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1  *-----
   ---*
2  User:                u63452984
3  Date:                07 January 2024
4  Time:                06:40:18
5  Site:                70094220
6  Platform:           Linux
7  Maintenance Release: 9.04.01M7P080620
8  EM Version:          15.2
9  *
10 *-----
    ---*
11 * Training Log
12 Date:                07 January 2024
13 Time:                06:40:05
14 *-----
    ---*
15 15242  proc freq data=EMWS3.Boost_VariableSet noprint;
16 15243  table ROLE*LEVEL/out=WORK.BoostMETA;
17 15244  run;
18 15245  proc print data=WORK.BoostMETA label noobs;
19 15246  var ROLE LEVEL COUNT;
20 15247  label ROLE = "%sysfunc(sasmsg(sashelp.dmine, meta_r
      ole_vlabel, NOQUOTE))" LEVEL = "%sysfunc(sasmsg(sashelp.dm
      ine, meta_level_vlabel, NOQUOTE))" COUNT = "%sysfunc(sasms
      g(sashelp.dmine, rpt_count_vlabel, NOQUOTE))";
21 15248  title9 ' ';
22 15249  title10 "%sysfunc(sasmsg(sashelp.dmine, rpt_varSumm
      ary_title , NOQUOTE))";
23 15250  run;
24 15251  title10;
25 15252  %let EMNORLEN = %DMNORLEN;
26 EMWS3.Part2_TRAIN EMWS3.Part2_TRAIN
27 EMWS3.Part2_TRAIN EMWS3.Part2_TRAIN EMWS3 Part2_TRAIN
28 EMWS3.Part2_TRAIN EMWS3.Part2_TRAIN
29 EMWS3.Part2_TRAIN EMWS3.Part2_TRAIN EMWS3 Part2_TRAIN

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30 Executing SASHELP.EMCORE.EMINFOITERATOR.SCL _INIT >>
31 Executing SASHELP.EMCORE.EMINFOITERATOR.SCL setMetaData >
    >
32 Executing SASHELP.EMCORE.EMINFOITERATOR.SCL next >>
33 Executing SASHELP.EMCORE.EMINFOITERATOR.SCL setMetaData >
    >
34 Executing SASHELP.EMCORE.EMINFOITERATOR.SCL next >>
35 Executing SASHELP.EMCORE.EMINFOITERATOR.SCL _term >>
36 15299 data WORK.Boost_EVENT(KEEP=VARIABLE LABEL LEVEL EVE
    NT NUMLEVELS ORDER);
37 15300 length ORDER $20;
38 15301 label VARIABLE = "%sysfunc(sasmsg(sashelp.dmine, rpt
    t_target_vlabel, NOQUOTE))" EVENT = "%sysfunc(sasmsg(sash
    elp.dmine, assmt_event_vlabel, NOQUOTE))" NUMLEVELS = "%sy
    sfunc(sasmsg(sashelp.dmine, rpt_numcat_vlabel, NOQUOTE))"
    LEVEL =
39 15302 "%sysfunc(sasmsg(sashelp.dmine, meta_level_vlabe
    l, NOQUOTE))" ORDER = "%sysfunc(sasmsg(sashelp.dmine, meta
    _order_vlabel, NOQUOTE))" LABEL = "%sysfunc(sasmsg(sashelp
    .dmine, meta_label_vlabel, NOQUOTE))";
40 15303 set EMWS3.BOOST_IMP_CHURN_DM( where=(_TYPE_="TARGET
    "));
41 15304 NumLevels=2;
42 15305 select(upcase(ORDER));
43 15306 when('DESC') ORDER = 'Descending';
44 15307 when('ASC') ORDER = 'Ascending';
45 15308 when('FMTDESC') ORDER = 'Formatted Descending';
46 15309 when('FMTASC') ORDER = 'Formatted Ascending';
47 15310 otherwise ORDER = 'Descending';
48 15311 end;
49 15312 output;
50 15313 run;
51 15314 title9 ' ';
52 15315 proc print data=WORK.Boost_EVENT noobs label;
53 15316 var VARIABLE EVENT LEVEL NUMLEVELS ORDER LABEL;
54 15317 title9 ' ';

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55 15318  title10 "%sysfunc(sasmsg(sashelp.dmine, rpt_modelEv
      ent_title , NOQUOTE))";
56 15319  run;
57 15320  title10;
58 "No decisions defined for target "IMP_Churn"."
59 15321  proc print data = EMWS3.Boost_IMP_Churn_DM noobs la
      bel;
60 15322  var _type_ variable label;
61 15323  where _type_ ^in('MATRIX', 'DECISION', 'TRAINPRIOR'
      , 'DATAPRIOR', 'DECPRIOR');
62 15324  label _TYPE_ = "%sysfunc(sasmsg(sashelp.dmine, rpt_
      type_vlabel, NOQUOTE))" VARIABLE = "%sysfunc(sasmsg(sa
      shelp.dmine, rpt_variable_vlabel, NOQUOTE))" LABEL = "%sys
      func(sasmsg(sashelp.dmine, meta_label_vlabel, NOQUOTE))";
63 15325  title9 ' ';
64 15326  title10 "%sysfunc(sasmsg(sashelp.dmine, rpt_predDec
      Vars_title , NOQUOTE))";
65 15327  run;
66 15328  title10;
67 15329  %let EMEXCEPTIONSTRING=;
68 PERFORMANCE DETAILS
69 15787  *-----
      -----*;
70 15788  * Boost: Generation of macros and macro variables;
71 15789  * To see the code generated, set the EM_DEBUG macro
      variable to SOURCE or _ALL_;
72 15790  *-----
      -----*;
73
74 15791  %let EMEXCEPTIONSTRING=;
75 15792  *-----
      -----*;
76 15793  * TRAIN: Boost;
77 15794  *-----
      -----*;
78 15795  %let EM_ACTION = TRAIN;

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79 15796 %let syscc = 0;
80 15797 %macro main;
81 15798
82 15799     filename temp catalog 'sashelp.emmodl.boost_macro
      s.source';
83 15800     %include temp;
84 15801     filename temp;
85 15802
86 15803     %setProperties;
87 15804
88 15805     %if %upcase(&EM_ACTION) = CREATE %then %do;
89 15806         filename temp catalog 'sashelp.emmodl.boost_cre
      ate.source';
90 15807         %include temp;
91 15808         filename temp;
92 15809
93 15810         %create;
94 15811     %end;
95 15812
96 15813     %else
97 15814         %if %upcase(&EM_ACTION) = TRAIN %then %do;
98 15815
99 15816         filename temp catalog 'sashelp.emmodl.boost_
      train.source';
100 15817         %include temp;
101 15818         filename temp;
102 15819         %train;
103 15820     %end;
104 15821
105 15822     %else
106 15823         %if %upcase(&EM_ACTION) = SCORE %then %do;
107 15824         filename temp catalog 'sashelp.emmodl.boost_sco
      re.source';
108 15825         %include temp;
109 15826         filename temp;
110 15827
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111 15828      %score;
112 15829
113 15830      %end;
114 15831
115 15832      %else
116 15833      %if %upcase(&EM_ACTION) = REPORT %then %do;
117 15834
118 15835          filename temp catalog 'sashelp.emmodl.boost_
report.source';
119 15836          %include temp;
120 15837          filename temp;
121 15838
122 15839          %report;
123 15840      %end;
124 15841
125 15842      %doendm:
126 15843  %mend main;
127 15844
128 15845  %main;
129 NOTE: %INCLUDE (level 1) file TEMP is file SASHELP.EMMODL.
BOOST_MACROS.SOURCE.
130 15847 +%macro SetProperty;
131 15849 +      /* boost options */
132 15850 +      %em_checkmacro(name=EM_PROPERTY_ITERATIONS,
value=50, global=Y);
133 15851 +      %em_checkmacro(name=EM_PROPERTY_TRAINPROPORTIO
N, value=60, global=Y);
134 15852 +      %em_checkmacro(name=EM_PROPERTY_CATEGORICALBIN
S, value=30, global=Y);
135 15853 +      %em_checkmacro(name=EM_PROPERTY_INTERVALBINS,
value=100, global=Y);
136 15854 +      %em_checkmacro(name=EM_PROPERTY_HUBER, value=N
O, global=Y);
137 15855 +      %em_checkmacro(name=EM_PROPERTY_SEED, value=
12345, global=Y);
138 15856 +      %em_checkmacro(name=EM_PROPERTY_SHRINKAGE, v

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    alue=0.1, global=Y);
139 15857 +      %em_checkmacro(name=EM_PROPERTY_LEAFFRACTION,
    value=0.001, global=Y);
140 15858 +      %em_checkmacro(name=EM_PROPERTY_SPLITSIZE,    v
    alue=., global=Y);
141 15859 +      %em_checkmacro(name=EM_PROPERTY_NODESIZE,    va
    lue=20000, global=Y);
142 15860 +      %em_checkmacro(name=EM_PROPERTY_SUBSERIES,    v
    alue=BEST, global=Y);
143 15861 +      %em_checkmacro(name=EM_PROPERTY_ITERATIONNUM,
    value=1, global=Y);
144 15863 +      %em_checkmacro(name=EM_PROPERTY_PRECISION,
    value=0, global=Y);
145 15864 +      %em_checkmacro(name=EM_PROPERTY_MISSING,
    value=USEINSEARCH, global=Y);
146 15865 +      %em_checkmacro(name=EM_PROPERTY_MINCATSIZE, va
    lue=5, global=Y);
147 15866 +      %em_checkmacro(name=EM_PROPERTY_MAXBRANCH,    va
    lue=2, global=Y);
148 15867 +      %em_checkmacro(name=EM_PROPERTY_MAXDEPTH,    va
    lue=2, global=Y);
149 15868 +      %em_checkmacro(name=EM_PROPERTY_REUSEVAR,    va
    lue=1, global=Y);
150 15869 +      %em_checkmacro(name=EM_PROPERTY_EXHAUSTIVE,
    value=5000, global=Y);
151 15870 +      %em_checkmacro(name=EM_PROPERTY_PERFORMANCE,
    value=DISK, global=Y);
152 15872 +      %em_checkmacro(name=EM_PROPERTY_ASSESSMEASURE,
    value=PROFIT, global=Y);
153 15873 +      %em_checkmacro(name=EM_PROPERTY_MEASURE, value
    =PROFIT, global=Y);
154 15874 +      %em_checkmacro(name=EM_PROPERTY_NSURRS, value=
    0, global=Y);
155 15875 +      %em_checkmacro(name=EM_PROPERTY_VARSELECTION,
    value=Y, global=Y);
156 15877 +      %em_checkmacro(name=EM_PROPERTY_OBSIMPORTANCE,

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        value=N, global=Y);
157 15878 +      %em_checkmacro(name=EM_PROPERTY_NUMSINGLEIMP,
        value=5, global=Y);
158 15879 +      %em_checkmacro(name=EM_PROPERTY_NUMPAIRIMP, va
        lue=0, global=Y);
159 15881 +%mend SetPropertyies;
160 NOTE: %INCLUDE (level 1) ending.
161 NOTE: Fileref TEMP has been deassigned.
162 NOTE: %INCLUDE (level 1) file TEMP is file SASHELP.EMMODL.
        BOOST_TRAIN.SOURCE.
163 15885 +%macro train;
164 15887 +      filename temp catalog 'sashelp.emmodl.boost_trai
        nmacros.source';
165 15888 +      %include temp;
166 15889 +      filename temp;
167 15891 +      %if &EM_IMPORT_DATA eq %then %do;
168 15892 +          %let EMEXCEPTIONSTRING = exception.server.IM
        PORT.NOTRAIN,1;
169 15893 +          %put &em_codebar;
170 15894 +          %let errormsg = %sysfunc(sasmsg(sashelp.dmin
        e, error_nodeTrainRawData_note, NOQUOTE));
171 15895 +          %put &errormsg;
172 15896 +          %put &em_codebar;
173 15897 +          %goto doendm;
174 15898 +      %end;
175 15899 +      %else
176 15900 +          %let EMEXCEPTIONSTRING =;
177 15902 +      %if &EM_NUM_TARGET ne 1 %then %do;
178 15903 +          %let EMEXCEPTIONSTRING = exception.server.U
        SE1TARGET;
179 15904 +          %put &em_codebar;
180 15905 +          %let errormsg = %sysfunc(sasmsg(sashelp.dmi
        ne, metadata.use01target_err, NOQUOTE));
181 15906 +          %put &errormsg;
182 15907 +          %put &em_codebar;
183 15908 +          %goto doendm;

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184 15909 +      %end;
185 15911 +      %let target_level = %EM_TARGET_LEVEL;
186 15912 +      %let target_var = %EM_TARGET;
187 15914 +      %if ("%&target_Level" ne "INTERVAL") %then %do;
188 15915 +          %em_boost_makeDMDB(indata=&EM_IMPORT_DATA, t
            target=&target_Var,
189 15916 +                                nLevel=_nTargetLevel);
190 15917 +      %end;
191 15919 +      /* check actual num of target levels */
192 15920 +      %if (&target_Level eq BINARY) %then %do;
193 15921 +          %if &_nTargetLevel > 2 %then %do;
194 15922 +              %let EMEXCEPTIONSTRING = exception.server.M
            ETADATA.WRONGTARGETLEVEL,&target_Var;
195 15923 +              %put &em_codebar;
196 15924 +              %let errormsg = %sysfunc(sasmsg(sashelp.dmi
            ne, metadata.wrongtargetlevel, NOQUOTE));
197 15925 +              %put &errormsg;
198 15926 +              %put &em_codebar;
199 15927 +              %goto doendm;
200 15928 +          %end;
201 15929 +      %end;
202 15931 +      %if (&EM_NUM_INTERVAL_INPUT < 1) and (&EM_NUM_B
            INARY_INPUT < 1) and (&EM_NUM_ORDINAL_INPUT < 1)
203 15932 +          and (&EM_NUM_NOMINAL_INPUT < 1) %then %do;
204 15933 +          %let EMEXCEPTIONSTRING = exception.server.U
            SEATLEAST1INPUTREJECT;
205 15934 +          %put &em_codebar;
206 15935 +          %let errormsg = %sysfunc(sasmsg(sashelp.dmi
            ne, error_noInput_note, NOQUOTE));
207 15936 +          %put &errormsg;
208 15937 +          %put &em_codebar;
209 15938 +          %goto doendm;
210 15939 +      %end;
211 15941 +      /* Initialize property macro variables */
212 15942 +      %SetProperties;
213 15944 +      /* data sets */

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214 15945 + %EM_GETNAME(key=MODEL, type=DATA);
215 15946 + %EM_GETNAME(key=IMPORTANCE, type=DATA);
216 15947 + %EM_GETNAME(key=SUBFIT, type=DATA);
217 15948 + %EM_GETNAME(key=EMOUTFIT, type=DATA);
218 15950 + /* files
219 15951 + %EM_GETNAME(key=BINNINGCODE, type=FILE, extensio
      n=sas);*/
220 15953 + /* retrieve target information */
221 15954 + %let dsid=%sysfunc(open(&EM_DEC_DECMETA(where=(
      TYPE_='TARGET'))));
222 15956 + %let vn_event =%sysfunc(varnum(&dsid, EVENT));
223 15957 + %let vn_target_type = %sysfunc(varnum(&dsid, TYP
      E));
224 15958 + %let vn_target_format = %sysfunc(varnum(&dsid, F
      ORMAT));
225 15959 + %let vn_target_level = %sysfunc(varnum(&dsid, L
      EVEL));
226 15960 + %do %while(^ %sysfunc(fetch(&dsid)));
227 15961 + %let temp = %nrquote(%sysfunc(getvarc(&dsid,
      &vn_event)));
228 15962 + %let Target_Event = %nrquote(%sysfunc(tranwr
      d(&temp, %str(%"), "")));
229 15963 + %let Target_Type = %sysfunc(getvarc(&dsid, &
      vn_target_type));
230 15964 + %let Target_Format = %sysfunc(getvarc(&dsid, &
      vn_target_format));
231 15965 + %let Target_Level = %sysfunc(getvarc(&dsid, &
      vn_target_level));
232 15966 + %end;
233 15967 + %let dsid = %sysfunc(close(&dsid));
234 15969 + /* if target level is ORDINAL, throw run time ex
      ception -- proc boost does not support ordinal target */
235 15970 + %if &Target_Level eq ORDINAL %then %do;
236 15971 + %let EMEXCEPTIONSTRING = exception.server.M
      ETADATA.INVALIDORDINALTARGET;
237 15972 + %put &em_codebar;

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238 15973 +          %let errormsg = %sysfunc(sasmsg(sashelp.dmi
          ne, error_invalidordinaltarget_note, NOQUOTE));
239 15974 +          %put &errormsg;
240 15975 +          %put &em_codebar;
241 15976 +          %goto doendm;
242 15977 +      %end;
243 15979 +      /* if subSeries=ITERATIONS and iterationNum not
          specified, exception should be thrown */
244 15980 +      %if ((&EM_PROPERTY_SUBSERIES eq ITERATIONS) and
          (&EM_PROPERTY_ITERATIONNUM eq . )) %then %do;
245 15981 +          %let EMEXCEPTIONSTRING = exception.server.E
          MTOOL.BOOST.NOITERATIONNUM;
246 15982 +          %put &em_codebar;
247 15983 +          %let errormsg = %sysfunc(sasmsg(sashelp.dmi
          ne, error_noiterationnum_note, NOQUOTE));
248 15984 +          %put &errormsg;
249 15985 +          %put &em_codebar;
250 15986 +          %goto doendm;
251 15987 +      %end;
252 15989 +      %runBoostProcedure;
253 15992 +      %doendm:
254 15993 +%mend train;
255 NOTE: %INCLUDE (level 1) ending.
256 NOTE: Fileref TEMP has been deassigned.
257 NOTE: %INCLUDE (level 1) file TEMP is file SASHELP.EMMODL.
          BOOST_TRAINMACROS.SOURCE.
258 15994 +%Macro em_boost_makeDMDB(indata=, target=,  nLevel=
          );
259 15995 +      %global &nLevel;
260 15997 +      %let targetLevel=;
261 15998 +      data _null_;
262 15999 +          length orderString $64;
263 16000 +          set &em_data_variableset end=eof;
264 16001 +          where NAME="&target";
265 16002 +          select(order);
266 16003 +          when('')          order ='DESC';

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267 16004 +           when('FMTASC')  order='ASCFMT';
268 16005 +           when('FMTDESC') order='DESFMT';
269 16006 +           otherwise;
270 16007 +       end;
271 16008 +       if eof then do;
272 16009 +           call symput("targetOrder", trim(order));
273 16010 +           call symput("targetLevel", trim(Level));
274 16011 +       end;
275 16012 +   run;
276 16014 +   %if "&targetLevel" ne "INTERVAL" %then %do;
277 16015 +   proc dmdb batch data=&indata dmdbCat=_BoostDMDB
278 16016 +       classout=_tmp_dmdbout;
279 16017 +       class &target(&targetOrder);
280 16018 +       target &target;
281 16019 +   run;
282 16020 +   data _tmp_dmdbout;
283 16021 +       set _tmp_dmdbout;
284 16022 +       if strip(TYPE) = 'N' and strip(LEVEL) = '.' then
           delete;
285 16023 +       if strip(TYPE) = 'C' and strip(LEVEL) = '' then
           delete;
286 16024 +   run;
287 16025 +   data _null_;
288 16026 +       %let dsid = %sysfunc(open(work._tmp_dmdbout));
289 16027 +       %let _obs = %sysfunc(attrn(&dsid, NOBS));
290 16028 +       %let dsid = %sysfunc(close(&dsid));
291 16029 +       call symput("&nLevel", put(&_obs, Best12.));
292 16030 +   run;
293 16032 +   proc datasets lib=work nolist;
294 16033 +       delete _tmp_dmdbout;
295 16034 +   run;
296 16035 +   quit;
297 16036 +   %end;
298 16038 +%Mend em_boost_makeDMDB;
299 16040 +%macro runBoostProcedure;
300 16042 +   proc sql;

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301 16043 +      reset noprint;
302 16044 +      select count(*) into :nobs from &EM_IMPORT_DATA
      ;
303 16045 +      quit;
304 16047 +      %let arborkluge= "work._BoostDMDB";
305 16048 +      proc arbor proc=treeboost data=&EM_IMPORT_DATA
306 16050 +          %if &EM_PROPERTY_ITERATIONS ne %then %do;
307 16051 +              iterations = &EM_PROPERTY_ITERATIONS
308 16052 +          %end;
309 16054 +          %if &EM_PROPERTY_TRAINPROPORTION ne %then %do;
310 16055 +              %let tprop = %sysevalf(&EM_PROPERTY_TRAINPRO
      PORTION / 100);
311 16056 +              trainproportion = &tprop
312 16057 +          %end;
313 16059 +          %if &EM_PROPERTY_SEED ne %then %do;
314 16060 +              seed = &EM_PROPERTY_SEED
315 16061 +          %end;
316 16063 +          %if &EM_PROPERTY_SHRINKAGE ne %then %do;
317 16064 +              shrinkage = &EM_PROPERTY_SHRINKAGE
318 16065 +          %end;
319 16067 +          %if &EM_PROPERTY_LEAFFRACTION ne %then %do;
320 16068 +              leaffraction = &EM_PROPERTY_LEAFFRACTION
321 16069 +          %end;
322 16071 +          %let splitsize = &EM_PROPERTY_SPLITSIZE;
323 16072 +          %if &splitsize ge &nobs %then %do;
324 16073 +              %let splitsize= .;
325 16074 +          %end;
326 16075 +          %if &splitsize ne . %then %do;
327 16076 +              splitsize = &splitsize
328 16077 +          %end;
329 16079 +          %if &EM_PROPERTY_MINCATSIZE ne %then %do;
330 16080 +              mincatsize = &EM_PROPERTY_MINCATSIZE
331 16081 +          %end;
332 16083 +          %if &EM_PROPERTY_MAXBRANCH ne %then %do;
333 16084 +              maxbranch = &EM_PROPERTY_MAXBRANCH
334 16085 +          %end;

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335 16087 +      %if &EM_PROPERTY_MAXDEPTH ne %then %do;
336 16088 +          maxdepth = &EM_PROPERTY_MAXDEPTH
337 16089 +      %end;
338 16091 +      %let nsurrs = ;
339 16092 +      %if &EM_PROPERTY_NSURRS ne %then %do;
340 16093 +          %let numInputs = %sysevalf(&EM_NUM_BINARY_INP
          UT + &EM_NUM_ORDINAL_INPUT + &EM_NUM_INTERVAL_INPUT + &EM_
          NUM_NOMINAL_INPUT);
341 16094 +          %let nsurrs = %sysevalf(%sysfunc(min(&EM_PROP
          ERTY_NSURRS, (&numInputs -1 ))));
342 16095 +          maxsurrs = &nsurrs
343 16096 +      %end;
344 16098 +      %if &EM_PROPERTY_MISSING ne %then %do;
345 16099 +          Missing = &EM_PROPERTY_MISSING
346 16100 +      %end;
347 16102 +      %if &EM_PROPERTY_REUSEVAR ne %then %do;
348 16103 +          reusevar = &EM_PROPERTY_REUSEVAR
349 16104 +      %end;
350 16105 +/*
351 16106 +      %if &EM_PROPERTY_PRECISION ne %then %do;
352 16107 +          intervaldecimals=&EM_PROPERTY_PRECISION
353 16108 +      %end;
354 16109 +*/
355 16110 +      %if &EM_PROPERTY_EXHAUSTIVE ne %then %do;
356 16111 +          Exhaustive = &EM_PROPERTY_EXHAUSTIVE
357 16112 +      %end;
358 16114 +      %if &Target_Event ne %then %do;
359 16115 +          Event="&Target_Event"
360 16116 +      %end;
361 16118 +      %if &EM_PROPERTY_CATEGORICALBINS ne %then %do;
362 16119 +          CategoricalBins = &EM_PROPERTY_CATEGORICALBIN
          S
363 16120 +      %end;
364 16122 +      %if &EM_PROPERTY_INTERVALBINS ne %then %do;
365 16123 +          IntervalBins = &EM_PROPERTY_INTERVALBINS
366 16124 +      %end;

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367 16126 +      %if &TARGET_LEVEL eq INTERVAL %then %do;
368 16127 +          %if &EM_PROPERTY_HUBER ne %then %do;
369 16128 +              Huber=&EM_PROPERTY_HUBER
370 16129 +          %end;
371 16130 +      %end;
372 16131 +      ;
373 16133 +      %if %EM_INTERVAL_INPUT %EM_INTERVAL_REJECTED ne
          %then %do;
374 16134 +          input %EM_INTERVAL_INPUT %EM_INTERVAL_REJECTE
          D/ level = interval;
375 16135 +      %end;
376 16137 +      %if %EM_BINARY_INPUT %EM_NOMINAL_INPUT %EM_BINA
          RY_REJECTED %EM_NOMINAL_REJECTED ne %then %do;
377 16138 +          input %EM_BINARY_INPUT %EM_BINARY_REJECTED %E
          M_NOMINAL_INPUT %EM_NOMINAL_REJECTED / level = nominal;
378 16139 +      %end;
379 16141 +      %if %EM_ORDINAL_INPUT %EM_ORDINAL_REJECTED ne %
          then %do;
380 16142 +          input %EM_ORDINAL_INPUT %EM_ORDINAL_REJECTED/
          level = ordinal;
381 16143 +      %end;
382 16145 +      %if %EM_FREQ ne %then %do;
383 16146 +          freq %EM_FREQ;
384 16147 +      %end;
385 16149 +      target %EM_TARGET / level = &TARGET_LEVEL;
386 16151 +      &EM_DEC_STATEMENT;
387 16153 +      %if &EM_PROPERTY_PERFORMANCE ne %then %do;
388 16154 +          performance workdatalocation = &EM_PROPERTY_
          PERFORMANCE
389 16155 +      %end;
390 16156 +      %if &EM_PROPERTY_NODESIZES ne %then %do;
391 16157 +          nodesize = &EM_PROPERTY_NODESIZES
392 16158 +      %end;
393 16159 +      ;
394 16160 +      save model=&EM_USER_MODEL;
395 16161 +      run;

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396 16162 + quit;
397 16163 + %em_checkerror();
398 16165 +%mend runBoostProcedure;
399 NOTE: %INCLUDE (level 1) ending.
400 NOTE: Fileref TEMP has been deassigned.
401
402 NOTE: Variable orderString is uninitialized.
403 NOTE: There were 1 observations read from the data set EMW
      S3.BOOST_VARIABLESET.
404      WHERE NAME='IMP_Churn';
405 NOTE: DATA statement used (Total process time):
406      real time          0.00 seconds
407      user cpu time      0.01 seconds
408      system cpu time    0.00 seconds
409      memory             30379.43k
410      OS Memory          40560.00k
411      Timestamp          07/01/2024 06:40:06 AM
412      Step Count                  1  Switch Count  0
413      Page Faults                  0
414      Page Reclaims                63
415      Page Swaps                   0
416      Voluntary Context Switches    2
417      Involuntary Context Switches  0
418      Block Input Operations        0
419      Block Output Operations       0
420
421
422
423 NOTE: Records processed = 17497    Memory used = 511K.
424 NOTE: There were 17497 observations read from the data set
      EMWS3.PART2_TRAIN.
425 NOTE: The data set WORK._TMP_DMDBOUT has 2 observations an
      d 9 variables.
426 NOTE: PROCEDURE DMDB used (Total process time):
427      real time          0.00 seconds
428      user cpu time      0.00 seconds

```

```

429      system cpu time      0.00 seconds
430      memory                30379.43k
431      OS Memory             41828.00k
432      Timestamp             07/01/2024 06:40:06 AM
433      Step Count              1  Switch Count  0
434      Page Faults            0
435      Page Reclaims          438
436      Page Swaps             0
437      Voluntary Context Switches  7
438      Involuntary Context Switches  0
439      Block Input Operations  0
440      Block Output Operations 320
441
442
443
444 NOTE: There were 2 observations read from the data set WORK.
      _TMP_DMDBOUT.
445 NOTE: The data set WORK._TMP_DMDBOUT has 2 observations and
      9 variables.
446 NOTE: DATA statement used (Total process time):
447      real time              0.00 seconds
448      user cpu time          0.00 seconds
449      system cpu time        0.00 seconds
450      memory                30379.43k
451      OS Memory             41828.00k
452      Timestamp             07/01/2024 06:40:06 AM
453      Step Count              1  Switch Count  0
454      Page Faults            0
455      Page Reclaims          128
456      Page Swaps             0
457      Voluntary Context Switches  0
458      Involuntary Context Switches  0
459      Block Input Operations  0
460      Block Output Operations 264
461
462

```



```

463
464 NOTE: DATA statement used (Total process time):
465     real time             0.00 seconds
466     user cpu time         0.01 seconds
467     system cpu time       0.00 seconds
468     memory                 30379.43k
469     OS Memory              41828.00k
470     Timestamp              07/01/2024 06:40:06 AM
471     Step Count              1   Switch Count   0
472     Page Faults             0
473     Page Reclaims           60
474     Page Swaps              0
475     Voluntary Context Switches  0
476     Involuntary Context Switches 0
477     Block Input Operations    0
478     Block Output Operations   0
479
480
481
482 NOTE: Deleting WORK._TMP_DMDBOUT (memtype=DATA).
483
484 NOTE: PROCEDURE DATASETS used (Total process time):
485     real time             0.00 seconds
486     user cpu time         0.00 seconds
487     system cpu time       0.00 seconds
488     memory                 30379.43k
489     OS Memory              41828.00k
490     Timestamp              07/01/2024 06:40:06 AM
491     Step Count              1   Switch Count   0
492     Page Faults             0
493     Page Reclaims           63
494     Page Swaps              0
495     Voluntary Context Switches  0
496     Involuntary Context Switches 0
497     Block Input Operations    0
498     Block Output Operations   8

```

499
500
501 NOTE: PROCEDURE SQL used (Total process time):
502 real time 0.00 seconds
503 user cpu time 0.00 seconds
504 system cpu time 0.01 seconds
505 memory 33704.68k
506 OS Memory 45684.00k
507 Timestamp 07/01/2024 06:40:06 AM
508 Step Count 1 Switch Count 0
509 Page Faults 0
510 Page Reclaims 509
511 Page Swaps 0
512 Voluntary Context Switches 5
513 Involuntary Context Switches 0
514 Block Input Operations 0
515 Block Output Operations 0
516
517
518 NOTE: 3323032 kilobytes of physical memory.
519 NOTE: Will use 17497 out of 17497 training cases.
520 NOTE: Using memory pool with 128472064 bytes.
521 NOTE: Will not search for split on variable M_Variable.
522 NOTE: Acceptable cases have the same value.
523 NOTE: Option MINCATSIZE=5 may apply.
524 NOTE: Will not search for split on variable M_Variable.
525 NOTE: Acceptable cases have the same value.
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666 NOTE: Acceptable cases have the same value.
667 NOTE: Option MINCATSIZE=5 may apply.
668 NOTE: Will not search for split on variable M_Variable.
669 NOTE: Acceptable cases have the same value.
670 NOTE: Option MINCATSIZE=5 may apply.
671 NOTE: Passed training data 250 times.
672 NOTE: Current TREEBOOST model contains 50 trees.
673 NOTE: Training used 1938920 bytes of work memory.
674 NOTE: The data set EMWS3.BOOST_MODEL has 7058 observations
and 4 variables.
675
676
677 NOTE: There were 17497 observations read from the data set

EMWS3.PART2_TRAIN.

```
678 NOTE: PROCEDURE ARBOR used (Total process time):
679     real time          5.85 seconds
680     user cpu time      5.75 seconds
681     system cpu time    0.08 seconds
682     memory             156658.81k
683     OS Memory          167824.00k
684     Timestamp          07/01/2024 06:40:11 AM
685     Step Count          1    Switch Count  0
686     Page Faults         0
687     Page Reclaims       1378
688     Page Swaps          0
689     Voluntary Context Switches  17
690     Involuntary Context Switches 501
691     Block Input Operations 0
692     Block Output Operations 776
693
694
695
696 16168  %let SYSCC = 0;
697 NOTE: PROCEDURE DISPLAY used (Total process time):
698     real time          0.00 seconds
699     user cpu time      0.00 seconds
700     system cpu time    0.00 seconds
701     memory             156658.81k
702     OS Memory          167824.00k
703     Timestamp          07/01/2024 06:40:11 AM
704     Step Count          1    Switch Count  1
705     Page Faults         0
706     Page Reclaims       46
707     Page Swaps          0
708     Voluntary Context Switches  1
709     Involuntary Context Switches 0
710     Block Input Operations 0
711     Block Output Operations 0
712
```

```

713
714 16169  *-----
      -----*;
715 16170  * End TRAIN: Boost;
716 16171  *-----
      -----*;
717 16172
718
719 16173  *-----
      -----*;
720 16174  * Close any missing semi colons;
721 16175  *-----
      -----*;
722 16176  ;
723 16177  ;
724 16178  ;
725 16179  ;
726 16180  quit;
727 16181  *-----
      -----*;
728 16182  * Close any unbalanced quotes;
729 16183  *-----
      -----*;
730 16184  /*; *"; *'; */
731 16185  ;
732 16186  run;
733 16187  quit;
734 16188  /* Reset EM Options */
735 16189  options formchar="|----|+|---+=|-\<>*";
736 16190  options nocenter ls=256 ps=10000;
737 16191  goptions reset=all device=GIF NODISPLAY;
738
739 *-----
    ---*
740 * Score Log
741 Date:

```

07 January 2024


```

742 Time:                                06:40:12
743 *-----*
    ---*
744 16293 %let EMEXCEPTIONSTRING=;
745 16294 *-----*
    -----*;
746 16295 * SCORE: Boost;
747 16296 *-----*
    -----*;
748 16297 %let EM_ACTION = SCORE;
749 16298 %let syscc = 0;
750 16299 %macro main;
751 16300
752 16301     filename temp catalog 'sashelp.emmodl.boost_macro
        s.source';
753 16302     %include temp;
754 16303     filename temp;
755 16304
756 16305     %setProperties;
757 16306
758 16307     %if %upcase(&EM_ACTION) = CREATE %then %do;
759 16308         filename temp catalog 'sashelp.emmodl.boost_cre
            ate.source';
760 16309         %include temp;
761 16310         filename temp;
762 16311
763 16312         %create;
764 16313     %end;
765 16314
766 16315     %else
767 16316         %if %upcase(&EM_ACTION) = TRAIN %then %do;
768 16317
769 16318             filename temp catalog 'sashelp.emmodl.boost_
                train.source';
770 16319             %include temp;
771 16320             filename temp;

```

```

772 16321          %train;
773 16322          %end;
774 16323
775 16324          %else
776 16325          %if %upcase(&EM_ACTION) = SCORE %then %do;
777 16326          filename temp catalog 'sashelp.emmodl.boost_sco
           re.source';
778 16327          %include temp;
779 16328          filename temp;
780 16329
781 16330          %score;
782 16331
783 16332          %end;
784 16333
785 16334          %else
786 16335          %if %upcase(&EM_ACTION) = REPORT %then %do;
787 16336
788 16337          filename temp catalog 'sashelp.emmodl.boost_
           report.source';
789 16338          %include temp;
790 16339          filename temp;
791 16340
792 16341          %report;
793 16342          %end;
794 16343
795 16344          %doendm:
796 16345  %mend main;
797 16346
798 16347  %main;
799 NOTE: %INCLUDE (level 1) file TEMP is file SASHELP.EMMODL.
           BOOST_MACROS.SOURCE.
800 16349 +%macro SetProperty;
801 16351 +          /* boost options */
802 16352 +          %em_checkmacro(name=EM_PROPERTY_ITERATIONS,
           value=50, global=Y);
803 16353 +          %em_checkmacro(name=EM_PROPERTY_TRAINPROPORTIO

```

```

N, value=60, global=Y);
804 16354 + %em_checkmacro(name=EM_PROPERTY_CATEGORICALBIN
S, value=30, global=Y);
805 16355 + %em_checkmacro(name=EM_PROPERTY_INTERVALBINS,
value=100, global=Y);
806 16356 + %em_checkmacro(name=EM_PROPERTY_HUBER, value=N
O, global=Y);
807 16357 + %em_checkmacro(name=EM_PROPERTY_SEED, value=
12345, global=Y);
808 16358 + %em_checkmacro(name=EM_PROPERTY_SHRINKAGE, v
alue=0.1, global=Y);
809 16359 + %em_checkmacro(name=EM_PROPERTY_LEAFFRACTION,
value=0.001, global=Y);
810 16360 + %em_checkmacro(name=EM_PROPERTY_SPLITSIZE, v
alue=., global=Y);
811 16361 + %em_checkmacro(name=EM_PROPERTY_NODESIZE, va
lue=20000, global=Y);
812 16362 + %em_checkmacro(name=EM_PROPERTY_SUBSERIES, v
alue=BEST, global=Y);
813 16363 + %em_checkmacro(name=EM_PROPERTY_ITERATIONNUM,
value=1, global=Y);
814 16365 + %em_checkmacro(name=EM_PROPERTY_PRECISION,
value=0, global=Y);
815 16366 + %em_checkmacro(name=EM_PROPERTY_MISSING,
value=USEINSEARCH, global=Y);
816 16367 + %em_checkmacro(name=EM_PROPERTY_MINCATSIZE, va
lue=5, global=Y);
817 16368 + %em_checkmacro(name=EM_PROPERTY_MAXBRANCH, va
lue=2, global=Y);
818 16369 + %em_checkmacro(name=EM_PROPERTY_MAXDEPTH, va
lue=2, global=Y);
819 16370 + %em_checkmacro(name=EM_PROPERTY_REUSEVAR, va
lue=1, global=Y);
820 16371 + %em_checkmacro(name=EM_PROPERTY_EXHAUSTIVE,
value=5000, global=Y);
821 16372 + %em_checkmacro(name=EM_PROPERTY_PERFORMANCE,

```

```

        value=DISK, global=Y);
822 16374 +      %em_checkmacro(name=EM_PROPERTY_ASSESSMEASURE,
        value=PROFIT, global=Y);
823 16375 +      %em_checkmacro(name=EM_PROPERTY_MEASURE, value
        =PROFIT, global=Y);
824 16376 +      %em_checkmacro(name=EM_PROPERTY_NSURRS, value=
        0, global=Y);
825 16377 +      %em_checkmacro(name=EM_PROPERTY_VARSELECTION,
        value=Y, global=Y);
826 16379 +      %em_checkmacro(name=EM_PROPERTY_OBSIMPORTANCE,
        value=N, global=Y);
827 16380 +      %em_checkmacro(name=EM_PROPERTY_NUMSINGLEIMP,
        value=5, global=Y);
828 16381 +      %em_checkmacro(name=EM_PROPERTY_NUMPAIRIMP, va
        lue=0, global=Y);
829 16383 +%mend SetPropertyes;
830 NOTE: %INCLUDE (level 1) ending.
831 NOTE: Fileref TEMP has been deassigned.
832 NOTE: %INCLUDE (level 1) file TEMP is file SASHELP.EMMODL.
        BOOST_SCORE.SOURCE.
833 16387 +%global ntrees ni nclasses;
834 16388 +%macro selectSubseries;
835 16390 +  %let arborkluge= "work._BoostDMDB";
836 16391 +  %if ^%sysfunc(cexist(work._BoostDMDB)) %then %do;
837 16392 +      filename temp catalog 'sashelp.emmodl.boost_t
        rainmacros.source';
838 16393 +      %include temp;
839 16394 +      filename temp;
840 16396 +      %let target_var = %EM_TARGET;
841 16397 +      %em_boost_makeDMDB(indata=&EM_IMPORT_DATA, tar
        get=&target_Var, nLevel=_nTargetLevel);
842 16398 +  %end;
843 16400 +      %EM_GETNAME(key=MODEL, type=DATA);
844 16401 +      %EM_GETNAME(key=IMPORTANCE, type=DATA);
845 16402 +      proc arbor proc=treeboost data=&EM_IMPORT_DATA
        inmodel=&EM_USER_MODEL;

```

```

846 16404 +      %if &EM_PROPERTY_SUBSERIES ne %then %do;
847 16405 +          subseries
848 16406 +      %if &EM_PROPERTY_SUBSERIES eq ITERATIONS %the
      n %do;
849 16407 +          &EM_PROPERTY_SUBSERIES = &EM_PROPERTY_ITER
      ATIONNUM
850 16408 +      %end;
851 16409 +      %else %do;
852 16410 +          &EM_PROPERTY_SUBSERIES
853 16411 +      %end;
854 16412 +  %end;
855 16413 +  ;
856 16415 +  makemacro nimportant=ni nclasses=nclasses
857 16416 +  %if &EM_PROPERTY_SUBSERIES eq BEST %then %do;
858 16417 +      nitsase=nitsase nitsmisc=nitsmisc nitsprofit
      =nitsprofit
859 16418 +  %end;
860 16419 +  ;
861 16421 +  %if &EM_PROPERTY_ASSESSMEASURE ne %then %do;
862 16422 +      assess
863 16423 +      %if &EM_IMPORT_VALIDATE ne %then %do;
864 16424 +          Validata=&EM_IMPORT_VALIDATE
865 16425 +      %end;
866 16426 +      %else %do;
867 16427 +          NoValidata
868 16428 +      %end;
869 16430 +      %if &EM_PROPERTY_ASSESSMEASURE eq PROFIT %the
      n %do;
870 16431 +          %if %sysfunc(exist(&EM_DEC_DECMETA, DATA))
      eq 0 %then %do;
871 16432 +              %if %upcase(&Target_Level) eq INTERVAL %
      then %do;
872 16433 +                  %let EM_PROPERTY_MEASURE = ASE;
873 16434 +              %end;
874 16435 +              %else %do;
875 16436 +                  %let EM_PROPERTY_MEASURE= MISC;

```

```

876 16437 +           %end;
877 16438 +           %let note = %sysfunc(sasmsg(sashelp.dmine,
profitlossmatrix_note, NOQUOTE));
878 16439 +           %put &note;
879 16440 +           %let note = %sysfunc(sasmsg(sashelp.dmine,
assessmearerest_note, NOQUOTE));
880 16441 +           %put &note;
881 16442 +           %end;
882 16443 +           %else %do;
883 16444 +               %let dsid = %sysfunc(open(&EM_DEC_DECME
TA(where=(_TYPE_='MATRIX'))));
884 16445 +               %if &dsid eq %then %do;
885 16446 +                   %if %upcase(&Target_Level) eq INTERV
AL %then %do;
886 16447 +                       %let EM_PROPERTY_MEASURE = ASE;
887 16448 +                       %end;
888 16449 +                       %else %do;
889 16450 +                           %let EM_PROPERTY_MEASURE = MISC;
890 16451 +                           %end;
891 16452 +                       %let note = %sysfunc(sasmsg(sashelp.
dmine, profitlossmatrix_note, NOQUOTE));
892 16453 +                       %put &note;
893 16454 +                       %let note = %sysfunc(sasmsg(sashelp.
dmine, assessmeasurereset_note, NOQUOTE));
894 16455 +                       %put &note;
895 16456 +                       %end;
896 16457 +                       %else %do;
897 16458 +                           %let firstobs = %sysfunc(fetchobs(&d
sid, 1));
898 16459 +                           %let usenum    = %sysfunc(VARNUM(&dsi
d, USE));
899 16460 +                           %let use        = %sysfunc(getvarc(&ds
id, &usenum));
900 16462 +                           %if &use eq N %then %do;
901 16463 +                               %if %upcase(&Target_Level) eq INTE
RVAL %then %do;

```

```

902 16464 +           %let EM_PROPERTY_MEASURE = ASE;
903 16465 +           %end;
904 16466 +           %else %do;
905 16467 +           %let EM_PROPERTY_MEASURE = MISC
          ;
906 16468 +           %end;
907 16469 +           %let note = %sysfunc(sasmsg(sashe
p.dmine, profitlossmatrix_note, NOQUOTE));
908 16470 +           %put &note;
909 16471 +           %let note = %sysfunc(sasmsg(sashe
p.dmine, assessmeasurereset_note, NOQUOTE));
910 16472 +           %put &note;
911 16474 +           %end;
912 16475 +           %else %do;
913 16476 +           %let EM_PROPERTY_MEASURE = PROFIT;
914 16477 +           %end;
915 16478 +           %end;
916 16479 +           %if &dsid ne %then %let dsid = %sysfunc
          (close(&dsid));
917 16480 +           %end;
918 16481 +           %end;
919 16482 +           %else %if &EM_PROPERTY_ASSESSMEASURE eq MISC
          %then %do;
920 16483 +           %if %upcase(&Target_Level) eq INTERVAL %th
          en %do;
921 16484 +           %let EM_PROPERTY_MEASURE = ASE;
922 16485 +           %end;
923 16486 +           %else %do;
924 16487 +           %let EM_PROPERTY_MEASURE = MISC;
925 16488 +           %end;
926 16489 +           %end;
927 16490 +           %else %if &EM_PROPERTY_ASSESSMEASURE eq ASE %
          then %do;
928 16491 +           %let EM_PROPERTY_MEASURE = ASE;
929 16492 +           %end;
930 16494 +           measure = &EM_PROPERTY_MEASURE

```

```

931 16496 +      ;
932 16497 +      %end;
933 16499 +      %let lookupString = ;
934 16500 +      %if ^%symexist(EM_OPTION) %then
935 16501 +          %let EM_OPTION=;
936 16503 +      %if %sysfunc(index(%upcase(&EM_DEBUG), I18N)) o
          r %sysfunc(index(%upcase(&EM_OPTION), I18N)) %then %do;
937 16504 +          %let lookupString = LOOKUP=SELECT;
938 16505 +      %end;
939 16507 +      code file="&EM_FILE_EMFLOWSCORECODE" res group=
          &emloopid &lookupString;
940 16508 +      code file="&EM_FILE_EMPUBLISHSCORECODE" nores g
          roup=&emloopid &lookupString;
941 16510 +      save fit=SUBFIT importance=&EM_USER_IMPORTANCE
          model=&EM_USER_MODEL;
942 16512 +      score data=&EM_IMPORT_DATA out=fds(keep= p_) o
          utfit=work.fit_train role=TRAIN;
943 16513 +      %if &EM_IMPORT_VALIDATE ne %then %do;
944 16514 +          score data=&EM_IMPORT_VALIDATE out=_NULL_ out
          fit=work.fit_valid role=VALID;
945 16515 +      %end;
946 16516 +      %if &EM_IMPORT_TEST ne %then %do;
947 16517 +          score data=&EM_IMPORT_TEST out=_NULL_ outfit=
          work.fit_test role=TEST;
948 16518 +      %end;
949 16520 +      run;
950 16521 +      quit;
951 16523 +      %if %sysfunc(cexist(work._BoostDMDB)) %then %do
          ;
952 16524 +          /* Delete DMDB catalog */
953 16525 +          proc datasets lib=work nolist;
954 16526 +              delete _BoostDMDB / mt=cat;
955 16527 +          run;
956 16528 +      %end;
957 16532 +      /* set ntrees macro to selected iteration based
          on subseries property */

```



```

958 16533 +      %if &EM_PROPERTY_SUBSERIES eq ITERATIONS %then
      %do;
959 16534 +          %let ntrees = &EM_PROPERTY_ITERATIONNUM;
960 16535 +      %end;
961 16536 +      %else %if &EM_PROPERTY_SUBSERIES eq LONGEST %th
      en %do;
962 16537 +          %let ntrees = &EM_PROPERTY_ITERATIONS;
963 16538 +      %end;
964 16539 +      %else %if &EM_PROPERTY_SUBSERIES eq BEST %then
      %do;
965 16540 +          %if &EM_PROPERTY_MEASURE eq ASE %then %let n
      trees=&NITSASE;
966 16541 +          %else %if &EM_PROPERTY_MEASURE eq MISC %then
      %let ntrees=&NITSMISC;
967 16542 +          %else %let ntrees=&NITSPROFIT;
968 16543 +      %end;
969 16544 +%mend selectSubseries;
970 16546 +%macro createSubFit;
971 16548 +      %EM_GETNAME(key=SUBFIT, type=DATA);
972 16549 +      data &EM_USER_SUBFIT;
973 16550 +          length datarole $8;
974 16551 +          set SUBFIT;
975 16552 +          datarole = "TRAIN";
976 16553 +          label _MISC_ = "%sysfunc(sasmsg(sashelp.dmi
      ne, rpt_misclassrate_title, noquote))"
977 16554 +          _MAX_ = "%sysfunc(sasmsg(sashelp.dmi
      ne, rpt_maxabserror_vlabel, noquote))"
978 16555 +          _SSE_ = "%sysfunc(sasmsg(sashelp.dmi
      ne, rpt_sumsqerror_vlabel, noquote))"
979 16556 +          _ASE_ = "%sysfunc(sasmsg(sashelp.dmi
      ne, rpt_avgsquareerror_title, noquote))"
980 16557 +          _RASE_ = "%sysfunc(sasmsg(sashelp.dmi
      ne, rpt_rootavgsqerror_vlabel, noquote))"
981 16558 +          _APROF_ = "%sysfunc(sasmsg(sashelp.dmi
      ne, rpt_avgprofit_vlabel, noquote))"
982 16559 +          _PROF_ = "%sysfunc(sasmsg(sashelp.dmi

```

```

ne, assmt_profitt_vlabel, noquote))"
983 16560 +          _PASE_ = "%sysfunc(sasmsg(sashelp.dmi
ne, rpt_avgsqerrprior_vlabel, noquote))"
984 16561 +          _PMISC_ = "%sysfunc(sasmsg(sashelp.dmi
ne, rpt_missprior_vlabel, noquote))"
985 16562 +          _NLEAVES_ = "%sysfunc(sasmsg(sashelp.d
mine, rpt_nleaves_vlabel, noquote))"
986 16563 +          _ITERATION_ = "%sysfunc(sasmsg(sashelp.dm
ine, rpt_iter_vlabel , noquote))"
987 16564 +          _NW_ = "%sysfunc(sasmsg(sashelp.dmine,
rpt_nleaves_vlabel , noquote))"
988 16565 +          datarole = "%sysfunc(sasmsg(sashelp.dmi
ne, rpt_datarole_vlabel , noquote))";
989 16566 +          keep _ITERATION_ _NW_ _MISC_ _MAX_ _SSE_ _ASE_
_RASE_ _NLEAVES_ datarole
990 16567 +          %if &EM_DEC_DECDATA ne %then %do;
991 16568 +          _APROF_ _PROF_ _PASE_ _PMISC_
992 16569 +          %end;
993 16570 +          ;
994 16571 +          run;
995 16573 +          %if &EM_IMPORT_VALIDATE ne %then %do;
996 16574 +          data tempvalid;
997 16575 +          length datarole $8;
998 16576 +          set SUBFIT;
999 16577 +          rename _VMISC_ = _MISC_
1000 16578 +          _VMAX_ = _MAX_
1001 16579 +          _VSSE_ = _SSE_
1002 16580 +          _VASE_ = _ASE_
1003 16581 +          _VRASE_ = _RASE_
1004 16582 +          %if &EM_DEC_DECDATA ne %then %do;
1005 16583 +          _VAPROF_ = _APROF_
1006 16584 +          _VPROF_ = _PROF_
1007 16585 +          _VPASE_ = _PASE_
1008 16586 +          _VPMISC_ = _PMISC_
1009 16587 +          %end;
1010 16588 +          ;

```

```

1011 16589 +          datarole = "VALID";
1012 16590 +          label _VMISC_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_misclassrate_title, noquote))"
1013 16591 +          _VMAX_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_maxabserror_vlabel, noquote))"
1014 16592 +          _VSSE_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_sumsqerror_vlabel, noquote))"
1015 16593 +          _VASE_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_avgsquareerror_title, noquote))"
1016 16594 +          _VRASE_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_rootavgsqerror_vlabel, noquote))"
1017 16595 +          _VAPROF_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_avgprofit_vlabel, noquote))"
1018 16596 +          _VPROF_ = "%sysfunc(sasmsg(sashel
p.dmine, assmt_profitt_vlabel, noquote))"
1019 16597 +          _VPASE_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_avgsqerrprior_vlabel, noquote))"
1020 16598 +          _VPMISC_ = "%sysfunc(sasmsg(sashel
p.dmine, rpt_missprior_vlabel, noquote))"
1021 16599 +          _NLEAVES_ = "%sysfunc(sasmsg(sashe
lp.dmine, rpt_nleaves_vlabel, noquote))"
1022 16600 +          datarole = "%sysfunc(sasmsg(sashelp
.dmine, rpt_datarole_vlabel, noquote))";
1023 16601 +          keep _ITERATION_ _NW_ _VMISC_ _VMAX_ _VSSE_
_VASE_ _VRASE_ _NLEAVES_ datarole
1024 16602 +          %if &EM_DEC_DECDATA ne %then %do;
1025 16603 +          _VAPROF_ _VPROF_ _VPASE_ _VPMISC_
1026 16604 +          %end;
1027 16605 +          ;
1028 16606 +          run;
1029 16608 +          data &EM_USER_SUBFIT;
1030 16609 +          set &EM_USER_SUBFIT tempvalid;
1031 16610 +          run;
1032 16612 +          proc datasets library=work nolist;
1033 16613 +          delete tempvalid;
1034 16614 +          run;

```

```

1035 16615 + %end;
1036 16617 + proc datasets library=work nolist;
1037 16618 + delete subfit;
1038 16619 + run;
1039 16621 +%mend createSubFit;
1040 16623 +%macro createFitStatistics;
1041 16625 + %EM_GETNAME(key=EMOUTFIT, type=DATA);
1042 16626 + data &EM_USER_EMOUTFIT;
1043 16627 + length target $32;
1044 16628 + merge work.fit_train
1045 16629 + %if &EM_IMPORT_VALIDATE ne %then %do;
1046 16630 + work.fit_valid
1047 16631 + %end;
1048 16632 + %if &EM_IMPORT_TEST ne %then %do;
1049 16633 + work.fit_test
1050 16634 + %end;
1051 16635 + ;
1052 16636 + target = "%EM_TARGET";
1053 16637 + drop _NW_;
1054 16638 + run;
1055 16640 + %if &EM_IMPORT_VALIDATE ne %then %do;
1056 16641 + proc datasets library=work nolist;
1057 16642 + delete fit_valid;
1058 16643 + run;
1059 16644 + %end;
1060 16645 + %if &EM_IMPORT_TEST ne %then %do;
1061 16646 + proc datasets library=work nolist;
1062 16647 + delete fit_test;
1063 16648 + run;
1064 16649 + %end;
1065 16652 +%mend createFitStatistics;
1066 16654 +%macro generatePartialDependencyTable(iteration= ,d
s1=, var=);
1067 16656 + %EM_GETNAME(key=PARTIALDEPENDENCY, type=DATA);
1068 16658 + %if &iteration eq 1 %then %do;
1069 16659 + data &EM_USER_PARTIALDEPENDENCY;

```

```

1070 16660 +      run;
1071 16661 +      %end;
1072 16663 +      %let partialvar = partial&iteration;
1073 16664 +      data &EM_USER_PARTIALDEPENDENCY;
1074 16665 +          merge &EM_USER_PARTIALDEPENDENCY &ds1(rename=(P
            _BAD1=&partialvar) keep=P_BAD1 &var);
1075 16666 +          label &partialvar = "%sysfunc(sasmsg(sashelp.dm
            ine, rpt_partialdep_vlabel, noquote, &var))";
1076 16667 +      run;
1077 16669 +%mend generatePartialDependencyTable;
1078 16671 +%macro merge_imp_h (iactds=, impds= );
1079 16672 +      %if &ni gt 0 %then %do;
1080 16673 +          data _imp;
1081 16674 +              set &impds.;
1082 16675 +              _obs_ = _n_;
1083 16676 +          run;
1084 16677 +          proc sort data=_imp;
1085 16678 +              by name;
1086 16679 +          run;
1087 16680 +          proc sort data= &iactds.;
1088 16681 +              by name;
1089 16682 +          run;
1090 16683 +          data &impds;
1091 16684 +              merge _imp &iactds;
1092 16685 +              by name;
1093 16686 +          run;
1094 16687 +          proc sort data=&impds;
1095 16688 +              by _obs_;
1096 16689 +          run;
1097 16690 +          data &impds;
1098 16691 +              set &impds;
1099 16692 +              drop _obs_;
1100 16693 +          run;
1101 16694 +          quit;
1102 16695 +      %end;
1103 16696 +%mend;

```

```

1104 16698 +*****
      *****
1105 16699 +** MACROS FOR DISCOVERING INTERACTION OF INPUTS IN
      ARBORETUM MODELS
1106 16700 +**
1107 16701 +** AUTHOR:      saspgn
1108 16702 +** REVISED:    1 MAY 2007
1109 16703 +**
1110 16704 +** REFERENCE: Jerome H. Friedman and Bogdan E. Pope
      scu
1111 16705 +**                      Predictive Models via Rule Ense
      mbles
1112 16706 +**                      28 Feb 2005
1113 16707 +*****
      *****;
1114 16709 +%macro compute_iact_h(data=, model=, outds=);
1115 16711 +/*** NOTE: this macro was modified to also calculat
      ion 1 way partial dependency values as well ****/
1116 16713 +*****
      *****
1117 16714 +** MACRO:      COMPUTE_IACT_H
1118 16715 +** PURPOSE:    ESTIMATE INTERACTION OF INPUT TO ANY
      OTHER INPUTS IN MODEL
1119 16716 +** AUTHOR:      saspgn
1120 16717 +** DATE:        30 APR 2007
1121 16718 +**
1122 16719 +** ARGUMENTS: DATA= data with which to evaluate in
      teraction.
1123 16720 +**                      Typically training data.
1124 16721 +**                      MODEL= Model data set from SAVE MODEL
      = option
1125 16722 +**                      of PROC ARBORETUM (or SPLIT,
      FOREST, TREEBOOST)
1126 16723 +**                      OUTDS= output data set from this macr
      o.
1127 16724 +**                      Contains two variables:

```

```

1128 16725 +**                                NAME    containing name of input variable
1129 16726 +**                                H        containing the H statistic for interaction.
1130 16727 +**
1131 16728 +** DETAILS:    In Predictive Models via Rule Ensembles the authors
1132 16729 +**            define statistic  $H_j$  that will be greater than 0 to
1133 16730 +**            the extent that input variable  $j$  interacts with some
1134 16731 +**            other variable (section 8.1, equation 45 ).
1135 16732 +**            Macro COMPUTE_IACT_H computes  $H_j$  for all variables
1136 16733 +**            used as a primary splitting rule in the model.
1137 16734 +**            The computation of interactions is time consuming.
1138 16735 +**            The user might therefore consult  $H_j$  before selecting
1139 16736 +**            which interactions to compute.
1140 16737 +**
1141 16738 +** REFERENCE: Jerome H. Friedman and Bogdan E. Popescu
1142 16739 +**            Predictive Models via Rule Ensembles
1143 16740 +**            28 Feb 2005
1144 16741 +**            http://www.stat-stanford.edu/~jhf
1145 16742 +*****
1146 16744 +    %do v=1 %to &ni;
1147 16745 +        proc arbor proc=treeboost inmodel=&model;
1148 16746 +            makemacro importantid=&v var=var;
1149 16747 +            partialdep data=&data out=vds(keep= p_:
```

```

        &var) var= (&var);
1150 16748 +          partialdep data=&data out=eds(keep= p_
        ) exceptvar= (&var);
1151 16749 +          quit;
1152 16751 +          %let predvar=;
1153 16752 +          %let dsid=%sysfunc(open(&EM_DEC_DECMETA(wher
        e=(_TYPE_='PREDICTED'))));
1154 16753 +          %let varnum=%sysfunc(varnum(&dsid, VARIABLE
        E));
1155 16754 +          %do %while(^ %sysfunc(fetch(&dsid)));
1156 16755 +          %let variable = %sysfunc(getvarc(&dsid,
        &varnum));
1157 16756 +          %let predvar = &predvar &variable;
1158 16757 +          %end;
1159 16758 +          %let dsid = %sysfunc(close(&dsid));
1160 16760 +          data fds; set fds; keep &predvar; run;
1161 16761 +          data vds; set vds; keep &predvar; run;
1162 16762 +          data eds; set eds; keep &predvar; run;
1163 16765 +          %compute_iact_sub(ds1=fds, ds2=vds, ds3=eds
        , nc=&nclasses, outds=h);
1164 16767 +          /* generates table same size as training da
        ta -- too large to plot; removing for now
1165 16768 +          %generatePartialDependencyTable(iteration=&
        v, ds1=vds, var=&var); */
1166 16770 +          data h;
1167 16771 +          set h;
1168 16772 +          length name $ 32;
1169 16773 +          name = "&var";
1170 16774 +          run;
1171 16775 +          data &outds;
1172 16776 +          set
1173 16777 +          %if &v ne 1 %then %do;
1174 16778 +          &outds
1175 16779 +          %end;
1176 16780 +          h;
1177 16781 +          run;

```



```

1178 16783 +      %end;
1179 16784 +%mend;
1180 16786 +%macro compute_iact_sub(ds1=, ds2=, ds3=, nc=, outd
      s=);
1181 16788 +          %if &nc eq 0 %then %do;
1182 16789 +              data ads; set &ds1; array r p_;; keep
      a; a = r(1); run;
1183 16790 +              data bds; set &ds2; array r p_;; keep
      b; b = r(1); run;
1184 16791 +              data cds; set &ds3; array r p_;; keep
      c; c = r(1); run;
1185 16792 +              data mds; merge ads bds cds;          r
      un;
1186 16794 +              proc stdize data= mds method=mean out=
      sds;
1187 16795 +                  var a b c;
1188 16796 +              run;
1189 16798 +              data &outds;
1190 16799 +                  retain ss 0  sf 0;
1191 16800 +                  set sds end=the_end;
1192 16801 +                  keep H;
1193 16803 +                  s = a - b - c;
1194 16804 +                  ss = ss + s*s;
1195 16805 +                  sf = sf + a * a;
1196 16807 +                  if the_end ne 0 then do;
1197 16808 +                      H = ss/sf;
1198 16809 +                      output;
1199 16810 +                  end;
1200 16811 +              run;
1201 16812 +          %end;
1202 16814 +          %else %do;  * categorical response. nclasse
      s > 0 ;
1203 16815 +              data ads;
1204 16816 +                  set &ds1;
1205 16817 +                  array r{*} p_;;
1206 16818 +                  keep a;;

```

```

1207 16819 +           %do j = 1 %to &nclasses;
1208 16820 +           a&j = r(&j);
1209 16821 +           %end;
1210 16822 +       run;
1211 16823 +       data bds;
1212 16824 +           set &ds2;
1213 16825 +           array r{*} p_;;
1214 16826 +           keep b;;
1215 16827 +           %do j = 1 %to &nclasses;
1216 16828 +           b&j = r(&j);
1217 16829 +           %end;
1218 16830 +       run;
1219 16831 +       data cds;
1220 16832 +           set &ds3;
1221 16833 +           array r{*} p_;;
1222 16834 +           keep c;;
1223 16835 +           %do j = 1 %to &nclasses;
1224 16836 +           c&j = r(&j);
1225 16837 +           %end;
1226 16838 +       run;
1227 16840 +       data mds;
1228 16841 +           merge ads bds cds;
1229 16842 +       run;
1230 16843 +       proc stdize data=mds method=mean out=
1231 16844 +           sds;
1232 16845 +           var a: b: c;;
1233 16847 +       run;
1234 16848 +       data &outds;
1235 16849 +           retain ss 0 sf 0;
1236 16850 +           set sds end=the_end;
1237 16851 +           array ra a;;
1238 16852 +           array rb b;;
1239 16853 +           array rc c;;
1240 16855 +           keep H;
1241 16856 +           do j = 1 to dim(ra);
               s = ra(j) - rb(j) - rc(j);

```

```

1242 16857 +          ss = ss + s*s;
1243 16858 +          sf = sf + ra(j) * ra(j);
1244 16859 +          end;
1245 16861 +          if the_end ne 0 then do;
1246 16862 +              H = ss/sf;
1247 16863 +              output;
1248 16864 +          end;
1249 16865 +          run;
1250 16866 +          %end;
1251 16867 +%mend;
1252 16869 +%macro score;
1253 16871 +      /* retrieve target information */
1254 16872 +      %let dsid=%sysfunc(open(&EM_DEC_DECMETA(where=(
TYPE_='TARGET'))));
1255 16874 +      %let vn_event =%sysfunc(varnum(&dsid, EVENT));
1256 16875 +      %let vn_target_type = %sysfunc(varnum(&dsid, TYP
E));
1257 16876 +      %let vn_target_format = %sysfunc(varnum(&dsid, F
ORMAT));
1258 16877 +      %let vn_target_level  = %sysfunc(varnum(&dsid, L
EVEL));
1259 16878 +      %do %while(^ %sysfunc(fetch(&dsid)));
1260 16879 +          %let temp = %nrquote(%sysfunc(getvarc(&dsid,
&vn_event)));
1261 16880 +          %let Target_Event = %nrquote(%sysfunc(tranwr
d(&temp, %str(%), "")));
1262 16881 +          %let Target_Type = %sysfunc(getvarc(&dsid, &
vn_target_type));
1263 16882 +          %let Target_Format = %sysfunc(getvarc(&dsid,
&vn_target_format));
1264 16883 +          %let Target_Level = %sysfunc(getvarc(&dsid, &
vn_target_level));
1265 16884 +      %end;
1266 16885 +      %let dsid = %sysfunc(close(&dsid));
1267 16887 +      /* if subSeries=ITERATIONS and iterationNum not
specified, exception should be thrown */

```

```

1268 16888 +    %if ((&EM_PROPERTY_SUBSERIES eq ITERATIONS) and
            (&EM_PROPERTY_ITERATIONNUM eq . )) %then %do;
1269 16889 +        %let EMEXCEPTIONSTRING = exception.server.E
            MTOOL.BOOST.NOITERATIONNUM;
1270 16890 +        %put &em_codebar;
1271 16891 +        %let errormsg = %sysfunc(sasmsg(sashelp.dmi
            ne, error_noiterationnum_note, NOQUOTE));
1272 16892 +        %put &errormsg;
1273 16893 +        %put &em_codebar;
1274 16894 +        %goto doendm;
1275 16895 +    %end;
1276 16897 +    /* score based on selected subseries */
1277 16898 +    %selectSubseries;
1278 16900 +    /* detect variables that have interaction with o
            ther input variables in model;    */
1279 16901 +    /* also used to calculate 1 way partial dependen
            cy statistics    */
1280 16902 +    %if %symexist(EM_PROPERTY_CREATEHSTAT) %then %do
            ;
1281 16903 +        %if &EM_PROPERTY_CREATEHSTAT eq Y %then %do;
1282 16904 +            %compute_iact_h(data=&EM_IMPORT_DATA, model=
            &EM_USER_MODEL, outds=iact);
1283 16905 +        %end;
1284 16906 +    %end;
1285 16908 +    /* determine whether priors were used during mod
            elling */
1286 16909 +    %let usePriors = N;
1287 16910 +    data _null_;
1288 16911 +        set &EM_DEC_DECMETA(where=(_TYPE_='DECPRIOR'))
            ;
1289 16912 +        call symput('usePriors', strip(USE));
1290 16913 +    run;
1291 16915 +    /* update scorecode with code to calculated unad
            justed residual variables if priors were detected */
1292 16916 +    %if &usePriors eq Y %then %do;
1293 16917 +        filename temp catalog 'sashelp.emutil.em_make

```

```

        unadjustedresidualvars.source';
1294 16918 +      %include temp;
1295 16919 +      filename temp;
1296 16921 +      %EM_GETNAME(key=ADJUSTEDRESIDUALS, type=FILE,
        extension=sas);
1297 16922 +      filename adjref "&EM_USER_ADJUSTEDRESIDUALS";
1298 16923 +      %makeUnadjustedResidualVars(target=%EM_TARGET
        , decmeta=&EM_DEC_DECMETA, fref=adjref);
1299 16925 +      /* append adjusted residual code to already p
        opulated flowscorecode */
1300 16926 +      filename temp catalog 'sashelp.emutil.em_copy
        file.source';
1301 16927 +      %include temp;
1302 16928 +      filename temp;
1303 16930 +      filename fref "&EM_FILE_EMFLOWSCORECODE";
1304 16931 +      %em_copyfile(infref=adjref, outfref=fref, app
        end=Y);
1305 16932 +      filename adjref;
1306 16933 +      filename fref;
1307 16935 +      %end;
1308 16937 +      /* set all Q variables created by proc arbor to
        have a role of ASSESS */
1309 16938 +      %let numLevels = 0;
1310 16939 +      data _null_;
1311 16940 +          set &EM_DEC_DECMETA end=eof;
1312 16941 +          where _TYPE_ = 'RESIDUAL';
1313 16942 +          call symput('res_vars'!!strip(put(_N_,BEST.)),
        strip(Variable));
1314 16943 +          if eof then
1315 16944 +              call symput('numLevels', strip(put(_N_,BEST.
        )));
1316 16945 +      run;
1317 16947 +      %do i=1 %to &numLevels;
1318 16948 +          %let qvar = &&res_vars&i;
1319 16949 +          %let qvar = %substr(&qvar,2);
1320 16950 +          %let qvar = Q&qvar;

```

```

1321 16951 +      %em_metachange(name=&qvar, role=ASSESS);
1322 16952 +      %end;
1323 16954 +      /* merge H Statistic into the outimportance data
        set */
1324 16955 +      %EM_GETNAME(key=IMPORTANCE, type=DATA);
1325 16956 +      %if %symexist(EM_PROPERTY_CREATEHSTAT) %then %do
        ;
1326 16957 +          %if &EM_PROPERTY_CREATEHSTAT eq Y %then %do;
1327 16958 +          %merge_imp_h(iactds=iact, impds=&EM_USER_IMP
        ORTANCE);
1328 16959 +      %end;
1329 16960 +      %end;
1330 16962 +      /* add labels to importance table */
1331 16963 +      data &EM_USER_IMPORTANCE;
1332 16964 +          set &EM_USER_IMPORTANCE;
1333 16965 +          label  NAME = "%sysfunc(sasmsg(sashelp.dmine,
        meta_name_vlabel, noquote))"
1334 16966 +          LABEL = "%sysfunc(sasmsg(sashelp.dmine,
        meta_label_vlabel, noquote))"
1335 16967 +          NRULES = "%sysfunc(sasmsg(sashelp.dmine
        , rpt_nrules_vlabel, noquote))"
1336 16968 +          IMPORTANCE = "%sysfunc(sasmsg(sashelp.d
        mine, rpt_importance_vlabel, noquote))"
1337 16969 +          %if %symexist(EM_PROPERTY_CREATEHSTAT)
        %then %do;
1338 16970 +          %if &EM_PROPERTY_CREATEHSTAT eq Y %th
        en %do;
1339 16971 +          H = "%sysfunc(sasmsg(sashelp.dmine,
        rpt_h_vlabel, noquote))"
1340 16972 +          %end;
1341 16973 +          %end;
1342 16974 +          %if &EM_IMPORT_VALIDATE ne %then %do;
1343 16975 +          VIMPORTANCE = "%sysfunc(sasmsg(sashel
        p.dmine, rpt_vimportance_vlabel, noquote))"
1344 16976 +          RATIO = "%sysfunc(sasmsg(sashelp.dmin
        e, rpt_ratio_vlabel, noquote))"

```

```

1345 16977 +           %end;
1346 16978 +           %let nsurrs = ;
1347 16979 +           %if &EM_PROPERTY_NSURRS ne %then %do;
1348 16980 +           %let numInputs = %sysevalf(&EM_NUM_BINARY_INPUT + &EM_NUM_ORDINAL_INPUT + &EM_NUM_INTERVAL_INPUT + &EM_NUM_NOMINAL_INPUT);
1349 16981 +           %let nsurrs = %sysevalf(%sysfunc(min(&EM_PROPERTY_NSURRS, (&numInputs -1 ))));
1350 16982 +           %if &nsurrs gt 0 %then %do;
1351 16983 +           NSURROGATES = "%sysfunc(sasmsg(sashelp.dmine, rpt_nsurrogates_vlabel, noquote))";
1352 16984 +           %end;
1353 16985 +           %end;
1354 16986 +           ;
1355 16987 +   run;
1356 16989 +   /* print outimportance dataset to output window */
1357 16990 +   %let title10 = %sysfunc(sasmsg(sashelp.dmine, rpt_variableImportance_title, NOQUOTE));
1358 16991 +   %if &EM_PROPERTY_NSURRS gt 0 %then %do;
1359 16992 +       title10 "&title10";
1360 16994 +       %if &ni gt 0 %then %do;
1361 16995 +           proc print data=&EM_USER_IMPORTANCE (where=(nrules>0) OR (nsurrogates > 0)
1362 16996 +               %if %symexist(EM_PROPERTY_CREATEHSTAT) %then %do;
1363 16997 +               %if &EM_PROPERTY_CREATEHSTAT eq Y %then %do;
1364 16998 +                   OR (H ne .)
1365 16999 +               %end;
1366 17000 +           %end;
1367 17001 +       ));
1368 17002 +   %end;
1369 17003 +   %else %do;
1370 17004 +       proc print data=&EM_USER_IMPORTANCE (where=(nrules>0) OR (nsurrogates > 0));

```

```

1371 17005 +      %end;
1372 17006 +      run;
1373 17007 +      title10;
1374 17008 +      %end;
1375 17009 +      %else %do;
1376 17010 +          title10 "&title10";
1377 17011 +          %if &ni gt 0 %then %do;
1378 17012 +              proc print data=&EM_USER_IMPORTANCE (where=(
                    (nrules>0)
1379 17013 +                  %if %symexist(EM_PROPERTY_CREATEHSTAT) %then
                    %do;
1380 17014 +                      %if &EM_PROPERTY_CREATEHSTAT eq Y %then %d
                    o;
1381 17015 +                      OR (H ne .)
1382 17016 +                      %end;
1383 17017 +                      %end;
1384 17018 +                      ));
1385 17019 +                      %end;
1386 17020 +                      %else %do;
1387 17021 +                          proc print data=&EM_USER_IMPORTANCE (where=(
                    (nrules>0)));
1388 17022 +                      %end;
1389 17023 +                      run;
1390 17024 +                      title10;
1391 17025 +                      %end;
1392 17027 +      /* generate EM_USER_SUBFIT dataset to plot train
                    and validation data across iterations*/
1393 17028 +      %createSubFit;
1394 17030 +      /* generate fit statistics for train, valid and
                    test datasets */
1395 17031 +      %createFitStatistics;
1396 17033 +      /* refresh exports */
1397 17034 +      /* variable selection based on importance value
                    s */
1398 17035 +      %if &EM_PROPERTY_VARSELECTION eq Y %then %do;
1399 17036 +          %let dsid = %sysfunc(open(&EM_USER_IMPORTANCE

```



```

    ));
1400 17037 +      %if &dsid %then %do;
1401 17038 +          %let obs= %sysfunc(fetch(&dsid));
1402 17039 +          %let imp_num = %sysfunc(VARNUM(&dsid, IMPOR
TANCE));
1403 17040 +          %let var_num = %sysfunc(VARNUM(&dsid, NAME)
);
1404 17041 +          %let nobs = %sysfunc(ATTRN(&dsid, NOBS));
1405 17043 +          %if ((&imp_num ne 0 ) AND (&var_num ne 0))
%then %do;
1406 17044 +              %do %while(&nobs=0);
1407 17045 +                  %let nobs = %eval(&nobs-1);
1408 17046 +                  %let imp_value = %sysfunc(getvarn(&dsi
d, &imp_num));
1409 17047 +                  %let varname = %upcase(%sysfunc(getvar
c(&dsid, &var_num)));
1410 17049 +                  %if &imp_value lt 0.05 %then %do;
1411 17050 +                      %em_metachange(name=&varname, role=R
EJECTED);
1412 17051 +                  %end;
1413 17052 +                  %else %do;
1414 17053 +                      %em_metachange(name=&varname, role=I
NPUT);
1415 17054 +                  %end;
1416 17055 +                  %let obs= %sysfunc(fetch(&dsid));
1417 17056 +              %end;
1418 17057 +          %end;
1419 17058 +      %end;
1420 17059 +      %if &dsid %then %let dsid= %sysfunc(close(&ds
id));
1421 17060 +      %end;
1422 17062 +      /* build reports dependent on subseries selectio
n */
1423 17063 +      %EM_REPORT(key=SUBFIT, viewtype=LINEPLOT, block=
MODEL, view=1, X=_ITERATION_, Y=_ASE_, group=dataRole, aut
odisplay=Y, xref=&ntrees, DESCRIPTION=SUBFIT);

```

```

1424 17064 + %EM_REPORT(VIEW=1, Y=_NW_, xref=&ntrees);
1425 17065 + %EM_REPORT(VIEW=1, Y=_MISC_, xref=&ntrees);
1426 17066 + %EM_REPORT(VIEW=1, Y=_MAX_, xref=&ntrees);
1427 17067 + %EM_REPORT(VIEW=1, Y=_SSE_, xref=&ntrees);
1428 17068 + %EM_REPORT(VIEW=1, Y=_RASE_, xref=&ntrees);
1429 17069 + %EM_REPORT(VIEW=1, Y=_APROF_, xref=&ntrees);
1430 17070 + %EM_REPORT(VIEW=1, Y=_PROF_, xref=&ntrees);
1431 17071 + %EM_REPORT(VIEW=1, Y=_PASE_, xref=&ntrees);
1432 17072 + %EM_REPORT(VIEW=1, Y=_PMISC_, xref=&ntrees);
1433 17074 + /* build importance table including H statistics
      for display */
1434 17075 + %EM_REPORT(key=IMPORTANCE, viewtype=DATA, block=
      MODEL, DESCRIPTION=IMPORTANCE, AUTODISPLAY=Y);
1435 17077 + %doendm;
1436 17078 +%mend score;
1437 NOTE: %INCLUDE (level 1) ending.
1438 NOTE: Fileref TEMP has been deassigned.
1439 NOTE: 3322312 kilobytes of physical memory.
1440 NOTE: Will use 17497 out of 17497 training cases.
1441 NOTE: Using memory pool with 128266240 bytes.
1442 NOTE: Will not search for split on variable M_Variable.
1443 NOTE: Acceptable cases have the same value.
1444 NOTE: Option MINCATSIZE=5 may apply.
1445 NOTE: Will not search for split on variable M_Variable.
1446 NOTE: Acceptable cases have the same value.
1447 NOTE: Option MINCATSIZE=5 may apply.
1448 NOTE: Will not search for split on variable M_Variable.
1449 NOTE: Acceptable cases have the same value.
1450 NOTE: Option MINCATSIZE=5 may apply.
1451 NOTE: Will not search for split on variable M_Variable.
1452 NOTE: Acceptable cases have the same value.
1453 NOTE: Option MINCATSIZE=5 may apply.
1454 NOTE: Will not search for split on variable M_Variable.
1455 NOTE: Acceptable cases have the same value.
1456 NOTE: Option MINCATSIZE=5 may apply.
1457 NOTE: Will not search for split on variable M_Variable.

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1458 NOTE: Acceptable cases have the same value.
1459 NOTE: Option MINCATSIZE=5 may apply.
1460 NOTE: Will not search for split on variable M_Variable.
1461 NOTE: Acceptable cases have the same value.
1462 NOTE: Option MINCATSIZE=5 may apply.
1463 NOTE: Will not search for split on variable M_Variable.
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1501 NOTE: Option MINCATSIZE=5 may apply.
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1506 NOTE: Acceptable cases have the same value.
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1511 NOTE: Will not search for split on variable M_Variable.
1512 NOTE: Acceptable cases have the same value.
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1514 NOTE: Will not search for split on variable M_Variable.
1515 NOTE: Acceptable cases have the same value.
1516 NOTE: Option MINCATSIZE=5 may apply.
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1518 NOTE: Acceptable cases have the same value.
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1523 NOTE: Will not search for split on variable M_Variable.
1524 NOTE: Acceptable cases have the same value.
1525 NOTE: Option MINCATSIZE=5 may apply.
1526 NOTE: Will not search for split on variable M_Variable.
1527 NOTE: Acceptable cases have the same value.
1528 NOTE: Option MINCATSIZE=5 may apply.
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1530 NOTE: Acceptable cases have the same value.
1531 NOTE: Option MINCATSIZE=5 may apply.
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1533 NOTE: Acceptable cases have the same value.
1534 NOTE: Option MINCATSIZE=5 may apply.
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1545 NOTE: Acceptable cases have the same value.
1546 NOTE: Option MINCATSIZE=5 may apply.
1547 NOTE: Will not search for split on variable M_Variable.
1548 NOTE: Acceptable cases have the same value.
1549 NOTE: Option MINCATSIZE=5 may apply.
1550 NOTE: Will not search for split on variable M_Variable.
1551 NOTE: Acceptable cases have the same value.
1552 NOTE: Option MINCATSIZE=5 may apply.
1553 NOTE: Will not search for split on variable M_Variable.
1554 NOTE: Acceptable cases have the same value.
1555 NOTE: Option MINCATSIZE=5 may apply.
1556 NOTE: Will not search for split on variable M_Variable.
1557 NOTE: Acceptable cases have the same value.
1558 NOTE: Option MINCATSIZE=5 may apply.
1559 NOTE: Will not search for split on variable M_Variable.
1560 NOTE: Acceptable cases have the same value.
1561 NOTE: Option MINCATSIZE=5 may apply.
1562 NOTE: Will not search for split on variable M_Variable.
1563 NOTE: Acceptable cases have the same value.
1564 NOTE: Option MINCATSIZE=5 may apply.
1565 NOTE: Will not search for split on variable M_Variable.

1566 NOTE: Acceptable cases have the same value.
1567 NOTE: Option MINCATSIZE=5 may apply.
1568 NOTE: Will not search for split on variable M_Variable.
1569 NOTE: Acceptable cases have the same value.
1570 NOTE: Option MINCATSIZE=5 may apply.
1571 NOTE: Will not search for split on variable M_Variable.
1572 NOTE: Acceptable cases have the same value.
1573 NOTE: Option MINCATSIZE=5 may apply.
1574 NOTE: Will not search for split on variable M_Variable.
1575 NOTE: Acceptable cases have the same value.
1576 NOTE: Option MINCATSIZE=5 may apply.
1577 NOTE: Will not search for split on variable M_Variable.
1578 NOTE: Acceptable cases have the same value.
1579 NOTE: Option MINCATSIZE=5 may apply.
1580 NOTE: Will not search for split on variable M_Variable.
1581 NOTE: Acceptable cases have the same value.
1582 NOTE: Option MINCATSIZE=5 may apply.
1583 NOTE: Will not search for split on variable M_Variable.
1584 NOTE: Acceptable cases have the same value.
1585 NOTE: Option MINCATSIZE=5 may apply.
1586 NOTE: Will not search for split on variable M_Variable.
1587 NOTE: Acceptable cases have the same value.
1588 NOTE: Option MINCATSIZE=5 may apply.
1589 NOTE: Will not search for split on variable M_Variable.
1590 NOTE: Acceptable cases have the same value.
1591 NOTE: Option MINCATSIZE=5 may apply.
1592 NOTE: Passed training data 250 times.
1593 NOTE: Current TREEBOOST model contains 50 trees.
1594 NOTE: Training used 1938920 bytes of work memory.
1595 NOTE: Current TREEBOOST model contains 42 trees.
1596 NOTE: Created macro variable NCLASSES equal to 2.
1597 NOTE: Created macro variable NI equal to 4.
1598 NOTE: Created macro variable NITSASE equal to 50.
1599 NOTE: Created macro variable NITSMISC equal to 42.
1600 NOTE: Created macro variable NITSPROFIT equal to 0.
1601 A profit/loss matrix must be defined for AssessMeasure=PRO

FIT/LOSS

1602 The value for Assessment Measure has been reset to DECISION.

1603 NOTE: Current TREEBOOST model contains 43 trees.

1604 NOTE: External file /home/u63452984/case-study-s2192852/Workspaces/EMWS3/Boost/EMFLOWSCORE.sas opened.

1605 NOTE: External file /home/u63452984/case-study-s2192852/Workspaces/EMWS3/Boost/EMPUBLISHSCORE.sas opened.

1606 NOTE: The data set WORK.SUBFIT has 50 observations and 19 variables.

1607 NOTE: The data set EMWS3.BOOST_IMPORTANCE has 6 observations and 6 variables.

1608 NOTE: The data set EMWS3.BOOST_MODEL has 7671 observations and 4 variables.

1609 NOTE: The data set WORK.FIT_TRAIN has 1 observations and 10 variables.

1610 NOTE: The data set WORK.FDS has 17497 observations and 2 variables.

1611 NOTE: The data set WORK.FIT_VALID has 1 observations and 8 variables.

1612

1613

1614 NOTE: There were 17497 observations read from the data set EMWS3.PART2_TRAIN.

1615 NOTE: The data set WORK._NAMEDAT has 2 observations and 5 variables.

1616 NOTE: PROCEDURE ARBOR used (Total process time):

1617 real time 2.98 seconds

1618 user cpu time 2.95 seconds

1619 system cpu time 0.01 seconds

1620 memory 158481.62k

1621 OS Memory 169620.00k

1622 Timestamp 07/01/2024 06:40:15 AM

1623 Step Count 1 Switch Count 0

1624 Page Faults 0

1625 Page Reclaims 2571

1626	Page Swaps	0	
1627	Voluntary Context Switches	101	
1628	Involuntary Context Switches	2	
1629	Block Input Operations	800	
1630	Block Output Operations	3280	
1631			
1632			
1633			
1634	NOTE: Deleting WORK._BOOSTDMDB (memtype=CATALOG).		
1635			
1636	NOTE: PROCEDURE DATASETS used (Total process time):		
1637	real time	0.00 seconds	
1638	user cpu time	0.00 seconds	
1639	system cpu time	0.00 seconds	
1640	memory	158481.62k	
1641	OS Memory	169620.00k	
1642	Timestamp	07/01/2024 06:40:15 AM	
1643	Step Count	1	Switch Count 0
1644	Page Faults	0	
1645	Page Reclaims	57	
1646	Page Swaps	0	
1647	Voluntary Context Switches	0	
1648	Involuntary Context Switches	0	
1649	Block Input Operations	0	
1650	Block Output Operations	8	
1651			
1652			
1653			
1654	NOTE: There were 1 observations read from the data set EMW S3.BOOST_IMP_CHURN_DM.		
1655	WHERE _TYPE_='DECPRIOR';		
1656	NOTE: DATA statement used (Total process time):		
1657	real time	0.00 seconds	
1658	user cpu time	0.00 seconds	
1659	system cpu time	0.00 seconds	
1660	memory	158481.62k	


```

1661      OS Memory          169620.00k
1662      Timestamp          07/01/2024 06:40:15 AM
1663      Step Count          1      Switch Count    0
1664      Page Faults         0
1665      Page Reclaims       62
1666      Page Swaps          0
1667      Voluntary Context Switches    2
1668      Involuntary Context Switches  0
1669      Block Input Operations        0
1670      Block Output Operations       0
1671
1672
1673
1674 NOTE: There were 2 observations read from the data set EMW
      S3.BOOST_IMP_CHURN_DM.
1675      WHERE _TYPE_='RESIDUAL';
1676 NOTE: DATA statement used (Total process time):
1677      real time          0.00 seconds
1678      user cpu time      0.00 seconds
1679      system cpu time    0.00 seconds
1680      memory            158481.62k
1681      OS Memory          169620.00k
1682      Timestamp          07/01/2024 06:40:15 AM
1683      Step Count          1      Switch Count    0
1684      Page Faults         0
1685      Page Reclaims       61
1686      Page Swaps          0
1687      Voluntary Context Switches    3
1688      Involuntary Context Switches  0
1689      Block Input Operations        0
1690      Block Output Operations       0
1691
1692
1693
1694 NOTE: The data set WORK.EM_METACHANGE has 1 observations a
      nd 9 variables.

```

```

1695 NOTE: DATA statement used (Total process time):
1696     real time             0.00 seconds
1697     user cpu time         0.00 seconds
1698     system cpu time       0.00 seconds
1699     memory                 158481.62k
1700     OS Memory             169620.00k
1701     Timestamp             07/01/2024 06:40:15 AM
1702     Step Count             1   Switch Count   0
1703     Page Faults            0
1704     Page Reclaims          94
1705     Page Swaps             0
1706     Voluntary Context Switches 0
1707     Involuntary Context Switches 0
1708     Block Input Operations 0
1709     Block Output Operations 264
1710
1711
1712
1713 NOTE: There were 1 observations read from the data set WORK.
      EM_METACHANGE.
1714 NOTE: The data set WORK.EM_METACHANGE has 2 observations and
      9 variables.
1715 NOTE: DATA statement used (Total process time):
1716     real time             0.00 seconds
1717     user cpu time         0.01 seconds
1718     system cpu time       0.00 seconds
1719     memory                 158481.62k
1720     OS Memory             169620.00k
1721     Timestamp             07/01/2024 06:40:15 AM
1722     Step Count             1   Switch Count   0
1723     Page Faults            0
1724     Page Reclaims          130
1725     Page Swaps             0
1726     Voluntary Context Switches 0
1727     Involuntary Context Switches 0
1728     Block Input Operations 0

```

```

1729          Block Output Operations                264
1730
1731
1732
1733 NOTE: There were 6 observations read from the data set EMW
      S3.BOOST_IMPORTANCE.
1734 NOTE: The data set EMWS3.BOOST_IMPORTANCE has 6 observatio
      ns and 6 variables.
1735 NOTE: DATA statement used (Total process time):
1736          real time                0.01 seconds
1737          user cpu time              0.00 seconds
1738          system cpu time            0.00 seconds
1739          memory                    158481.62k
1740          OS Memory                 169620.00k
1741          Timestamp                 07/01/2024 06:40:15 AM
1742          Step Count                  1  Switch Count    0
1743          Page Faults                  0
1744          Page Reclaims                812
1745          Page Swaps                   0
1746          Voluntary Context Switches   36
1747          Involuntary Context Switches 0
1748          Block Input Operations       288
1749          Block Output Operations      264
1750
1751
1752
1753 NOTE: There were 4 observations read from the data set EMW
      S3.BOOST_IMPORTANCE.
1754          WHERE nrules>0;
1755 NOTE: The PROCEDURE PRINT printed page 4.
1756 NOTE: PROCEDURE PRINT used (Total process time):
1757          real time                0.00 seconds
1758          user cpu time              0.00 seconds
1759          system cpu time            0.00 seconds
1760          memory                    158481.62k
1761          OS Memory                 169620.00k

```

1762	Timestamp	07/01/2024 06:40:15 AM	
1763	Step Count	1	Switch Count 0
1764	Page Faults	0	
1765	Page Reclaims	55	
1766	Page Swaps	0	
1767	Voluntary Context Switches	9	
1768	Involuntary Context Switches	0	
1769	Block Input Operations	288	
1770	Block Output Operations	0	
1771			
1772			
1773			
1774	NOTE: Variable <code>_APROF_</code> is uninitialized.		
1775	NOTE: Variable <code>_PROF_</code> is uninitialized.		
1776	NOTE: Variable <code>_PASE_</code> is uninitialized.		
1777	NOTE: Variable <code>_PMISC_</code> is uninitialized.		
1778	NOTE: Variable <code>_NLEAVES_</code> is uninitialized.		
1779	WARNING: The variable <code>_NLEAVES_</code> in the DROP, KEEP, or RENAME list has never been referenced.		
1780	WARNING: The variable <code>_APROF_</code> in the DROP, KEEP, or RENAME list has never been referenced.		
1781	WARNING: The variable <code>_PROF_</code> in the DROP, KEEP, or RENAME list has never been referenced.		
1782	WARNING: The variable <code>_PASE_</code> in the DROP, KEEP, or RENAME list has never been referenced.		
1783	WARNING: The variable <code>_PMISC_</code> in the DROP, KEEP, or RENAME list has never been referenced.		
1784	NOTE: There were 50 observations read from the data set WORK.SUBFIT.		
1785	NOTE: The data set EMWS3.BOOST_SUBFIT has 50 observations and 8 variables.		
1786	NOTE: DATA statement used (Total process time):		
1787	real time	0.01 seconds	
1788	user cpu time	0.01 seconds	
1789	system cpu time	0.01 seconds	
1790	memory	158481.62k	

1791	OS Memory	169620.00k	
1792	Timestamp	07/01/2024 06:40:15 AM	
1793	Step Count	1	Switch Count 0
1794	Page Faults	0	
1795	Page Reclaims	1609	
1796	Page Swaps	0	
1797	Voluntary Context Switches	15	
1798	Involuntary Context Switches	0	
1799	Block Input Operations	0	
1800	Block Output Operations	264	
1801			
1802			
1803			
1804	NOTE: Variable _VAPROF_ is uninitialized.		
1805	NOTE: Variable _VPROF_ is uninitialized.		
1806	NOTE: Variable _VPASE_ is uninitialized.		
1807	NOTE: Variable _VPMISC_ is uninitialized.		
1808	NOTE: Variable _NLEAVES_ is uninitialized.		
1809	WARNING: The variable _NLEAVES_ in the DROP, KEEP, or RENAME list has never been referenced.		
1810	WARNING: The variable _VAPROF_ in the DROP, KEEP, or RENAME list has never been referenced.		
1811	WARNING: The variable _VPROF_ in the DROP, KEEP, or RENAME list has never been referenced.		
1812	WARNING: The variable _VPASE_ in the DROP, KEEP, or RENAME list has never been referenced.		
1813	WARNING: The variable _VPMISC_ in the DROP, KEEP, or RENAME list has never been referenced.		
1814	WARNING: The variable _VAPROF_ in the DROP, KEEP, or RENAME list has never been referenced.		
1815	WARNING: The variable _VPROF_ in the DROP, KEEP, or RENAME list has never been referenced.		
1816	WARNING: The variable _VPASE_ in the DROP, KEEP, or RENAME list has never been referenced.		
1817	WARNING: The variable _VPMISC_ in the DROP, KEEP, or RENAME list has never been referenced.		

1818 NOTE: There were 50 observations read from the data set WORK.SUBFIT.

1819 NOTE: The data set WORK.TEMPVALID has 50 observations and 8 variables.

1820 NOTE: DATA statement used (Total process time):

1821	real time	0.00 seconds	
1822	user cpu time	0.00 seconds	
1823	system cpu time	0.00 seconds	
1824	memory	158481.62k	
1825	OS Memory	169620.00k	
1826	Timestamp	07/01/2024 06:40:15 AM	
1827	Step Count	1	Switch Count 0
1828	Page Faults	0	
1829	Page Reclaims	1383	
1830	Page Swaps	0	
1831	Voluntary Context Switches	0	
1832	Involuntary Context Switches	0	
1833	Block Input Operations	0	
1834	Block Output Operations	264	

1835

1836

1837

1838 NOTE: There were 50 observations read from the data set EMWS3.BOOST_SUBFIT.

1839 NOTE: There were 50 observations read from the data set WORK.TEMPVALID.

1840 NOTE: The data set EMWS3.BOOST_SUBFIT has 100 observations and 8 variables.

1841 NOTE: DATA statement used (Total process time):

1842	real time	0.01 seconds	
1843	user cpu time	0.01 seconds	
1844	system cpu time	0.01 seconds	
1845	memory	158481.62k	
1846	OS Memory	169620.00k	
1847	Timestamp	07/01/2024 06:40:15 AM	
1848	Step Count	1	Switch Count 0

1849	Page Faults	0
1850	Page Reclaims	163
1851	Page Swaps	0
1852	Voluntary Context Switches	38
1853	Involuntary Context Switches	0
1854	Block Input Operations	288
1855	Block Output Operations	264
1856		
1857		
1858		
1859	NOTE: Deleting WORK.TEMPVALID (memtype=DATA).	
1860		
1861	NOTE: PROCEDURE DATASETS used (Total process time):	
1862	real time	0.00 seconds
1863	user cpu time	0.00 seconds
1864	system cpu time	0.00 seconds
1865	memory	158481.62k
1866	OS Memory	169620.00k
1867	Timestamp	07/01/2024 06:40:15 AM
1868	Step Count	1 Switch Count 0
1869	Page Faults	0
1870	Page Reclaims	49
1871	Page Swaps	0
1872	Voluntary Context Switches	0
1873	Involuntary Context Switches	0
1874	Block Input Operations	0
1875	Block Output Operations	8
1876		
1877		
1878		
1879	NOTE: Deleting WORK.SUBFIT (memtype=DATA).	
1880		
1881	NOTE: PROCEDURE DATASETS used (Total process time):	
1882	real time	0.00 seconds
1883	user cpu time	0.00 seconds
1884	system cpu time	0.00 seconds

1885	memory	158481.62k	
1886	OS Memory	169620.00k	
1887	Timestamp	07/01/2024 06:40:15 AM	
1888	Step Count	1	Switch Count 0
1889	Page Faults	0	
1890	Page Reclaims	48	
1891	Page Swaps	0	
1892	Voluntary Context Switches	0	
1893	Involuntary Context Switches	0	
1894	Block Input Operations	0	
1895	Block Output Operations	8	
1896			
1897			
1898			
1899	NOTE: There were 1 observations read from the data set WORK.FIT_TRAIN.		
1900	NOTE: There were 1 observations read from the data set WORK.FIT_VALID.		
1901	NOTE: The data set EMWS3.BOOST_EMOUTFIT has 1 observations and 18 variables.		
1902	NOTE: DATA statement used (Total process time):		
1903	real time	0.00 seconds	
1904	user cpu time	0.00 seconds	
1905	system cpu time	0.00 seconds	
1906	memory	158481.62k	
1907	OS Memory	169620.00k	
1908	Timestamp	07/01/2024 06:40:15 AM	
1909	Step Count	1	Switch Count 0
1910	Page Faults	0	
1911	Page Reclaims	164	
1912	Page Swaps	0	
1913	Voluntary Context Switches	18	
1914	Involuntary Context Switches	0	
1915	Block Input Operations	0	
1916	Block Output Operations	264	
1917			


```

1918
1919
1920 NOTE: Deleting WORK.FIT_VALID (memtype=DATA) .
1921
1922 NOTE: PROCEDURE DATASETS used (Total process time):
1923     real time           0.00 seconds
1924     user cpu time       0.00 seconds
1925     system cpu time     0.00 seconds
1926     memory              158481.62k
1927     OS Memory           169620.00k
1928     Timestamp           07/01/2024 06:40:15 AM
1929     Step Count          1   Switch Count   0
1930     Page Faults         0
1931     Page Reclaims       83
1932     Page Swaps          0
1933     Voluntary Context Switches  3
1934     Involuntary Context Switches 0
1935     Block Input Operations 0
1936     Block Output Operations 8
1937
1938
1939
1940 NOTE: There were 2 observations read from the data set WOR
      K.EM_METACHANGE.
1941 NOTE: The data set WORK.EM_METACHANGE has 3 observations a
      nd 9 variables.
1942 NOTE: DATA statement used (Total process time):
1943     real time           0.00 seconds
1944     user cpu time       0.00 seconds
1945     system cpu time     0.00 seconds
1946     memory              158481.62k
1947     OS Memory           169620.00k
1948     Timestamp           07/01/2024 06:40:15 AM
1949     Step Count          1   Switch Count   0
1950     Page Faults         0
1951     Page Reclaims       131

```

1952	Page Swaps	0
1953	Voluntary Context Switches	0
1954	Involuntary Context Switches	0
1955	Block Input Operations	0
1956	Block Output Operations	264
1957		
1958		
1959		
1960	NOTE: There were 3 observations read from the data set WORK.EM_METACHANGE.	
1961	NOTE: The data set WORK.EM_METACHANGE has 4 observations and 9 variables.	
1962	NOTE: DATA statement used (Total process time):	
1963	real time	0.00 seconds
1964	user cpu time	0.00 seconds
1965	system cpu time	0.00 seconds
1966	memory	158481.62k
1967	OS Memory	169620.00k
1968	Timestamp	07/01/2024 06:40:15 AM
1969	Step Count	1 Switch Count 0
1970	Page Faults	0
1971	Page Reclaims	130
1972	Page Swaps	0
1973	Voluntary Context Switches	0
1974	Involuntary Context Switches	0
1975	Block Input Operations	0
1976	Block Output Operations	264
1977		
1978		
1979		
1980	NOTE: There were 4 observations read from the data set WORK.EM_METACHANGE.	
1981	NOTE: The data set WORK.EM_METACHANGE has 5 observations and 9 variables.	
1982	NOTE: DATA statement used (Total process time):	
1983	real time	0.00 seconds

1984	user cpu time	0.01 seconds	
1985	system cpu time	0.00 seconds	
1986	memory	158481.62k	
1987	OS Memory	169620.00k	
1988	Timestamp	07/01/2024 06:40:15 AM	
1989	Step Count	1	Switch Count 0
1990	Page Faults	0	
1991	Page Reclaims	130	
1992	Page Swaps	0	
1993	Voluntary Context Switches	0	
1994	Involuntary Context Switches	0	
1995	Block Input Operations	0	
1996	Block Output Operations	264	
1997			
1998			
1999			
2000	NOTE: There were 5 observations read from the data set WORK.EM_METACHANGE.		
2001	NOTE: The data set WORK.EM_METACHANGE has 6 observations and 9 variables.		
2002	NOTE: DATA statement used (Total process time):		
2003	real time	0.00 seconds	
2004	user cpu time	0.00 seconds	
2005	system cpu time	0.00 seconds	
2006	memory	158481.62k	
2007	OS Memory	169620.00k	
2008	Timestamp	07/01/2024 06:40:15 AM	
2009	Step Count	1	Switch Count 0
2010	Page Faults	0	
2011	Page Reclaims	130	
2012	Page Swaps	0	
2013	Voluntary Context Switches	0	
2014	Involuntary Context Switches	0	
2015	Block Input Operations	0	
2016	Block Output Operations	264	
2017			

2018
2019
2020 NOTE: There were 6 observations read from the data set WORK.EM_METACHANGE.
2021 NOTE: The data set WORK.EM_METACHANGE has 7 observations and 9 variables.
2022 NOTE: DATA statement used (Total process time):
2023 real time 0.00 seconds
2024 user cpu time 0.00 seconds
2025 system cpu time 0.00 seconds
2026 memory 158481.62k
2027 OS Memory 169620.00k
2028 Timestamp 07/01/2024 06:40:15 AM
2029 Step Count 1 Switch Count 0
2030 Page Faults 0
2031 Page Reclaims 130
2032 Page Swaps 0
2033 Voluntary Context Switches 0
2034 Involuntary Context Switches 0
2035 Block Input Operations 0
2036 Block Output Operations 264
2037
2038
2039
2040 NOTE: There were 7 observations read from the data set WORK.EM_METACHANGE.
2041 NOTE: The data set WORK.EM_METACHANGE has 8 observations and 9 variables.
2042 NOTE: DATA statement used (Total process time):
2043 real time 0.00 seconds
2044 user cpu time 0.00 seconds
2045 system cpu time 0.00 seconds
2046 memory 158481.62k
2047 OS Memory 169620.00k
2048 Timestamp 07/01/2024 06:40:15 AM
2049 Step Count 1 Switch Count 0

2050	Page Faults	0
2051	Page Reclaims	130
2052	Page Swaps	0
2053	Voluntary Context Switches	0
2054	Involuntary Context Switches	0
2055	Block Input Operations	0
2056	Block Output Operations	264
2057		
2058		
2059		
2060	NOTE: The data set WORK.EM_USER_REPORT has 133 observations and 4 variables.	
2061	NOTE: DATA statement used (Total process time):	
2062	real time	0.02 seconds
2063	user cpu time	0.03 seconds
2064	system cpu time	0.00 seconds
2065	memory	158481.62k
2066	OS Memory	169620.00k
2067	Timestamp	07/01/2024 06:40:15 AM
2068	Step Count	1 Switch Count 0
2069	Page Faults	0
2070	Page Reclaims	214
2071	Page Swaps	0
2072	Voluntary Context Switches	0
2073	Involuntary Context Switches	0
2074	Block Input Operations	0
2075	Block Output Operations	264
2076		
2077		
2078		
2079	NOTE: There were 133 observations read from the data set WORK.EM_USER_REPORT.	
2080	NOTE: The data set WORK.EM_USER_REPORT has 266 observations and 4 variables.	
2081	NOTE: DATA statement used (Total process time):	
2082	real time	0.02 seconds

2083	user cpu time	0.02 seconds	
2084	system cpu time	0.00 seconds	
2085	memory	158481.62k	
2086	OS Memory	169620.00k	
2087	Timestamp	07/01/2024 06:40:15 AM	
2088	Step Count	1	Switch Count 0
2089	Page Faults	0	
2090	Page Reclaims	220	
2091	Page Swaps	0	
2092	Voluntary Context Switches	0	
2093	Involuntary Context Switches	0	
2094	Block Input Operations	0	
2095	Block Output Operations	264	
2096			
2097			
2098			
2099	NOTE: There were 266 observations read from the data set WORK.EM_USER_REPORT.		
2100	NOTE: The data set WORK.EM_USER_REPORT has 399 observations and 4 variables.		
2101	NOTE: DATA statement used (Total process time):		
2102	real time	0.02 seconds	
2103	user cpu time	0.03 seconds	
2104	system cpu time	0.01 seconds	
2105	memory	158481.62k	
2106	OS Memory	169620.00k	
2107	Timestamp	07/01/2024 06:40:15 AM	
2108	Step Count	1	Switch Count 0
2109	Page Faults	0	
2110	Page Reclaims	196	
2111	Page Swaps	0	
2112	Voluntary Context Switches	0	
2113	Involuntary Context Switches	0	
2114	Block Input Operations	0	
2115	Block Output Operations	520	
2116			

```

2117
2118
2119 NOTE: There were 399 observations read from the data set W
      ORK.EM_USER_REPORT.
2120 NOTE: The data set WORK.EM_USER_REPORT has 532 observation
      s and 4 variables.
2121 NOTE: DATA statement used (Total process time):
2122      real time          0.02 seconds
2123      user cpu time       0.02 seconds
2124      system cpu time     0.00 seconds
2125      memory              158481.62k
2126      OS Memory          169620.00k
2127      Timestamp          07/01/2024 06:40:15 AM
2128      Step Count                  1  Switch Count  0
2129      Page Faults                  0
2130      Page Reclaims                196
2131      Page Swaps                   0
2132      Voluntary Context Switches    0
2133      Involuntary Context Switches  0
2134      Block Input Operations        0
2135      Block Output Operations      528
2136
2137
2138
2139 NOTE: There were 532 observations read from the data set W
      ORK.EM_USER_REPORT.
2140 NOTE: The data set WORK.EM_USER_REPORT has 665 observation
      s and 4 variables.
2141 NOTE: DATA statement used (Total process time):
2142      real time          0.02 seconds
2143      user cpu time       0.03 seconds
2144      system cpu time     0.00 seconds
2145      memory              158481.62k
2146      OS Memory          169620.00k
2147      Timestamp          07/01/2024 06:40:15 AM
2148      Step Count                  1  Switch Count  0

```

2149	Page Faults	0	
2150	Page Reclaims	196	
2151	Page Swaps	0	
2152	Voluntary Context Switches	0	
2153	Involuntary Context Switches	0	
2154	Block Input Operations	0	
2155	Block Output Operations	776	
2156			
2157			
2158			
2159	NOTE: There were 665 observations read from the data set WORK.EM_USER_REPORT.		
2160	NOTE: The data set WORK.EM_USER_REPORT has 798 observations and 4 variables.		
2161	NOTE: DATA statement used (Total process time):		
2162	real time	0.02 seconds	
2163	user cpu time	0.02 seconds	
2164	system cpu time	0.00 seconds	
2165	memory	158481.62k	
2166	OS Memory	169620.00k	
2167	Timestamp	07/01/2024 06:40:15 AM	
2168	Step Count	1	Switch Count 0
2169	Page Faults	0	
2170	Page Reclaims	228	
2171	Page Swaps	0	
2172	Voluntary Context Switches	0	
2173	Involuntary Context Switches	0	
2174	Block Input Operations	0	
2175	Block Output Operations	776	
2176			
2177			
2178			
2179	NOTE: There were 798 observations read from the data set WORK.EM_USER_REPORT.		
2180	NOTE: The data set WORK.EM_USER_REPORT has 931 observations and 4 variables.		


```

2181 NOTE: DATA statement used (Total process time):
2182     real time             0.02 seconds
2183     user cpu time          0.03 seconds
2184     system cpu time        0.00 seconds
2185     memory                 158481.62k
2186     OS Memory             169620.00k
2187     Timestamp              07/01/2024 06:40:15 AM
2188     Step Count              1   Switch Count   0
2189     Page Faults             0
2190     Page Reclaims          228
2191     Page Swaps              0
2192     Voluntary Context Switches  0
2193     Involuntary Context Switches 0
2194     Block Input Operations    0
2195     Block Output Operations  1032
2196
2197
2198
2199 NOTE: There were 931 observations read from the data set W
      ORK.EM_USER_REPORT.
2200 NOTE: The data set WORK.EM_USER_REPORT has 1064 observatio
      ns and 4 variables.
2201 NOTE: DATA statement used (Total process time):
2202     real time             0.02 seconds
2203     user cpu time          0.02 seconds
2204     system cpu time        0.00 seconds
2205     memory                 158481.62k
2206     OS Memory             169620.00k
2207     Timestamp              07/01/2024 06:40:15 AM
2208     Step Count              1   Switch Count   0
2209     Page Faults             0
2210     Page Reclaims          260
2211     Page Swaps              0
2212     Voluntary Context Switches  0
2213     Involuntary Context Switches 0
2214     Block Input Operations    0

```

```

2215          Block Output Operations          1032
2216
2217
2218
2219 NOTE: There were 1064 observations read from the data set
      WORK.EM_USER_REPORT.
2220 NOTE: The data set WORK.EM_USER_REPORT has 1197 observatio
      ns and 4 variables.
2221 NOTE: DATA statement used (Total process time):
2222          real time          0.02 seconds
2223          user cpu time      0.03 seconds
2224          system cpu time    0.00 seconds
2225          memory             158481.62k
2226          OS Memory         169620.00k
2227          Timestamp         07/01/2024 06:40:15 AM
2228          Step Count                1  Switch Count  0
2229          Page Faults                0
2230          Page Reclaims              260
2231          Page Swaps                 0
2232          Voluntary Context Switches  0
2233          Involuntary Context Switches 0
2234          Block Input Operations      0
2235          Block Output Operations     1288
2236
2237
2238
2239 NOTE: There were 1197 observations read from the data set
      WORK.EM_USER_REPORT.
2240 NOTE: The data set WORK.EM_USER_REPORT has 1330 observatio
      ns and 4 variables.
2241 NOTE: DATA statement used (Total process time):
2242          real time          0.02 seconds
2243          user cpu time      0.03 seconds
2244          system cpu time    0.00 seconds
2245          memory             158481.62k
2246          OS Memory         169620.00k

```

```

2247      Timestamp                07/01/2024 06:40:15 AM
2248      Step Count                  1  Switch Count  0
2249      Page Faults                 0
2250      Page Reclaims               292
2251      Page Swaps                   0
2252      Voluntary Context Switches  0
2253      Involuntary Context Switches 0
2254      Block Input Operations       0
2255      Block Output Operations      1288
2256
2257
2258
2259 NOTE: There were 1330 observations read from the data set
      WORK.EM_USER_REPORT.
2260 NOTE: The data set WORK.EM_USER_REPORT has 1462 observatio
      ns and 4 variables.
2261 NOTE: DATA statement used (Total process time):
2262      real time                    0.02 seconds
2263      user cpu time                 0.03 seconds
2264      system cpu time              0.01 seconds
2265      memory                       158481.62k
2266      OS Memory                   169620.00k
2267      Timestamp                07/01/2024 06:40:15 AM
2268      Step Count                  1  Switch Count  0
2269      Page Faults                 0
2270      Page Reclaims               292
2271      Page Swaps                   0
2272      Voluntary Context Switches  0
2273      Involuntary Context Switches 0
2274      Block Input Operations       0
2275      Block Output Operations      1544
2276
2277
2278 17079  *-----
      -----*;
2279 17080  * End SCORE: Boost;

```

```

2280 17081  *-----
          -----*;
2281 17082
2282
2283 17083  proc sort data=WORK.EM_METACHANGE;
2284 17084  by key uname;
2285 17085  run;
2286
2287 NOTE: There were 8 observations read from the data set WOR
      K.EM_METACHANGE.
2288 NOTE: The data set WORK.EM_METACHANGE has 8 observations a
      nd 9 variables.
2289 NOTE: PROCEDURE SORT used (Total process time):
2290      real time          0.00 seconds
2291      user cpu time      0.00 seconds
2292      system cpu time    0.00 seconds
2293      memory             158481.62k
2294      OS Memory          169620.00k
2295      Timestamp          07/01/2024 06:40:15 AM
2296      Step Count                1  Switch Count  0
2297      Page Faults                0
2298      Page Reclaims             116
2299      Page Swaps                 0
2300      Voluntary Context Switches 0
2301      Involuntary Context Switches 0
2302      Block Input Operations      0
2303      Block Output Operations    264
2304
2305
2306 17086  filename x "/home/u63452984/case-study-s2192852/Wor
      kspaces/EMWS3/Boost/CDELTA_TRAIN.sas";
2307 17087  data _null_;
2308 17088  file x;
2309 17089  put 'if upcase(NAME) = "AGE" then do;';
2310 17090  put 'ROLE = "INPUT";';
2311 17091  put 'end;';

```

```

2312 17092 put 'else ';
2313 17093 put 'if upcase(NAME) = "IMP_TOTALSPENT" then do;';
2314 17094 put 'ROLE = "INPUT";';
2315 17095 put 'end;';
2316 17096 put 'else ';
2317 17097 put 'if upcase(NAME) = "MEMBERSHIPLEVEL" then do;';
2318 17098 put 'ROLE = "INPUT";';
2319 17099 put 'end;';
2320 17100 put 'else ';
2321 17101 put 'if upcase(NAME) = "M_VARIABLE" then do;';
2322 17102 put 'ROLE = "REJECTED";';
2323 17103 put 'end;';
2324 17104 put 'else ';
2325 17105 put 'if upcase(NAME) = "PAYMENTMETHOD" then do;';
2326 17106 put 'ROLE = "REJECTED";';
2327 17107 put 'end;';
2328 17108 put 'else ';
2329 17109 put 'if upcase(NAME) = "Q_IMP_CHURN0" then do;';
2330 17110 put 'ROLE = "ASSESS";';
2331 17111 put 'end;';
2332 17112 put 'else ';
2333 17113 put 'if upcase(NAME) = "Q_IMP_CHURN1" then do;';
2334 17114 put 'ROLE = "ASSESS";';
2335 17115 put 'end;';
2336 17116 put 'else ';
2337 17117 put 'if upcase(NAME) = "TOTALPURCHASES" then do;';
2338 17118 put 'ROLE = "INPUT";';
2339 17119 put 'end;';
2340 17120 run;
2341
2342 NOTE: The file X is:
2343      Filename=/home/u63452984/case-study-s2192852/Workspa
      ces/EMWS3/Boost/CDELTA_TRAIN.sas,
2344      Owner Name=u63452984,Group Name=oda,
2345      Access Permission=-rw-r--r--,
2346      Last Modified=07 January 2024 06:40:15

```

```

2347
2348 NOTE: 31 records were written to the file X.
2349     The minimum record length was 4.
2350     The maximum record length was 44.
2351 NOTE: DATA statement used (Total process time):
2352     real time             0.00 seconds
2353     user cpu time          0.00 seconds
2354     system cpu time        0.00 seconds
2355     memory                 158481.62k
2356     OS Memory              169620.00k
2357     Timestamp              07/01/2024 06:40:15 AM
2358     Step Count              1   Switch Count   0
2359     Page Faults             0
2360     Page Reclaims          30
2361     Page Swaps              0
2362     Voluntary Context Switches 5
2363     Involuntary Context Switches 0
2364     Block Input Operations   0
2365     Block Output Operations  8
2366
2367
2368 17121  filename x;
2369 NOTE: Fileref X has been deassigned.
2370
2371 17122  filename emflow "/home/u63452984/case-study-s219285
        2/Workspaces/EMWS3/Boost/EMFLOWSCORE.sas";
2372 17123  *-----
        -----*;
2373 17124  * Boost: Scoring DATA data;
2374 17125  *-----
        -----*;
2375 17126  data EMWS3.Boost_TRAIN
2376 17127  / view=EMWS3.Boost_TRAIN
2377 17128  ;
2378 17129  set EMWS3.Part2_TRAIN
2379 17130  ;

```

```

2380 17131 %inc emflow;
2381 NOTE: %INCLUDE (level 1) file EMFLOW is file /home/u634529
      84/case-study-s2192852/Workspaces/EMWS3/Boost/EMFLOWSCORE.
      sas.
2382 17132 +*****
      *****;
2383 17133 +*****
      *****;
      DECISION TREE SCORING CODE
2384 17134 +*****
      *****;
2385 17135 +
2386 17136 +*****
      *****;
      LENGTHS OF NEW CHARACTER VARIABLES
2387 17137 +LENGTH F_IMP_Churn $ 12;
2388 17138 +LENGTH I_IMP_Churn $ 12;
2389 17139 +LENGTH _WARN_ $ 4;
2390 17140 +
2391 17141 +*****
      *****;
      LABELS FOR NEW VARIABLES
2392 17142 +label P_IMP_Churn0 = 'Predicted: IMP_Churn=0' ;
2393 17143 + P_IMP_Churn0 = 0;
2394 17144 +label P_IMP_Churn1 = 'Predicted: IMP_Churn=1' ;
2395 17145 + P_IMP_Churn1 = 0;
2396 17146 +label Q_IMP_Churn0 = 'Unadjusted P: IMP_Churn=0' ;
2397 17147 + Q_IMP_Churn0 = 0;
2398 17148 +label Q_IMP_Churn1 = 'Unadjusted P: IMP_Churn=1' ;
2399 17149 + Q_IMP_Churn1 = 0;
2400 17150 +label R_IMP_Churn0 = 'Residual: IMP_Churn=0' ;
2401 17151 +label R_IMP_Churn1 = 'Residual: IMP_Churn=1' ;
2402 17152 +label F_IMP_Churn = 'From: IMP_Churn' ;
2403 17153 +label I_IMP_Churn = 'Into: IMP_Churn' ;
2404 17154 +label U_IMP_Churn = 'Unnormalized Into: IMP_Churn'
      ;
2405 17155 +label _WARN_ = 'Warnings' ;
2406 17156 +
2407 17157 +

```

```

2408 17158 +*****          TEMPORARY VARIABLES FOR FORMATTED VALUE
      S          *****;
2409 17159 +LENGTH _ARBFMT_12 $      12; DROP _ARBFMT_12;
2410 17160 +_ARBFMT_12 = ' '; /* Initialize to avoid warning. *
      /
2411 17161 +LENGTH _ARBFMT_8 $      8; DROP _ARBFMT_8;
2412 17162 +_ARBFMT_8 = ' '; /* Initialize to avoid warning. */
2413 17163 +
2414 17164 +
2415 17165 +_ARBFMT_12 = PUT( IMP_Churn , BEST12.);
2416 17166 + %DMNORMCP( _ARBFMT_12, F_IMP_Churn );
2417 17167 +
2418 17168 + DROP _ARB_F_;
2419 17169 + DROP _ARB_BADF_;
2420 17170 +      _ARB_F_ = -0.622623377;
2421 17171 +      _ARB_BADF_ = 0;
2422 17172 +*****          ASSIGN OBSERVATION TO NODE
      *****;
2423 17173 + DROP _ARB_P_;
2424 17174 + _ARB_P_ = 0;
2425 17175 + DROP _ARB_PPATH_; _ARB_PPATH_ = 1;
2426 17176 +
2427 17177 +***** LEAF      1  NODE      342 *****;
2428 17178 +IF _ARB_BADF_ EQ 0 THEN DO;
2429 17179 +
2430 17180 +      DROP _BRANCH_;
2431 17181 +      _BRANCH_ = -1;
2432 17182 +      IF NOT MISSING(TotalPurchases ) AND
2433 17183 +      TotalPurchases <                      15.5 THEN DO;
2434 17184 +      _BRANCH_ =      1;
2435 17185 +      END;
2436 17186 +      IF _BRANCH_ LT 0 THEN DO;
2437 17187 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
2438 17188 +      END;
2439 17189 +      IF _BRANCH_ GT 0 THEN DO;

```



```

2440 17190 +
2441 17191 +     _BRANCH_ = -1;
2442 17192 +     IF NOT MISSING(TotalPurchases ) AND
2443 17193 +     TotalPurchases < 5.5 THEN D
      O;
2444 17194 +     _BRANCH_ = 1;
2445 17195 +     END;
2446 17196 +     IF _BRANCH_ LT 0 THEN DO;
2447 17197 +     IF MISSING( TotalPurchases ) THEN _BRANCH_
      = 1;
2448 17198 +     END;
2449 17199 +     IF _BRANCH_ GT 0 THEN DO;
2450 17200 +     _ARB_F_ + -0.006102709;
2451 17201 +     END;
2452 17202 +     END;
2453 17203 +     END;
2454 17204 +
2455 17205 +***** LEAF      2  NODE      343 *****;
2456 17206 +IF _ARB_BADF_ EQ 0 THEN DO;
2457 17207 +
2458 17208 +     _BRANCH_ = -1;
2459 17209 +     IF NOT MISSING(TotalPurchases ) AND
2460 17210 +     TotalPurchases < 15.5 THEN DO;
2461 17211 +     _BRANCH_ = 1;
2462 17212 +     END;
2463 17213 +     IF _BRANCH_ LT 0 THEN DO;
2464 17214 +     IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
2465 17215 +     END;
2466 17216 +     IF _BRANCH_ GT 0 THEN DO;
2467 17217 +
2468 17218 +     _BRANCH_ = -1;
2469 17219 +     IF NOT MISSING(TotalPurchases ) AND
2470 17220 +     5.5 <= TotalPurchases THEN
      DO;
2471 17221 +     _BRANCH_ = 2;

```

```

2472 17222 +      END;
2473 17223 +
2474 17224 +      IF _BRANCH_ GT 0 THEN DO;
2475 17225 +          _ARB_F_ + 0.0076496243;
2476 17226 +      END;
2477 17227 +      END;
2478 17228 +  END;
2479 17229 +
2480 17230 +***** LEAF      3  NODE      344 *****;
2481 17231 +IF _ARB_BADF_ EQ 0 THEN DO;
2482 17232 +
2483 17233 +  _BRANCH_ = -1;
2484 17234 +      IF NOT MISSING(TotalPurchases ) AND
2485 17235 +          15.5 <= TotalPurchases THEN DO
;
2486 17236 +      _BRANCH_ =      2;
2487 17237 +      END;
2488 17238 +
2489 17239 +  IF _BRANCH_ GT 0 THEN DO;
2490 17240 +
2491 17241 +      _BRANCH_ = -1;
2492 17242 +      IF NOT MISSING(IMP_TotalSpent ) AND
2493 17243 +      IMP_TotalSpent <          19137.5 THEN D
O;
2494 17244 +      _BRANCH_ =      1;
2495 17245 +      END;
2496 17246 +      IF _BRANCH_ LT 0 THEN DO;
2497 17247 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 1;
2498 17248 +      END;
2499 17249 +      IF _BRANCH_ GT 0 THEN DO;
2500 17250 +          _ARB_F_ + 0.0490009132;
2501 17251 +      END;
2502 17252 +      END;
2503 17253 +  END;
2504 17254 +

```

```

2505 17255 +***** LEAF      4  NODE      345 *****;
2506 17256 +IF _ARB_BADF_ EQ 0 THEN DO;
2507 17257 +
2508 17258 +   _BRANCH_ = -1;
2509 17259 +   IF NOT MISSING(TotalPurchases ) AND
2510 17260 +           15.5 <= TotalPurchases THEN DO
      ;
2511 17261 +   _BRANCH_ =      2;
2512 17262 +   END;
2513 17263 +
2514 17264 + IF _BRANCH_ GT 0 THEN DO;
2515 17265 +
2516 17266 +   _BRANCH_ = -1;
2517 17267 +   IF NOT MISSING(IMP_TotalSpent ) AND
2518 17268 +           19137.5 <= IMP_TotalSpent THEN
      DO;
2519 17269 +   _BRANCH_ =      2;
2520 17270 +   END;
2521 17271 +
2522 17272 +   IF _BRANCH_ GT 0 THEN DO;
2523 17273 +   _ARB_F_ + 0.1142909529;
2524 17274 +   END;
2525 17275 +   END;
2526 17276 + END;
2527 17277 +
2528 17278 +***** LEAF      5  NODE      349 *****;
2529 17279 +IF _ARB_BADF_ EQ 0 THEN DO;
2530 17280 +
2531 17281 +   _BRANCH_ = -1;
2532 17282 +   IF NOT MISSING(TotalPurchases ) AND
2533 17283 +   TotalPurchases <           15.5 THEN DO;
2534 17284 +   _BRANCH_ =      1;
2535 17285 +   END;
2536 17286 + IF _BRANCH_ LT 0 THEN DO;
2537 17287 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;

```

```

2538 17288 + END;
2539 17289 + IF _BRANCH_ GT 0 THEN DO;
2540 17290 +
2541 17291 +     _BRANCH_ = -1;
2542 17292 +     IF NOT MISSING(IMP_TotalSpent ) AND
2543 17293 +     IMP_TotalSpent < 5166.5 THEN D
    O;
2544 17294 +     _BRANCH_ = 1;
2545 17295 +     END;
2546 17296 + IF _BRANCH_ LT 0 THEN DO;
2547 17297 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
    = 1;
2548 17298 +     END;
2549 17299 + IF _BRANCH_ GT 0 THEN DO;
2550 17300 +     _ARB_F_ + -0.005778204;
2551 17301 +     END;
2552 17302 +     END;
2553 17303 + END;
2554 17304 +
2555 17305 +***** LEAF      6  NODE    350 *****;
2556 17306 +IF _ARB_BADF_ EQ 0 THEN DO;
2557 17307 +
2558 17308 +     _BRANCH_ = -1;
2559 17309 +     IF NOT MISSING(TotalPurchases ) AND
2560 17310 +     TotalPurchases < 15.5 THEN DO;
2561 17311 +     _BRANCH_ = 1;
2562 17312 +     END;
2563 17313 + IF _BRANCH_ LT 0 THEN DO;
2564 17314 +     IF MISSING( TotalPurchases ) THEN _BRANCH_ =
    1;
2565 17315 + END;
2566 17316 + IF _BRANCH_ GT 0 THEN DO;
2567 17317 +
2568 17318 +     _BRANCH_ = -1;
2569 17319 +     IF NOT MISSING(IMP_TotalSpent ) AND
2570 17320 +     5166.5 <= IMP_TotalSpent THEN

```

```

DO;
2571 17321 +      _BRANCH_ =      2;
2572 17322 +      END;
2573 17323 +
2574 17324 +      IF _BRANCH_ GT 0 THEN DO;
2575 17325 +      _ARB_F_ + 0.0076511639;
2576 17326 +      END;
2577 17327 +      END;
2578 17328 +      END;
2579 17329 +
2580 17330 +***** LEAF      7  NODE      351 *****;
2581 17331 +IF _ARB_BADF_ EQ 0 THEN DO;
2582 17332 +
2583 17333 +      _BRANCH_ = -1;
2584 17334 +      IF NOT MISSING(TotalPurchases ) AND
2585 17335 +      15.5 <= TotalPurchases THEN DO
;
2586 17336 +      _BRANCH_ =      2;
2587 17337 +      END;
2588 17338 +
2589 17339 +      IF _BRANCH_ GT 0 THEN DO;
2590 17340 +
2591 17341 +      _BRANCH_ = -1;
2592 17342 +      IF NOT MISSING(Age ) AND
2593 17343 +      Age <      44.5 THEN DO;
2594 17344 +      _BRANCH_ =      1;
2595 17345 +      END;
2596 17346 +
2597 17347 +      IF _BRANCH_ GT 0 THEN DO;
2598 17348 +      _ARB_F_ + 0.0195981388;
2599 17349 +      END;
2600 17350 +      END;
2601 17351 +      END;
2602 17352 +
2603 17353 +***** LEAF      8  NODE      352 *****;
2604 17354 +IF _ARB_BADF_ EQ 0 THEN DO;

```

```

2605 17355 +
2606 17356 +   _BRANCH_ = -1;
2607 17357 +   IF NOT MISSING(TotalPurchases ) AND
2608 17358 +           15.5 <= TotalPurchases THEN DO
      ;
2609 17359 +   _BRANCH_ = 2;
2610 17360 +   END;
2611 17361 +
2612 17362 + IF _BRANCH_ GT 0 THEN DO;
2613 17363 +
2614 17364 +   _BRANCH_ = -1;
2615 17365 +   IF NOT MISSING(Age ) AND
2616 17366 +           44.5 <= Age THEN DO;
2617 17367 +   _BRANCH_ = 2;
2618 17368 +   END;
2619 17369 + IF _BRANCH_ LT 0 THEN DO;
2620 17370 +   IF MISSING( Age ) THEN _BRANCH_ = 2;
2621 17371 +   END;
2622 17372 + IF _BRANCH_ GT 0 THEN DO;
2623 17373 +   _ARB_F_ + 0.0707741637;
2624 17374 +   END;
2625 17375 +   END;
2626 17376 + END;
2627 17377 +
2628 17378 +***** LEAF      9  NODE    356 *****;
2629 17379 +IF _ARB_BADF_ EQ 0 THEN DO;
2630 17380 +
2631 17381 +   _BRANCH_ = -1;
2632 17382 +   IF NOT MISSING(TotalPurchases ) AND
2633 17383 +   TotalPurchases <           14.5 THEN DO;
2634 17384 +   _BRANCH_ = 1;
2635 17385 +   END;
2636 17386 + IF _BRANCH_ LT 0 THEN DO;
2637 17387 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
2638 17388 +   END;

```

```

2639 17389 + IF _BRANCH_ GT 0 THEN DO;
2640 17390 +
2641 17391 +     _BRANCH_ = -1;
2642 17392 +     IF NOT MISSING(IMP_TotalSpent ) AND
2643 17393 +     IMP_TotalSpent < 6780 THEN D
O;
2644 17394 +     _BRANCH_ = 1;
2645 17395 +     END;
2646 17396 + IF _BRANCH_ LT 0 THEN DO;
2647 17397 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 1;
2648 17398 +     END;
2649 17399 + IF _BRANCH_ GT 0 THEN DO;
2650 17400 +     _ARB_F_ + -0.004419704;
2651 17401 +     END;
2652 17402 +     END;
2653 17403 + END;
2654 17404 +
2655 17405 +***** LEAF 10 NODE 357 *****;
2656 17406 +IF _ARB_BADF_ EQ 0 THEN DO;
2657 17407 +
2658 17408 +     _BRANCH_ = -1;
2659 17409 +     IF NOT MISSING(TotalPurchases ) AND
2660 17410 +     TotalPurchases < 14.5 THEN DO;
2661 17411 +     _BRANCH_ = 1;
2662 17412 +     END;
2663 17413 + IF _BRANCH_ LT 0 THEN DO;
2664 17414 +     IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
2665 17415 +     END;
2666 17416 + IF _BRANCH_ GT 0 THEN DO;
2667 17417 +
2668 17418 +     _BRANCH_ = -1;
2669 17419 +     IF NOT MISSING(IMP_TotalSpent ) AND
2670 17420 +     6780 <= IMP_TotalSpent THEN
DO;

```

```

2671 17421 +      _BRANCH_ =      2;
2672 17422 +      END;
2673 17423 +
2674 17424 +      IF _BRANCH_ GT 0 THEN DO;
2675 17425 +      _ARB_F_ + 0.0093245027;
2676 17426 +      END;
2677 17427 +      END;
2678 17428 +      END;
2679 17429 +
2680 17430 +***** LEAF      11  NODE      358 *****;
2681 17431 +IF _ARB_BADF_ EQ 0 THEN DO;
2682 17432 +
2683 17433 +      _BRANCH_ = -1;
2684 17434 +      IF NOT MISSING(TotalPurchases ) AND
2685 17435 +      14.5 <= TotalPurchases THEN DO
;
2686 17436 +      _BRANCH_ =      2;
2687 17437 +      END;
2688 17438 +
2689 17439 +      IF _BRANCH_ GT 0 THEN DO;
2690 17440 +
2691 17441 +      _BRANCH_ = -1;
2692 17442 +      IF NOT MISSING(IMP_TotalSpent ) AND
2693 17443 +      IMP_TotalSpent <      19401.5 THEN D
O;
2694 17444 +      _BRANCH_ =      1;
2695 17445 +      END;
2696 17446 +      IF _BRANCH_ LT 0 THEN DO;
2697 17447 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 1;
2698 17448 +      END;
2699 17449 +      IF _BRANCH_ GT 0 THEN DO;
2700 17450 +      _ARB_F_ + 0.0314122125;
2701 17451 +      END;
2702 17452 +      END;
2703 17453 +      END;

```



```

2704 17454 +
2705 17455 +***** LEAF      12  NODE      359 *****;
2706 17456 +IF _ARB_BADF_ EQ 0 THEN DO;
2707 17457 +
2708 17458 +   _BRANCH_ = -1;
2709 17459 +       IF NOT MISSING(TotalPurchases ) AND
2710 17460 +                   14.5 <= TotalPurchases THEN DO
;
2711 17461 +       _BRANCH_ =      2;
2712 17462 +   END;
2713 17463 +
2714 17464 + IF _BRANCH_ GT 0 THEN DO;
2715 17465 +
2716 17466 +   _BRANCH_ = -1;
2717 17467 +       IF NOT MISSING(IMP_TotalSpent ) AND
2718 17468 +                   19401.5 <= IMP_TotalSpent THEN
DO;
2719 17469 +       _BRANCH_ =      2;
2720 17470 +   END;
2721 17471 +
2722 17472 + IF _BRANCH_ GT 0 THEN DO;
2723 17473 +   _ARB_F_ + 0.0898268026;
2724 17474 +   END;
2725 17475 +   END;
2726 17476 + END;
2727 17477 +
2728 17478 +***** LEAF      13  NODE      363 *****;
2729 17479 +IF _ARB_BADF_ EQ 0 THEN DO;
2730 17480 +
2731 17481 +   _BRANCH_ = -1;
2732 17482 +       IF NOT MISSING(IMP_TotalSpent ) AND
2733 17483 +   IMP_TotalSpent <                   8145 THEN DO;
2734 17484 +       _BRANCH_ =      1;
2735 17485 +   END;
2736 17486 + IF _BRANCH_ LT 0 THEN DO;
2737 17487 +       IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =

```

```

1;
2738 17488 + END;
2739 17489 + IF _BRANCH_ GT 0 THEN DO;
2740 17490 +
2741 17491 +     _BRANCH_ = -1;
2742 17492 +     IF NOT MISSING(TotalPurchases ) AND
2743 17493 +     TotalPurchases < 6.5 THEN D
O;
2744 17494 +     _BRANCH_ = 1;
2745 17495 +     END;
2746 17496 + IF _BRANCH_ LT 0 THEN DO;
2747 17497 +     IF MISSING( TotalPurchases ) THEN _BRANCH_
= 1;
2748 17498 +     END;
2749 17499 + IF _BRANCH_ GT 0 THEN DO;
2750 17500 +     _ARB_F_ + -0.005076494;
2751 17501 +     END;
2752 17502 +     END;
2753 17503 + END;
2754 17504 +
2755 17505 +***** LEAF 14 NODE 364 *****;
2756 17506 +IF _ARB_BADF_ EQ 0 THEN DO;
2757 17507 +
2758 17508 +     _BRANCH_ = -1;
2759 17509 +     IF NOT MISSING(IMP_TotalSpent ) AND
2760 17510 +     IMP_TotalSpent < 8145 THEN DO;
2761 17511 +     _BRANCH_ = 1;
2762 17512 +     END;
2763 17513 + IF _BRANCH_ LT 0 THEN DO;
2764 17514 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
2765 17515 +     END;
2766 17516 + IF _BRANCH_ GT 0 THEN DO;
2767 17517 +
2768 17518 +     _BRANCH_ = -1;
2769 17519 +     IF NOT MISSING(TotalPurchases ) AND

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2770 17520 +                6.5 <= TotalPurchases  THEN
      DO;
2771 17521 +      _BRANCH_ =      2;
2772 17522 +      END;
2773 17523 +
2774 17524 +      IF _BRANCH_ GT 0 THEN DO;
2775 17525 +      _ARB_F_ + 0.0032276607;
2776 17526 +      END;
2777 17527 +      END;
2778 17528 +      END;
2779 17529 +
2780 17530 +***** LEAF      15  NODE      365 *****;
2781 17531 +IF _ARB_BADF_ EQ 0 THEN DO;
2782 17532 +
2783 17533 +      _BRANCH_ = -1;
2784 17534 +      IF NOT MISSING(IMP_TotalSpent ) AND
2785 17535 +                8145 <= IMP_TotalSpent  THEN DO
      ;
2786 17536 +      _BRANCH_ =      2;
2787 17537 +      END;
2788 17538 +
2789 17539 +      IF _BRANCH_ GT 0 THEN DO;
2790 17540 +
2791 17541 +      _BRANCH_ = -1;
2792 17542 +      IF NOT MISSING(Age ) AND
2793 17543 +      Age <                45.5 THEN DO;
2794 17544 +      _BRANCH_ =      1;
2795 17545 +      END;
2796 17546 +
2797 17547 +      IF _BRANCH_ GT 0 THEN DO;
2798 17548 +      _ARB_F_ + -0.000616866;
2799 17549 +      END;
2800 17550 +      END;
2801 17551 +      END;
2802 17552 +
2803 17553 +***** LEAF      16  NODE      366 *****;

```

```

2804 17554 +IF _ARB_BADF_ EQ 0 THEN DO;
2805 17555 +
2806 17556 +   _BRANCH_ = -1;
2807 17557 +   IF NOT MISSING(IMP_TotalSpent ) AND
2808 17558 +           8145 <= IMP_TotalSpent THEN DO
      ;
2809 17559 +   _BRANCH_ = 2;
2810 17560 +   END;
2811 17561 +
2812 17562 + IF _BRANCH_ GT 0 THEN DO;
2813 17563 +
2814 17564 +   _BRANCH_ = -1;
2815 17565 +   IF NOT MISSING(Age ) AND
2816 17566 +           45.5 <= Age THEN DO;
2817 17567 +   _BRANCH_ = 2;
2818 17568 +   END;
2819 17569 + IF _BRANCH_ LT 0 THEN DO;
2820 17570 +   IF MISSING( Age ) THEN _BRANCH_ = 2;
2821 17571 +   END;
2822 17572 + IF _BRANCH_ GT 0 THEN DO;
2823 17573 +   _ARB_F_ + 0.0314096173;
2824 17574 +   END;
2825 17575 +   END;
2826 17576 + END;
2827 17577 +
2828 17578 +***** LEAF      17  NODE      370 *****;
2829 17579 +IF _ARB_BADF_ EQ 0 THEN DO;
2830 17580 +
2831 17581 +   _BRANCH_ = -1;
2832 17582 +   IF NOT MISSING(IMP_TotalSpent ) AND
2833 17583 +   IMP_TotalSpent <           13417.5 THEN DO;
2834 17584 +   _BRANCH_ = 1;
2835 17585 +   END;
2836 17586 + IF _BRANCH_ LT 0 THEN DO;
2837 17587 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;

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```

2838 17588 + END;
2839 17589 + IF _BRANCH_ GT 0 THEN DO;
2840 17590 +
2841 17591 +     _BRANCH_ = -1;
2842 17592 +     IF NOT MISSING(IMP_TotalSpent ) AND
2843 17593 +     IMP_TotalSpent < 6859 THEN D
    O;
2844 17594 +     _BRANCH_ = 1;
2845 17595 +     END;
2846 17596 +     IF _BRANCH_ LT 0 THEN DO;
2847 17597 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
    = 1;
2848 17598 +     END;
2849 17599 +     IF _BRANCH_ GT 0 THEN DO;
2850 17600 +     _ARB_F_ + -0.00416765;
2851 17601 +     END;
2852 17602 +     END;
2853 17603 + END;
2854 17604 +
2855 17605 +***** LEAF 18 NODE 371 *****;
2856 17606 +IF _ARB_BADF_ EQ 0 THEN DO;
2857 17607 +
2858 17608 + _BRANCH_ = -1;
2859 17609 +     IF NOT MISSING(IMP_TotalSpent ) AND
2860 17610 +     IMP_TotalSpent < 13417.5 THEN DO;
2861 17611 +     _BRANCH_ = 1;
2862 17612 +     END;
2863 17613 + IF _BRANCH_ LT 0 THEN DO;
2864 17614 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
    1;
2865 17615 + END;
2866 17616 + IF _BRANCH_ GT 0 THEN DO;
2867 17617 +
2868 17618 + _BRANCH_ = -1;
2869 17619 +     IF NOT MISSING(IMP_TotalSpent ) AND
2870 17620 +     6859 <= IMP_TotalSpent THEN

```

```

DO;
2871 17621 +      _BRANCH_ =      2;
2872 17622 +      END;
2873 17623 +
2874 17624 +      IF _BRANCH_ GT 0 THEN DO;
2875 17625 +      _ARB_F_ + 0.0087232238;
2876 17626 +      END;
2877 17627 +      END;
2878 17628 +      END;
2879 17629 +
2880 17630 +***** LEAF      19  NODE      372 *****;
2881 17631 +IF _ARB_BADF_ EQ 0 THEN DO;
2882 17632 +
2883 17633 +      _BRANCH_ = -1;
2884 17634 +      IF NOT MISSING(IMP_TotalSpent ) AND
2885 17635 +      13417.5 <= IMP_TotalSpent THEN DO
;
2886 17636 +      _BRANCH_ =      2;
2887 17637 +      END;
2888 17638 +
2889 17639 +      IF _BRANCH_ GT 0 THEN DO;
2890 17640 +
2891 17641 +      _BRANCH_ = -1;
2892 17642 +      IF NOT MISSING(TotalPurchases ) AND
2893 17643 +      TotalPurchases <      21.5 THEN D
O;
2894 17644 +      _BRANCH_ =      1;
2895 17645 +      END;
2896 17646 +      IF _BRANCH_ LT 0 THEN DO;
2897 17647 +      IF MISSING( TotalPurchases ) THEN _BRANCH_
= 1;
2898 17648 +      END;
2899 17649 +      IF _BRANCH_ GT 0 THEN DO;
2900 17650 +      _ARB_F_ + 0.0314032826;
2901 17651 +      END;
2902 17652 +      END;

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```

2903 17653 + END;
2904 17654 +
2905 17655 +***** LEAF      20  NODE      373 *****;
2906 17656 +IF _ARB_BADF_ EQ 0 THEN DO;
2907 17657 +
2908 17658 +   _BRANCH_ = -1;
2909 17659 +   IF NOT MISSING(IMP_TotalSpent ) AND
2910 17660 +           13417.5 <= IMP_TotalSpent THEN DO
;
2911 17661 +   _BRANCH_ = 2;
2912 17662 + END;
2913 17663 +
2914 17664 + IF _BRANCH_ GT 0 THEN DO;
2915 17665 +
2916 17666 +   _BRANCH_ = -1;
2917 17667 +   IF NOT MISSING(TotalPurchases ) AND
2918 17668 +           21.5 <= TotalPurchases THEN
DO;
2919 17669 +   _BRANCH_ = 2;
2920 17670 + END;
2921 17671 +
2922 17672 + IF _BRANCH_ GT 0 THEN DO;
2923 17673 +   _ARB_F_ + 0.0766258071;
2924 17674 + END;
2925 17675 + END;
2926 17676 + END;
2927 17677 +
2928 17678 +***** LEAF      21  NODE      377 *****;
2929 17679 +IF _ARB_BADF_ EQ 0 THEN DO;
2930 17680 +
2931 17681 +   _BRANCH_ = -1;
2932 17682 +   IF NOT MISSING(IMP_TotalSpent ) AND
2933 17683 +   IMP_TotalSpent <           8897.5 THEN DO;
2934 17684 +   _BRANCH_ = 1;
2935 17685 + END;
2936 17686 + IF _BRANCH_ LT 0 THEN DO;

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```

2937 17687 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
2938 17688 +      END;
2939 17689 +      IF _BRANCH_ GT 0 THEN DO;
2940 17690 +
2941 17691 +          _BRANCH_ = -1;
2942 17692 +          _ARBFMT_8 = PUT( MembershipLevel , $8.);
2943 17693 +          %DMNORMIP( _ARBFMT_8);
2944 17694 +          IF _ARBFMT_8 IN ( 'SILVER' , 'GOLD' ) THEN DO;
2945 17695 +              _BRANCH_ =      1;
2946 17696 +          END;
2947 17697 +      IF _BRANCH_ LT 0 THEN DO;
2948 17698 +          IF MISSING( MembershipLevel ) THEN _BRANCH_
      = 1;
2949 17699 +          ELSE IF _ARBFMT_8 NOTIN (
2950 17700 +              'SILVER' , 'GOLD' , 'PLATINUM' , 'BRONZE'
2951 17701 +              ) THEN _BRANCH_ = 1;
2952 17702 +      END;
2953 17703 +      IF _BRANCH_ GT 0 THEN DO;
2954 17704 +          _ARB_F_ + -0.005750422;
2955 17705 +      END;
2956 17706 +      END;
2957 17707 +      END;
2958 17708 +
2959 17709 +***** LEAF      22  NODE      378 *****;
2960 17710 +IF _ARB_BADF_ EQ 0 THEN DO;
2961 17711 +
2962 17712 +      _BRANCH_ = -1;
2963 17713 +      IF NOT MISSING(IMP_TotalSpent ) AND
2964 17714 +      IMP_TotalSpent <      8897.5 THEN DO;
2965 17715 +          _BRANCH_ =      1;
2966 17716 +      END;
2967 17717 +      IF _BRANCH_ LT 0 THEN DO;
2968 17718 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
2969 17719 +      END;

```



```

2970 17720 + IF _BRANCH_ GT 0 THEN DO;
2971 17721 +
2972 17722 +     _BRANCH_ = -1;
2973 17723 +     _ARBFMT_8 = PUT( MembershipLevel , $8.);
2974 17724 +     %DMNORMIP( _ARBFMT_8);
2975 17725 +     IF _ARBFMT_8 IN ('PLATINUM' , 'BRONZE' ) THEN
        DO;
2976 17726 +         _BRANCH_ =     2;
2977 17727 +     END;
2978 17728 +
2979 17729 + IF _BRANCH_ GT 0 THEN DO;
2980 17730 +     _ARB_F_ + 0.0001036489;
2981 17731 +     END;
2982 17732 +     END;
2983 17733 + END;
2984 17734 +
2985 17735 +***** LEAF      23  NODE      379 *****;
2986 17736 +IF _ARB_BADF_ EQ 0 THEN DO;
2987 17737 +
2988 17738 +     _BRANCH_ = -1;
2989 17739 +     IF NOT MISSING(IMP_TotalSpent ) AND
2990 17740 +         8897.5 <= IMP_TotalSpent THEN DO
        ;
2991 17741 +         _BRANCH_ =     2;
2992 17742 +     END;
2993 17743 +
2994 17744 + IF _BRANCH_ GT 0 THEN DO;
2995 17745 +
2996 17746 +     _BRANCH_ = -1;
2997 17747 +     IF NOT MISSING(Age ) AND
2998 17748 +     Age <         39.5 THEN DO;
2999 17749 +         _BRANCH_ =     1;
3000 17750 +     END;
3001 17751 +
3002 17752 + IF _BRANCH_ GT 0 THEN DO;
3003 17753 +     _ARB_F_ + -0.00525956;

```

```

3004 17754 +      END;
3005 17755 +      END;
3006 17756 +  END;
3007 17757 +
3008 17758 +***** LEAF      24  NODE      380 *****;
3009 17759 +IF _ARB_BADF_ EQ 0 THEN DO;
3010 17760 +
3011 17761 +  _BRANCH_ = -1;
3012 17762 +      IF NOT MISSING(IMP_TotalSpent ) AND
3013 17763 +                  8897.5 <= IMP_TotalSpent THEN DO
;
3014 17764 +      _BRANCH_ =      2;
3015 17765 +  END;
3016 17766 +
3017 17767 +  IF _BRANCH_ GT 0 THEN DO;
3018 17768 +
3019 17769 +      _BRANCH_ = -1;
3020 17770 +      IF NOT MISSING(Age ) AND
3021 17771 +                  39.5 <= Age THEN DO;
3022 17772 +      _BRANCH_ =      2;
3023 17773 +  END;
3024 17774 +  IF _BRANCH_ LT 0 THEN DO;
3025 17775 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
3026 17776 +  END;
3027 17777 +  IF _BRANCH_ GT 0 THEN DO;
3028 17778 +      _ARB_F_ + 0.027981933;
3029 17779 +  END;
3030 17780 +  END;
3031 17781 +  END;
3032 17782 +
3033 17783 +***** LEAF      25  NODE      384 *****;
3034 17784 +IF _ARB_BADF_ EQ 0 THEN DO;
3035 17785 +
3036 17786 +  _BRANCH_ = -1;
3037 17787 +      IF NOT MISSING(TotalPurchases ) AND
3038 17788 +      TotalPurchases <                  18.5 THEN DO;

```

```

3039 17789 +      _BRANCH_ =      1;
3040 17790 +      END;
3041 17791 +      IF _BRANCH_ LT 0 THEN DO;
3042 17792 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          1;
3043 17793 +      END;
3044 17794 +      IF _BRANCH_ GT 0 THEN DO;
3045 17795 +
3046 17796 +          _BRANCH_ = -1;
3047 17797 +          IF NOT MISSING(TotalPurchases ) AND
3048 17798 +          TotalPurchases  <                      5.5 THEN D
          O;
3049 17799 +          _BRANCH_ =      1;
3050 17800 +      END;
3051 17801 +      IF _BRANCH_ LT 0 THEN DO;
3052 17802 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_
          = 1;
3053 17803 +      END;
3054 17804 +      IF _BRANCH_ GT 0 THEN DO;
3055 17805 +          _ARB_F_ + -0.003899332;
3056 17806 +      END;
3057 17807 +      END;
3058 17808 +      END;
3059 17809 +
3060 17810 +***** LEAF      26  NODE      385 *****;
3061 17811 +IF _ARB_BADF_ EQ 0 THEN DO;
3062 17812 +
3063 17813 +      _BRANCH_ = -1;
3064 17814 +          IF NOT MISSING(TotalPurchases ) AND
3065 17815 +          TotalPurchases  <                      18.5 THEN DO;
3066 17816 +          _BRANCH_ =      1;
3067 17817 +      END;
3068 17818 +      IF _BRANCH_ LT 0 THEN DO;
3069 17819 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          1;
3070 17820 +      END;

```

```

3071 17821 + IF _BRANCH_ GT 0 THEN DO;
3072 17822 +
3073 17823 +     _BRANCH_ = -1;
3074 17824 +     IF NOT MISSING(TotalPurchases ) AND
3075 17825 +             5.5 <= TotalPurchases THEN
DO;
3076 17826 +     _BRANCH_ = 2;
3077 17827 +     END;
3078 17828 +
3079 17829 + IF _BRANCH_ GT 0 THEN DO;
3080 17830 +     _ARB_F_ + 0.0050632004;
3081 17831 +     END;
3082 17832 +     END;
3083 17833 + END;
3084 17834 +
3085 17835 +***** LEAF      27  NODE      386 *****;
3086 17836 +IF _ARB_BADF_ EQ 0 THEN DO;
3087 17837 +
3088 17838 +     _BRANCH_ = -1;
3089 17839 +     IF NOT MISSING(TotalPurchases ) AND
3090 17840 +             18.5 <= TotalPurchases THEN DO
;
3091 17841 +     _BRANCH_ = 2;
3092 17842 +     END;
3093 17843 +
3094 17844 + IF _BRANCH_ GT 0 THEN DO;
3095 17845 +
3096 17846 +     _BRANCH_ = -1;
3097 17847 +     IF NOT MISSING(Age ) AND
3098 17848 +     Age <             43.5 THEN DO;
3099 17849 +     _BRANCH_ = 1;
3100 17850 +     END;
3101 17851 +
3102 17852 + IF _BRANCH_ GT 0 THEN DO;
3103 17853 +     _ARB_F_ + -0.011847815;
3104 17854 +     END;

```

```

3105 17855 +      END;
3106 17856 +      END;
3107 17857 +
3108 17858 +***** LEAF      28  NODE      387 *****;
3109 17859 +IF _ARB_BADF_ EQ 0 THEN DO;
3110 17860 +
3111 17861 +      _BRANCH_ = -1;
3112 17862 +      IF NOT MISSING(TotalPurchases ) AND
3113 17863 +                      18.5 <= TotalPurchases THEN DO
;
3114 17864 +      _BRANCH_ =      2;
3115 17865 +      END;
3116 17866 +
3117 17867 +      IF _BRANCH_ GT 0 THEN DO;
3118 17868 +
3119 17869 +      _BRANCH_ = -1;
3120 17870 +      IF NOT MISSING(Age ) AND
3121 17871 +                      43.5 <= Age THEN DO;
3122 17872 +      _BRANCH_ =      2;
3123 17873 +      END;
3124 17874 +      IF _BRANCH_ LT 0 THEN DO;
3125 17875 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
3126 17876 +      END;
3127 17877 +      IF _BRANCH_ GT 0 THEN DO;
3128 17878 +      _ARB_F_ + 0.04670247;
3129 17879 +      END;
3130 17880 +      END;
3131 17881 +      END;
3132 17882 +
3133 17883 +***** LEAF      29  NODE      391 *****;
3134 17884 +IF _ARB_BADF_ EQ 0 THEN DO;
3135 17885 +
3136 17886 +      _BRANCH_ = -1;
3137 17887 +      IF NOT MISSING(IMP_TotalSpent ) AND
3138 17888 +      IMP_TotalSpent <                      15313 THEN DO;
3139 17889 +      _BRANCH_ =      1;

```

```

3140 17890 +      END;
3141 17891 +      IF _BRANCH_ LT 0 THEN DO;
3142 17892 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
          1;
3143 17893 +      END;
3144 17894 +      IF _BRANCH_ GT 0 THEN DO;
3145 17895 +
3146 17896 +          _BRANCH_ = -1;
3147 17897 +          IF NOT MISSING(IMP_TotalSpent ) AND
3148 17898 +          IMP_TotalSpent <          5112.5 THEN D
          O;
3149 17899 +          _BRANCH_ =      1;
3150 17900 +      END;
3151 17901 +      IF _BRANCH_ LT 0 THEN DO;
3152 17902 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 1;
3153 17903 +      END;
3154 17904 +      IF _BRANCH_ GT 0 THEN DO;
3155 17905 +          _ARB_F_ + -0.003500646;
3156 17906 +      END;
3157 17907 +      END;
3158 17908 +      END;
3159 17909 +
3160 17910 +***** LEAF      30  NODE      392 *****;
3161 17911 +IF _ARB_BADF_ EQ 0 THEN DO;
3162 17912 +
3163 17913 +      _BRANCH_ = -1;
3164 17914 +          IF NOT MISSING(IMP_TotalSpent ) AND
3165 17915 +          IMP_TotalSpent <          15313 THEN DO;
3166 17916 +          _BRANCH_ =      1;
3167 17917 +      END;
3168 17918 +      IF _BRANCH_ LT 0 THEN DO;
3169 17919 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
          1;
3170 17920 +      END;
3171 17921 +      IF _BRANCH_ GT 0 THEN DO;

```

```

3172 17922 +
3173 17923 +     _BRANCH_ = -1;
3174 17924 +     IF NOT MISSING(IMP_TotalSpent ) AND
3175 17925 +         5112.5 <= IMP_TotalSpent THEN
        DO;
3176 17926 +         _BRANCH_ = 2;
3177 17927 +     END;
3178 17928 +
3179 17929 +     IF _BRANCH_ GT 0 THEN DO;
3180 17930 +         _ARB_F_ + 0.0043757916;
3181 17931 +     END;
3182 17932 +     END;
3183 17933 + END;
3184 17934 +
3185 17935 +***** LEAF      31  NODE      393 *****;
3186 17936 +IF _ARB_BADF_ EQ 0 THEN DO;
3187 17937 +
3188 17938 +     _BRANCH_ = -1;
3189 17939 +     IF NOT MISSING(IMP_TotalSpent ) AND
3190 17940 +         15313 <= IMP_TotalSpent THEN DO
        ;
3191 17941 +         _BRANCH_ = 2;
3192 17942 +     END;
3193 17943 +
3194 17944 +     IF _BRANCH_ GT 0 THEN DO;
3195 17945 +
3196 17946 +         _BRANCH_ = -1;
3197 17947 +         IF NOT MISSING(Age ) AND
3198 17948 +         Age < 39.5 THEN DO;
3199 17949 +             _BRANCH_ = 1;
3200 17950 +         END;
3201 17951 +
3202 17952 +     IF _BRANCH_ GT 0 THEN DO;
3203 17953 +         _ARB_F_ + -0.034504607;
3204 17954 +     END;
3205 17955 +     END;

```

```

3206 17956 + END;
3207 17957 +
3208 17958 +***** LEAF      32  NODE      394 *****;
3209 17959 +IF _ARB_BADF_ EQ 0 THEN DO;
3210 17960 +
3211 17961 + _BRANCH_ = -1;
3212 17962 + IF NOT MISSING(IMP_TotalSpent ) AND
3213 17963 + 15313 <= IMP_TotalSpent THEN DO
;
3214 17964 + _BRANCH_ = 2;
3215 17965 + END;
3216 17966 +
3217 17967 + IF _BRANCH_ GT 0 THEN DO;
3218 17968 +
3219 17969 + _BRANCH_ = -1;
3220 17970 + IF NOT MISSING(Age ) AND
3221 17971 + 39.5 <= Age THEN DO;
3222 17972 + _BRANCH_ = 2;
3223 17973 + END;
3224 17974 + IF _BRANCH_ LT 0 THEN DO;
3225 17975 + IF MISSING( Age ) THEN _BRANCH_ = 2;
3226 17976 + END;
3227 17977 + IF _BRANCH_ GT 0 THEN DO;
3228 17978 + _ARB_F_ + 0.0404612033;
3229 17979 + END;
3230 17980 + END;
3231 17981 + END;
3232 17982 +
3233 17983 +***** LEAF      33  NODE      398 *****;
3234 17984 +IF _ARB_BADF_ EQ 0 THEN DO;
3235 17985 +
3236 17986 + _BRANCH_ = -1;
3237 17987 + IF NOT MISSING(TotalPurchases ) AND
3238 17988 + TotalPurchases < 13.5 THEN DO;
3239 17989 + _BRANCH_ = 1;
3240 17990 + END;

```



```

3241 17991 + IF _BRANCH_ LT 0 THEN DO;
3242 17992 +     IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
3243 17993 + END;
3244 17994 + IF _BRANCH_ GT 0 THEN DO;
3245 17995 +
3246 17996 +     _BRANCH_ = -1;
3247 17997 +     IF NOT MISSING(IMP_TotalSpent ) AND
3248 17998 +     IMP_TotalSpent < 2289 THEN D
      O;
3249 17999 +     _BRANCH_ = 1;
3250 18000 + END;
3251 18001 +
3252 18002 + IF _BRANCH_ GT 0 THEN DO;
3253 18003 +     _ARB_F_ + -0.008001997;
3254 18004 + END;
3255 18005 + END;
3256 18006 + END;
3257 18007 +
3258 18008 +***** LEAF 34 NODE 399 *****;
3259 18009 +IF _ARB_BADF_ EQ 0 THEN DO;
3260 18010 +
3261 18011 +     _BRANCH_ = -1;
3262 18012 +     IF NOT MISSING(TotalPurchases ) AND
3263 18013 +     TotalPurchases < 13.5 THEN DO;
3264 18014 +     _BRANCH_ = 1;
3265 18015 +     END;
3266 18016 + IF _BRANCH_ LT 0 THEN DO;
3267 18017 +     IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
3268 18018 + END;
3269 18019 + IF _BRANCH_ GT 0 THEN DO;
3270 18020 +
3271 18021 +     _BRANCH_ = -1;
3272 18022 +     IF NOT MISSING(IMP_TotalSpent ) AND
3273 18023 +     2289 <= IMP_TotalSpent THEN

```

```

DO;
3274 18024 +      _BRANCH_ =      2;
3275 18025 +      END;
3276 18026 +      IF _BRANCH_ LT 0 THEN DO;
3277 18027 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
      = 2;
3278 18028 +      END;
3279 18029 +      IF _BRANCH_ GT 0 THEN DO;
3280 18030 +      _ARB_F_ + 0.0004955054;
3281 18031 +      END;
3282 18032 +      END;
3283 18033 +      END;
3284 18034 +
3285 18035 +***** LEAF      35  NODE      400 *****;
3286 18036 +IF _ARB_BADF_ EQ 0 THEN DO;
3287 18037 +
3288 18038 +      _BRANCH_ = -1;
3289 18039 +      IF NOT MISSING(TotalPurchases ) AND
3290 18040 +      13.5 <= TotalPurchases THEN DO
      ;
3291 18041 +      _BRANCH_ =      2;
3292 18042 +      END;
3293 18043 +
3294 18044 +      IF _BRANCH_ GT 0 THEN DO;
3295 18045 +
3296 18046 +      _BRANCH_ = -1;
3297 18047 +      IF NOT MISSING(IMP_TotalSpent ) AND
3298 18048 +      IMP_TotalSpent <      9273.5 THEN D
      O;
3299 18049 +      _BRANCH_ =      1;
3300 18050 +      END;
3301 18051 +
3302 18052 +      IF _BRANCH_ GT 0 THEN DO;
3303 18053 +      _ARB_F_ + 0.0004001676;
3304 18054 +      END;
3305 18055 +      END;

```

```

3306 18056 + END;
3307 18057 +
3308 18058 +***** LEAF      36  NODE      401 *****;
3309 18059 +IF _ARB_BADF_ EQ 0 THEN DO;
3310 18060 +
3311 18061 + _BRANCH_ = -1;
3312 18062 + IF NOT MISSING(TotalPurchases ) AND
3313 18063 + 13.5 <= TotalPurchases THEN DO
;
3314 18064 + _BRANCH_ = 2;
3315 18065 + END;
3316 18066 +
3317 18067 + IF _BRANCH_ GT 0 THEN DO;
3318 18068 +
3319 18069 + _BRANCH_ = -1;
3320 18070 + IF NOT MISSING(IMP_TotalSpent ) AND
3321 18071 + 9273.5 <= IMP_TotalSpent THEN
DO;
3322 18072 + _BRANCH_ = 2;
3323 18073 + END;
3324 18074 + IF _BRANCH_ LT 0 THEN DO;
3325 18075 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
3326 18076 + END;
3327 18077 + IF _BRANCH_ GT 0 THEN DO;
3328 18078 + _ARB_F_ + 0.0378346733;
3329 18079 + END;
3330 18080 + END;
3331 18081 + END;
3332 18082 +
3333 18083 +***** LEAF      37  NODE      405 *****;
3334 18084 +IF _ARB_BADF_ EQ 0 THEN DO;
3335 18085 +
3336 18086 + _BRANCH_ = -1;
3337 18087 + IF NOT MISSING(IMP_TotalSpent ) AND
3338 18088 + IMP_TotalSpent < 9087.5 THEN DO;

```

```

3339 18089 +      _BRANCH_ =      1;
3340 18090 +      END;
3341 18091 +      IF _BRANCH_ LT 0 THEN DO;
3342 18092 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
          1;
3343 18093 +      END;
3344 18094 +      IF _BRANCH_ GT 0 THEN DO;
3345 18095 +
3346 18096 +          _BRANCH_ = -1;
3347 18097 +          IF NOT MISSING(IMP_TotalSpent ) AND
3348 18098 +          IMP_TotalSpent  <                      388.5 THEN D
          O;
3349 18099 +          _BRANCH_ =      1;
3350 18100 +          END;
3351 18101 +
3352 18102 +          IF _BRANCH_ GT 0 THEN DO;
3353 18103 +              _ARB_F_ + -0.029166635;
3354 18104 +          END;
3355 18105 +      END;
3356 18106 +      END;
3357 18107 +
3358 18108 +***** LEAF      38  NODE      406 *****;
3359 18109 +IF _ARB_BADF_ EQ 0 THEN DO;
3360 18110 +
3361 18111 +      _BRANCH_ = -1;
3362 18112 +          IF NOT MISSING(IMP_TotalSpent ) AND
3363 18113 +          IMP_TotalSpent  <                      9087.5 THEN DO;
3364 18114 +              _BRANCH_ =      1;
3365 18115 +          END;
3366 18116 +      IF _BRANCH_ LT 0 THEN DO;
3367 18117 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
          1;
3368 18118 +      END;
3369 18119 +      IF _BRANCH_ GT 0 THEN DO;
3370 18120 +
3371 18121 +          _BRANCH_ = -1;

```

```

3372 18122 +      IF NOT MISSING(IMP_TotalSpent ) AND
3373 18123 +      388.5 <= IMP_TotalSpent THEN
      DO;
3374 18124 +      _BRANCH_ = 2;
3375 18125 +      END;
3376 18126 +      IF _BRANCH_ LT 0 THEN DO;
3377 18127 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
3378 18128 +      END;
3379 18129 +      IF _BRANCH_ GT 0 THEN DO;
3380 18130 +      _ARB_F_ + -0.001358249;
3381 18131 +      END;
3382 18132 +      END;
3383 18133 +      END;
3384 18134 +
3385 18135 +***** LEAF      39  NODE      407 *****;
3386 18136 +IF _ARB_BADF_ EQ 0 THEN DO;
3387 18137 +
3388 18138 + _BRANCH_ = -1;
3389 18139 +      IF NOT MISSING(IMP_TotalSpent ) AND
3390 18140 +      9087.5 <= IMP_TotalSpent THEN DO
      ;
3391 18141 +      _BRANCH_ = 2;
3392 18142 +      END;
3393 18143 +
3394 18144 +      IF _BRANCH_ GT 0 THEN DO;
3395 18145 +
3396 18146 +      _BRANCH_ = -1;
3397 18147 +      IF NOT MISSING(Age ) AND
3398 18148 +      Age < 45.5 THEN DO;
3399 18149 +      _BRANCH_ = 1;
3400 18150 +      END;
3401 18151 +
3402 18152 +      IF _BRANCH_ GT 0 THEN DO;
3403 18153 +      _ARB_F_ + -0.00213995;
3404 18154 +      END;

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```

3405 18155 +      END;
3406 18156 +      END;
3407 18157 +
3408 18158 +***** LEAF      40  NODE      408 *****;
3409 18159 +IF _ARB_BADF_ EQ 0 THEN DO;
3410 18160 +
3411 18161 +      _BRANCH_ = -1;
3412 18162 +      IF NOT MISSING(IMP_TotalSpent ) AND
3413 18163 +                      9087.5 <= IMP_TotalSpent THEN DO
;
3414 18164 +      _BRANCH_ =      2;
3415 18165 +      END;
3416 18166 +
3417 18167 +      IF _BRANCH_ GT 0 THEN DO;
3418 18168 +
3419 18169 +      _BRANCH_ = -1;
3420 18170 +      IF NOT MISSING(Age ) AND
3421 18171 +                      45.5 <= Age THEN DO;
3422 18172 +      _BRANCH_ =      2;
3423 18173 +      END;
3424 18174 +      IF _BRANCH_ LT 0 THEN DO;
3425 18175 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
3426 18176 +      END;
3427 18177 +      IF _BRANCH_ GT 0 THEN DO;
3428 18178 +      _ARB_F_ + 0.0211235482;
3429 18179 +      END;
3430 18180 +      END;
3431 18181 +      END;
3432 18182 +
3433 18183 +***** LEAF      41  NODE      412 *****;
3434 18184 +IF _ARB_BADF_ EQ 0 THEN DO;
3435 18185 +
3436 18186 +      _BRANCH_ = -1;
3437 18187 +      IF NOT MISSING(IMP_TotalSpent ) AND
3438 18188 +      IMP_TotalSpent <                      14847.5 THEN DO;
3439 18189 +      _BRANCH_ =      1;

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3440 18190 +      END;
3441 18191 +      IF _BRANCH_ LT 0 THEN DO;
3442 18192 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
1;
3443 18193 +      END;
3444 18194 +      IF _BRANCH_ GT 0 THEN DO;
3445 18195 +
3446 18196 +          _BRANCH_ = -1;
3447 18197 +          IF NOT MISSING( TotalPurchases ) AND
3448 18198 +          TotalPurchases < 3.5 THEN D
O;
3449 18199 +          _BRANCH_ = 1;
3450 18200 +      END;
3451 18201 +
3452 18202 +      IF _BRANCH_ GT 0 THEN DO;
3453 18203 +          _ARB_F_ + -0.006454924;
3454 18204 +      END;
3455 18205 +      END;
3456 18206 +      END;
3457 18207 +
3458 18208 +***** LEAF 42 NODE 413 *****;
3459 18209 +IF _ARB_BADF_ EQ 0 THEN DO;
3460 18210 +
3461 18211 +      _BRANCH_ = -1;
3462 18212 +          IF NOT MISSING(IMP_TotalSpent ) AND
3463 18213 +          IMP_TotalSpent < 14847.5 THEN DO;
3464 18214 +          _BRANCH_ = 1;
3465 18215 +      END;
3466 18216 +      IF _BRANCH_ LT 0 THEN DO;
3467 18217 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
1;
3468 18218 +      END;
3469 18219 +      IF _BRANCH_ GT 0 THEN DO;
3470 18220 +
3471 18221 +          _BRANCH_ = -1;
3472 18222 +          IF NOT MISSING( TotalPurchases ) AND

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3473 18223 +                3.5 <= TotalPurchases THEN
      DO;
3474 18224 +      _BRANCH_ =      2;
3475 18225 +      END;
3476 18226 +      IF _BRANCH_ LT 0 THEN DO;
3477 18227 +      IF MISSING( TotalPurchases ) THEN _BRANCH_
      = 2;
3478 18228 +      END;
3479 18229 +      IF _BRANCH_ GT 0 THEN DO;
3480 18230 +      _ARB_F_ + 0.0018956863;
3481 18231 +      END;
3482 18232 +      END;
3483 18233 +      END;
3484 18234 +
3485 18235 +***** LEAF      43  NODE      414 *****;
3486 18236 +IF _ARB_BADF_ EQ 0 THEN DO;
3487 18237 +
3488 18238 +      _BRANCH_ = -1;
3489 18239 +      IF NOT MISSING(IMP_TotalSpent ) AND
3490 18240 +      14847.5 <= IMP_TotalSpent THEN DO
      ;
3491 18241 +      _BRANCH_ =      2;
3492 18242 +      END;
3493 18243 +
3494 18244 +      IF _BRANCH_ GT 0 THEN DO;
3495 18245 +
3496 18246 +      _BRANCH_ = -1;
3497 18247 +      IF NOT MISSING(Age ) AND
3498 18248 +      Age <                44.5 THEN DO;
3499 18249 +      _BRANCH_ =      1;
3500 18250 +      END;
3501 18251 +
3502 18252 +      IF _BRANCH_ GT 0 THEN DO;
3503 18253 +      _ARB_F_ + -0.008063166;
3504 18254 +      END;
3505 18255 +      END;

```



```

3506 18256 + END;
3507 18257 +
3508 18258 +***** LEAF      44  NODE      415 *****;
3509 18259 +IF _ARB_BADF_ EQ 0 THEN DO;
3510 18260 +
3511 18261 + _BRANCH_ = -1;
3512 18262 + IF NOT MISSING(IMP_TotalSpent ) AND
3513 18263 + 14847.5 <= IMP_TotalSpent THEN DO
;
3514 18264 + _BRANCH_ = 2;
3515 18265 + END;
3516 18266 +
3517 18267 + IF _BRANCH_ GT 0 THEN DO;
3518 18268 +
3519 18269 + _BRANCH_ = -1;
3520 18270 + IF NOT MISSING(Age ) AND
3521 18271 + 44.5 <= Age THEN DO;
3522 18272 + _BRANCH_ = 2;
3523 18273 + END;
3524 18274 + IF _BRANCH_ LT 0 THEN DO;
3525 18275 + IF MISSING( Age ) THEN _BRANCH_ = 2;
3526 18276 + END;
3527 18277 + IF _BRANCH_ GT 0 THEN DO;
3528 18278 + _ARB_F_ + 0.0424213187;
3529 18279 + END;
3530 18280 + END;
3531 18281 + END;
3532 18282 +
3533 18283 +***** LEAF      45  NODE      419 *****;
3534 18284 +IF _ARB_BADF_ EQ 0 THEN DO;
3535 18285 +
3536 18286 + _BRANCH_ = -1;
3537 18287 + IF NOT MISSING(IMP_TotalSpent ) AND
3538 18288 + IMP_TotalSpent < 14847.5 THEN DO;
3539 18289 + _BRANCH_ = 1;
3540 18290 + END;

```

```

3541 18291 + IF _BRANCH_ LT 0 THEN DO;
3542 18292 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
3543 18293 + END;
3544 18294 + IF _BRANCH_ GT 0 THEN DO;
3545 18295 +
3546 18296 +     _BRANCH_ = -1;
3547 18297 +     IF NOT MISSING(IMP_TotalSpent ) AND
3548 18298 +     IMP_TotalSpent < 2924 THEN D
      O;
3549 18299 +     _BRANCH_ = 1;
3550 18300 + END;
3551 18301 +
3552 18302 + IF _BRANCH_ GT 0 THEN DO;
3553 18303 +     _ARB_F_ + -0.005050258;
3554 18304 + END;
3555 18305 + END;
3556 18306 + END;
3557 18307 +
3558 18308 +***** LEAF 46 NODE 420 *****;
3559 18309 +IF _ARB_BADF_ EQ 0 THEN DO;
3560 18310 +
3561 18311 +     _BRANCH_ = -1;
3562 18312 +     IF NOT MISSING(IMP_TotalSpent ) AND
3563 18313 +     IMP_TotalSpent < 14847.5 THEN DO;
3564 18314 +     _BRANCH_ = 1;
3565 18315 +     END;
3566 18316 + IF _BRANCH_ LT 0 THEN DO;
3567 18317 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
3568 18318 + END;
3569 18319 + IF _BRANCH_ GT 0 THEN DO;
3570 18320 +
3571 18321 +     _BRANCH_ = -1;
3572 18322 +     IF NOT MISSING(IMP_TotalSpent ) AND
3573 18323 +     2924 <= IMP_TotalSpent THEN

```

```

DO;
3574 18324 +      _BRANCH_ =      2;
3575 18325 +      END;
3576 18326 +      IF _BRANCH_ LT 0 THEN DO;
3577 18327 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
3578 18328 +      END;
3579 18329 +      IF _BRANCH_ GT 0 THEN DO;
3580 18330 +          _ARB_F_ + 0.0010553892;
3581 18331 +      END;
3582 18332 +      END;
3583 18333 +      END;
3584 18334 +
3585 18335 +***** LEAF      47  NODE      421 *****;
3586 18336 +IF _ARB_BADF_ EQ 0 THEN DO;
3587 18337 +
3588 18338 +      _BRANCH_ = -1;
3589 18339 +          IF NOT MISSING(IMP_TotalSpent ) AND
3590 18340 +              14847.5 <= IMP_TotalSpent THEN DO
;
3591 18341 +      _BRANCH_ =      2;
3592 18342 +      END;
3593 18343 +
3594 18344 +      IF _BRANCH_ GT 0 THEN DO;
3595 18345 +
3596 18346 +          _BRANCH_ = -1;
3597 18347 +              IF NOT MISSING(Age ) AND
3598 18348 +                  Age <                      44.5 THEN DO;
3599 18349 +                  _BRANCH_ =      1;
3600 18350 +              END;
3601 18351 +
3602 18352 +          IF _BRANCH_ GT 0 THEN DO;
3603 18353 +              _ARB_F_ + -0.011772233;
3604 18354 +          END;
3605 18355 +      END;
3606 18356 +      END;

```

```

3607 18357 +
3608 18358 +***** LEAF      48  NODE      422 *****;
3609 18359 +IF _ARB_BADF_ EQ 0 THEN DO;
3610 18360 +
3611 18361 +   _BRANCH_ = -1;
3612 18362 +       IF NOT MISSING(IMP_TotalSpent ) AND
3613 18363 +                   14847.5 <= IMP_TotalSpent  THEN DO
;
3614 18364 +       _BRANCH_ =      2;
3615 18365 +   END;
3616 18366 +
3617 18367 + IF _BRANCH_ GT 0 THEN DO;
3618 18368 +
3619 18369 +   _BRANCH_ = -1;
3620 18370 +       IF NOT MISSING(Age ) AND
3621 18371 +                   44.5 <= Age  THEN DO;
3622 18372 +       _BRANCH_ =      2;
3623 18373 +   END;
3624 18374 + IF _BRANCH_ LT 0 THEN DO;
3625 18375 +       IF MISSING( Age  ) THEN _BRANCH_ = 2;
3626 18376 +   END;
3627 18377 + IF _BRANCH_ GT 0 THEN DO;
3628 18378 +       _ARB_F_ + 0.0340186517;
3629 18379 +   END;
3630 18380 +   END;
3631 18381 + END;
3632 18382 +
3633 18383 +***** LEAF      49  NODE      426 *****;
3634 18384 +IF _ARB_BADF_ EQ 0 THEN DO;
3635 18385 +
3636 18386 +   _BRANCH_ = -1;
3637 18387 +       IF NOT MISSING(TotalPurchases ) AND
3638 18388 +       TotalPurchases  <                   16.5 THEN DO;
3639 18389 +       _BRANCH_ =      1;
3640 18390 +   END;
3641 18391 + IF _BRANCH_ LT 0 THEN DO;

```

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3642 18392 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
3643 18393 +      END;
3644 18394 +      IF _BRANCH_ GT 0 THEN DO;
3645 18395 +
3646 18396 +      _BRANCH_ = -1;
3647 18397 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
3648 18398 +      %DMNORMIP( _ARBFMT_8);
3649 18399 +      IF _ARBFMT_8 IN ('SILVER' , 'PLATINUM' , 'BRONZ
      E' ) THEN DO;
3650 18400 +      _BRANCH_ =      1;
3651 18401 +      END;
3652 18402 +      IF _BRANCH_ LT 0 THEN DO;
3653 18403 +      IF MISSING( MembershipLevel  ) THEN _BRANCH_
      = 1;
3654 18404 +      ELSE IF _ARBFMT_8 NOTIN (
3655 18405 +      'SILVER' , 'PLATINUM' , 'BRONZE' , 'GOLD'
3656 18406 +      ) THEN _BRANCH_ = 1;
3657 18407 +      END;
3658 18408 +      IF _BRANCH_ GT 0 THEN DO;
3659 18409 +      _ARB_F_ + 0.0015560125;
3660 18410 +      END;
3661 18411 +      END;
3662 18412 +      END;
3663 18413 +
3664 18414 +***** LEAF      50  NODE      427 *****;
3665 18415 +IF _ARB_BADF_ EQ 0 THEN DO;
3666 18416 +
3667 18417 +      _BRANCH_ = -1;
3668 18418 +      IF NOT MISSING(TotalPurchases ) AND
3669 18419 +      TotalPurchases <      16.5 THEN DO;
3670 18420 +      _BRANCH_ =      1;
3671 18421 +      END;
3672 18422 +      IF _BRANCH_ LT 0 THEN DO;
3673 18423 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;

```

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3674 18424 + END;
3675 18425 + IF _BRANCH_ GT 0 THEN DO;
3676 18426 +
3677 18427 +     _BRANCH_ = -1;
3678 18428 +     _ARBFMT_8 = PUT( MembershipLevel , $8.);
3679 18429 +     %DMNORMIP( _ARBFMT_8);
3680 18430 +     IF _ARBFMT_8 IN ('GOLD' ) THEN DO;
3681 18431 +         _BRANCH_ = 2;
3682 18432 +     END;
3683 18433 +
3684 18434 +     IF _BRANCH_ GT 0 THEN DO;
3685 18435 +         _ARB_F_ + -0.006424304;
3686 18436 +     END;
3687 18437 +     END;
3688 18438 + END;
3689 18439 +
3690 18440 +***** LEAF      51  NODE      428 *****;
3691 18441 +IF _ARB_BADF_ EQ 0 THEN DO;
3692 18442 +
3693 18443 +     _BRANCH_ = -1;
3694 18444 +     IF NOT MISSING(TotalPurchases ) AND
3695 18445 +         16.5 <= TotalPurchases THEN DO
;
3696 18446 +         _BRANCH_ = 2;
3697 18447 +     END;
3698 18448 +
3699 18449 + IF _BRANCH_ GT 0 THEN DO;
3700 18450 +
3701 18451 +     _BRANCH_ = -1;
3702 18452 +     IF NOT MISSING(Age ) AND
3703 18453 +     Age < 39.5 THEN DO;
3704 18454 +         _BRANCH_ = 1;
3705 18455 +     END;
3706 18456 +
3707 18457 +     IF _BRANCH_ GT 0 THEN DO;
3708 18458 +         _ARB_F_ + -0.019374845;

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3709 18459 +      END;
3710 18460 +      END;
3711 18461 +      END;
3712 18462 +
3713 18463 +***** LEAF      52  NODE      429 *****;
3714 18464 +IF _ARB_BADF_ EQ 0 THEN DO;
3715 18465 +
3716 18466 +      _BRANCH_ = -1;
3717 18467 +      IF NOT MISSING(TotalPurchases ) AND
3718 18468 +                  16.5 <= TotalPurchases THEN DO
;
3719 18469 +      _BRANCH_ =      2;
3720 18470 +      END;
3721 18471 +
3722 18472 +      IF _BRANCH_ GT 0 THEN DO;
3723 18473 +
3724 18474 +      _BRANCH_ = -1;
3725 18475 +      IF NOT MISSING(Age ) AND
3726 18476 +                  39.5 <= Age THEN DO;
3727 18477 +      _BRANCH_ =      2;
3728 18478 +      END;
3729 18479 +      IF _BRANCH_ LT 0 THEN DO;
3730 18480 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
3731 18481 +      END;
3732 18482 +      IF _BRANCH_ GT 0 THEN DO;
3733 18483 +      _ARB_F_ + 0.0268370873;
3734 18484 +      END;
3735 18485 +      END;
3736 18486 +      END;
3737 18487 +
3738 18488 +***** LEAF      53  NODE      433 *****;
3739 18489 +IF _ARB_BADF_ EQ 0 THEN DO;
3740 18490 +
3741 18491 +      _BRANCH_ = -1;
3742 18492 +      IF NOT MISSING(TotalPurchases ) AND
3743 18493 +      TotalPurchases <                  18.5 THEN DO;

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```

3744 18494 +      _BRANCH_ =      1;
3745 18495 +      END;
3746 18496 +      IF _BRANCH_ LT 0 THEN DO;
3747 18497 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          1;
3748 18498 +      END;
3749 18499 +      IF _BRANCH_ GT 0 THEN DO;
3750 18500 +
3751 18501 +          _BRANCH_ = -1;
3752 18502 +          IF NOT MISSING(IMP_TotalSpent ) AND
3753 18503 +          IMP_TotalSpent <          7686.5 THEN D
          O;
3754 18504 +          _BRANCH_ =      1;
3755 18505 +          END;
3756 18506 +          IF _BRANCH_ LT 0 THEN DO;
3757 18507 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
          = 1;
3758 18508 +      END;
3759 18509 +      IF _BRANCH_ GT 0 THEN DO;
3760 18510 +          _ARB_F_ + -0.001846263;
3761 18511 +      END;
3762 18512 +      END;
3763 18513 +      END;
3764 18514 +
3765 18515 +***** LEAF      54  NODE      434 *****;
3766 18516 +IF _ARB_BADF_ EQ 0 THEN DO;
3767 18517 +
3768 18518 +      _BRANCH_ = -1;
3769 18519 +          IF NOT MISSING(TotalPurchases ) AND
3770 18520 +          TotalPurchases <          18.5 THEN DO;
3771 18521 +          _BRANCH_ =      1;
3772 18522 +          END;
3773 18523 +      IF _BRANCH_ LT 0 THEN DO;
3774 18524 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          1;
3775 18525 +      END;

```



```

3776 18526 + IF _BRANCH_ GT 0 THEN DO;
3777 18527 +
3778 18528 +     _BRANCH_ = -1;
3779 18529 +     IF NOT MISSING(IMP_TotalSpent ) AND
3780 18530 +         7686.5 <= IMP_TotalSpent THEN
DO;
3781 18531 +     _BRANCH_ = 2;
3782 18532 +     END;
3783 18533 +
3784 18534 +     IF _BRANCH_ GT 0 THEN DO;
3785 18535 +         _ARB_F_ + 0.0055006656;
3786 18536 +     END;
3787 18537 +     END;
3788 18538 + END;
3789 18539 +
3790 18540 +***** LEAF      55  NODE      435 *****;
3791 18541 +IF _ARB_BADF_ EQ 0 THEN DO;
3792 18542 +
3793 18543 +     _BRANCH_ = -1;
3794 18544 +     IF NOT MISSING(TotalPurchases ) AND
3795 18545 +         18.5 <= TotalPurchases THEN DO
;
3796 18546 +     _BRANCH_ = 2;
3797 18547 +     END;
3798 18548 +
3799 18549 + IF _BRANCH_ GT 0 THEN DO;
3800 18550 +
3801 18551 +     _BRANCH_ = -1;
3802 18552 +     IF NOT MISSING(Age ) AND
3803 18553 +         Age < 68.5 THEN DO;
3804 18554 +         _BRANCH_ = 1;
3805 18555 +     END;
3806 18556 + IF _BRANCH_ LT 0 THEN DO;
3807 18557 +     IF MISSING( Age ) THEN _BRANCH_ = 1;
3808 18558 + END;
3809 18559 + IF _BRANCH_ GT 0 THEN DO;

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3810 18560 +      _ARB_F_ + 0.017028352;
3811 18561 +      END;
3812 18562 +      END;
3813 18563 +      END;
3814 18564 +
3815 18565 +***** LEAF      56  NODE      436 *****;
3816 18566 +IF _ARB_BADF_ EQ 0 THEN DO;
3817 18567 +
3818 18568 +      _BRANCH_ = -1;
3819 18569 +      IF NOT MISSING(TotalPurchases ) AND
3820 18570 +                      18.5 <= TotalPurchases THEN DO
;
3821 18571 +      _BRANCH_ =      2;
3822 18572 +      END;
3823 18573 +
3824 18574 +      IF _BRANCH_ GT 0 THEN DO;
3825 18575 +
3826 18576 +      _BRANCH_ = -1;
3827 18577 +      IF NOT MISSING(Age ) AND
3828 18578 +                      68.5 <= Age THEN DO;
3829 18579 +      _BRANCH_ =      2;
3830 18580 +      END;
3831 18581 +
3832 18582 +      IF _BRANCH_ GT 0 THEN DO;
3833 18583 +      _ARB_F_ + 0.0731436783;
3834 18584 +      END;
3835 18585 +      END;
3836 18586 +      END;
3837 18587 +
3838 18588 +***** LEAF      57  NODE      440 *****;
3839 18589 +IF _ARB_BADF_ EQ 0 THEN DO;
3840 18590 +
3841 18591 +      _BRANCH_ = -1;
3842 18592 +      IF NOT MISSING(TotalPurchases ) AND
3843 18593 +      TotalPurchases <                      5.5 THEN DO;
3844 18594 +      _BRANCH_ =      1;

```

```

3845 18595 +      END;
3846 18596 +      IF _BRANCH_ LT 0 THEN DO;
3847 18597 +          IF MISSING( TotalPurchases ) THEN _BRANCH_ =
          1;
3848 18598 +      END;
3849 18599 +      IF _BRANCH_ GT 0 THEN DO;
3850 18600 +
3851 18601 +          _BRANCH_ = -1;
3852 18602 +          IF NOT MISSING(IMP_TotalSpent ) AND
3853 18603 +          IMP_TotalSpent <
          472.5 THEN D
          O;
3854 18604 +          _BRANCH_ =      1;
3855 18605 +      END;
3856 18606 +
3857 18607 +      IF _BRANCH_ GT 0 THEN DO;
3858 18608 +          _ARB_F_ + -0.024786733;
3859 18609 +      END;
3860 18610 +      END;
3861 18611 +      END;
3862 18612 +
3863 18613 +***** LEAF      58  NODE      441 *****;
3864 18614 +IF _ARB_BADF_ EQ 0 THEN DO;
3865 18615 +
3866 18616 +      _BRANCH_ = -1;
3867 18617 +          IF NOT MISSING(TotalPurchases ) AND
3868 18618 +          TotalPurchases <
          5.5 THEN DO;
3869 18619 +          _BRANCH_ =      1;
3870 18620 +      END;
3871 18621 +      IF _BRANCH_ LT 0 THEN DO;
3872 18622 +          IF MISSING( TotalPurchases ) THEN _BRANCH_ =
          1;
3873 18623 +      END;
3874 18624 +      IF _BRANCH_ GT 0 THEN DO;
3875 18625 +
3876 18626 +          _BRANCH_ = -1;
3877 18627 +          IF NOT MISSING(IMP_TotalSpent ) AND

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3878 18628 +                472.5 <= IMP_TotalSpent THEN
      DO;
3879 18629 +      _BRANCH_ =      2;
3880 18630 +      END;
3881 18631 +      IF _BRANCH_ LT 0 THEN DO;
3882 18632 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
3883 18633 +      END;
3884 18634 +      IF _BRANCH_ GT 0 THEN DO;
3885 18635 +      _ARB_F_ + -0.002291689;
3886 18636 +      END;
3887 18637 +      END;
3888 18638 +      END;
3889 18639 +
3890 18640 +***** LEAF      59  NODE      442 *****;
3891 18641 +IF _ARB_BADF_ EQ 0 THEN DO;
3892 18642 +
3893 18643 +      _BRANCH_ = -1;
3894 18644 +      IF NOT MISSING( TotalPurchases ) AND
3895 18645 +                5.5 <= TotalPurchases THEN DO
      ;
3896 18646 +      _BRANCH_ =      2;
3897 18647 +      END;
3898 18648 +
3899 18649 +      IF _BRANCH_ GT 0 THEN DO;
3900 18650 +
3901 18651 +      _BRANCH_ = -1;
3902 18652 +      IF NOT MISSING( Age ) AND
3903 18653 +      Age <                45.5 THEN DO;
3904 18654 +      _BRANCH_ =      1;
3905 18655 +      END;
3906 18656 +
3907 18657 +      IF _BRANCH_ GT 0 THEN DO;
3908 18658 +      _ARB_F_ + -0.001153384;
3909 18659 +      END;
3910 18660 +      END;

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3911 18661 + END;
3912 18662 +
3913 18663 +***** LEAF      60  NODE      443 *****;
3914 18664 +IF _ARB_BADF_ EQ 0 THEN DO;
3915 18665 +
3916 18666 +   _BRANCH_ = -1;
3917 18667 +   IF NOT MISSING(TotalPurchases ) AND
3918 18668 +           5.5 <= TotalPurchases THEN DO
;
3919 18669 +   _BRANCH_ = 2;
3920 18670 + END;
3921 18671 +
3922 18672 + IF _BRANCH_ GT 0 THEN DO;
3923 18673 +
3924 18674 +   _BRANCH_ = -1;
3925 18675 +   IF NOT MISSING(Age ) AND
3926 18676 +           45.5 <= Age THEN DO;
3927 18677 +   _BRANCH_ = 2;
3928 18678 + END;
3929 18679 + IF _BRANCH_ LT 0 THEN DO;
3930 18680 +   IF MISSING( Age ) THEN _BRANCH_ = 2;
3931 18681 + END;
3932 18682 + IF _BRANCH_ GT 0 THEN DO;
3933 18683 +   _ARB_F_ + 0.0105484895;
3934 18684 + END;
3935 18685 + END;
3936 18686 + END;
3937 18687 +
3938 18688 +***** LEAF      61  NODE      447 *****;
3939 18689 +IF _ARB_BADF_ EQ 0 THEN DO;
3940 18690 +
3941 18691 +   _BRANCH_ = -1;
3942 18692 +   IF NOT MISSING(IMP_TotalSpent ) AND
3943 18693 +   IMP_TotalSpent <           9170.5 THEN DO;
3944 18694 +   _BRANCH_ = 1;
3945 18695 + END;

```

```

3946 18696 + IF _BRANCH_ LT 0 THEN DO;
3947 18697 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
3948 18698 + END;
3949 18699 + IF _BRANCH_ GT 0 THEN DO;
3950 18700 +
3951 18701 +     _BRANCH_ = -1;
3952 18702 +     _ARBFMT_8 = PUT( MembershipLevel , $8.);
3953 18703 +     %DMNORMIP( _ARBFMT_8);
3954 18704 +     IF _ARBFMT_8 IN ( 'SILVER' , 'GOLD' , 'BRONZE' )
      THEN DO;
3955 18705 +         _BRANCH_ = 1;
3956 18706 +     END;
3957 18707 + IF _BRANCH_ LT 0 THEN DO;
3958 18708 +     IF MISSING( MembershipLevel ) THEN _BRANCH_
      = 1;
3959 18709 +     ELSE IF _ARBFMT_8 NOTIN (
3960 18710 +         'SILVER' , 'GOLD' , 'BRONZE' , 'PLATINUM'
3961 18711 +     ) THEN _BRANCH_ = 1;
3962 18712 + END;
3963 18713 + IF _BRANCH_ GT 0 THEN DO;
3964 18714 +     _ARB_F_ + -0.002825654;
3965 18715 + END;
3966 18716 + END;
3967 18717 + END;
3968 18718 +
3969 18719 +***** LEAF      62  NODE      448 *****;
3970 18720 +IF _ARB_BADF_ EQ 0 THEN DO;
3971 18721 +
3972 18722 +     _BRANCH_ = -1;
3973 18723 +     IF NOT MISSING(IMP_TotalSpent ) AND
3974 18724 +     IMP_TotalSpent < 9170.5 THEN DO;
3975 18725 +         _BRANCH_ = 1;
3976 18726 +     END;
3977 18727 + IF _BRANCH_ LT 0 THEN DO;
3978 18728 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =

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1;
3979 18729 + END;
3980 18730 + IF _BRANCH_ GT 0 THEN DO;
3981 18731 +
3982 18732 +     _BRANCH_ = -1;
3983 18733 +     _ARBFMT_8 = PUT( MembershipLevel , $8.);
3984 18734 +     %DMNORMIP( _ARBFMT_8);
3985 18735 +     IF _ARBFMT_8 IN ('PLATINUM' ) THEN DO;
3986 18736 +         _BRANCH_ = 2;
3987 18737 +     END;
3988 18738 +
3989 18739 +     IF _BRANCH_ GT 0 THEN DO;
3990 18740 +         _ARB_F_ + 0.0030238775;
3991 18741 +     END;
3992 18742 + END;
3993 18743 + END;
3994 18744 +
3995 18745 +***** LEAF      63  NODE      449 *****;
3996 18746 +IF _ARB_BADF_ EQ 0 THEN DO;
3997 18747 +
3998 18748 +     _BRANCH_ = -1;
3999 18749 +     IF NOT MISSING(IMP_TotalSpent ) AND
4000 18750 +         9170.5 <= IMP_TotalSpent THEN DO
;
4001 18751 +         _BRANCH_ = 2;
4002 18752 +     END;
4003 18753 +
4004 18754 + IF _BRANCH_ GT 0 THEN DO;
4005 18755 +
4006 18756 +     _BRANCH_ = -1;
4007 18757 +     IF NOT MISSING(IMP_TotalSpent ) AND
4008 18758 +     IMP_TotalSpent < 9216 THEN D
O;
4009 18759 +         _BRANCH_ = 1;
4010 18760 +     END;
4011 18761 +

```

```

4012 18762 +      IF _BRANCH_ GT 0 THEN DO;
4013 18763 +          _ARB_F_ + 0.1016480801;
4014 18764 +      END;
4015 18765 +      END;
4016 18766 +  END;
4017 18767 +
4018 18768 +***** LEAF      64  NODE      450 *****;
4019 18769 +IF _ARB_BADF_ EQ 0 THEN DO;
4020 18770 +
4021 18771 +  _BRANCH_ = -1;
4022 18772 +      IF NOT MISSING(IMP_TotalSpent ) AND
4023 18773 +          9170.5 <= IMP_TotalSpent THEN DO
;
4024 18774 +          _BRANCH_ =      2;
4025 18775 +      END;
4026 18776 +
4027 18777 +  IF _BRANCH_ GT 0 THEN DO;
4028 18778 +
4029 18779 +      _BRANCH_ = -1;
4030 18780 +          IF NOT MISSING(IMP_TotalSpent ) AND
4031 18781 +              9216 <= IMP_TotalSpent THEN
DO;
4032 18782 +          _BRANCH_ =      2;
4033 18783 +      END;
4034 18784 +      IF _BRANCH_ LT 0 THEN DO;
4035 18785 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
4036 18786 +      END;
4037 18787 +      IF _BRANCH_ GT 0 THEN DO;
4038 18788 +          _ARB_F_ + 0.0067583203;
4039 18789 +      END;
4040 18790 +      END;
4041 18791 +  END;
4042 18792 +
4043 18793 +***** LEAF      65  NODE      454 *****;
4044 18794 +IF _ARB_BADF_ EQ 0 THEN DO;

```



```

4045 18795 +
4046 18796 +   _BRANCH_ = -1;
4047 18797 +   IF NOT MISSING(Age ) AND
4048 18798 +   Age < 19.5 THEN DO;
4049 18799 +   _BRANCH_ = 1;
4050 18800 +   END;
4051 18801 +
4052 18802 +   IF _BRANCH_ GT 0 THEN DO;
4053 18803 +
4054 18804 +   _BRANCH_ = -1;
4055 18805 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
4056 18806 +   %DMNORMIP( _ARBFMT_8);
4057 18807 +   IF _ARBFMT_8 IN ('SILVER' , 'BRONZE' ) THEN DO
;
4058 18808 +   _BRANCH_ = 1;
4059 18809 +   END;
4060 18810 +
4061 18811 +   IF _BRANCH_ GT 0 THEN DO;
4062 18812 +   _ARB_F_ + 0.0024312948;
4063 18813 +   END;
4064 18814 +   END;
4065 18815 +   END;
4066 18816 +
4067 18817 +***** LEAF 66 NODE 455 *****;
4068 18818 +IF _ARB_BADF_ EQ 0 THEN DO;
4069 18819 +
4070 18820 +   _BRANCH_ = -1;
4071 18821 +   IF NOT MISSING(Age ) AND
4072 18822 +   Age < 19.5 THEN DO;
4073 18823 +   _BRANCH_ = 1;
4074 18824 +   END;
4075 18825 +
4076 18826 +   IF _BRANCH_ GT 0 THEN DO;
4077 18827 +
4078 18828 +   _BRANCH_ = -1;
4079 18829 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);

```

```

4080 18830 +      %DMNORMIP( _ARBFMT_8);
4081 18831 +      IF _ARBFMT_8 IN ('GOLD' , 'PLATINUM' ) THEN DO
      ;
4082 18832 +      _BRANCH_ =      2;
4083 18833 +      END;
4084 18834 +      IF _BRANCH_ LT 0 THEN DO;
4085 18835 +      IF MISSING( MembershipLevel ) THEN _BRANCH_
      = 2;
4086 18836 +      ELSE IF _ARBFMT_8 NOTIN (
4087 18837 +      'SILVER' , 'BRONZE' , 'GOLD' , 'PLATINUM'
4088 18838 +      ) THEN _BRANCH_ = 2;
4089 18839 +      END;
4090 18840 +      IF _BRANCH_ GT 0 THEN DO;
4091 18841 +      _ARB_F_ + -0.031121539;
4092 18842 +      END;
4093 18843 +      END;
4094 18844 +      END;
4095 18845 +
4096 18846 +***** LEAF      67  NODE      456 *****;
4097 18847 +IF _ARB_BADF_ EQ 0 THEN DO;
4098 18848 +
4099 18849 +      _BRANCH_ = -1;
4100 18850 +      IF NOT MISSING(Age ) AND
4101 18851 +      19.5 <= Age THEN DO;
4102 18852 +      _BRANCH_ =      2;
4103 18853 +      END;
4104 18854 +      IF _BRANCH_ LT 0 THEN DO;
4105 18855 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
4106 18856 +      END;
4107 18857 +      IF _BRANCH_ GT 0 THEN DO;
4108 18858 +
4109 18859 +      _BRANCH_ = -1;
4110 18860 +      IF NOT MISSING(TotalPurchases ) AND
4111 18861 +      TotalPurchases <
      9.5 THEN D
      O;
4112 18862 +      _BRANCH_ =      1;

```

```

4113 18863 +      END;
4114 18864 +      IF _BRANCH_ LT 0 THEN DO;
4115 18865 +          IF MISSING( TotalPurchases ) THEN _BRANCH_
      = 1;
4116 18866 +      END;
4117 18867 +      IF _BRANCH_ GT 0 THEN DO;
4118 18868 +          _ARB_F_ + 0.00134714;
4119 18869 +      END;
4120 18870 +      END;
4121 18871 +  END;
4122 18872 +
4123 18873 +***** LEAF      68  NODE      457 *****;
4124 18874 +IF _ARB_BADF_ EQ 0 THEN DO;
4125 18875 +
4126 18876 +  _BRANCH_ = -1;
4127 18877 +      IF NOT MISSING(Age ) AND
4128 18878 +          19.5 <= Age  THEN DO;
4129 18879 +          _BRANCH_ =      2;
4130 18880 +      END;
4131 18881 +  IF _BRANCH_ LT 0 THEN DO;
4132 18882 +      IF MISSING( Age  ) THEN _BRANCH_ = 2;
4133 18883 +  END;
4134 18884 +  IF _BRANCH_ GT 0 THEN DO;
4135 18885 +
4136 18886 +      _BRANCH_ = -1;
4137 18887 +      IF NOT MISSING(TotalPurchases ) AND
4138 18888 +          9.5 <= TotalPurchases  THEN
      DO;
4139 18889 +          _BRANCH_ =      2;
4140 18890 +      END;
4141 18891 +
4142 18892 +      IF _BRANCH_ GT 0 THEN DO;
4143 18893 +          _ARB_F_ + -0.004905984;
4144 18894 +      END;
4145 18895 +      END;
4146 18896 +  END;

```

```

4147 18897 +
4148 18898 +***** LEAF      69  NODE      461 *****;
4149 18899 +IF _ARB_BADF_ EQ 0 THEN DO;
4150 18900 +
4151 18901 +   _BRANCH_ = -1;
4152 18902 +   IF NOT MISSING(TotalPurchases ) AND
4153 18903 +   TotalPurchases <                      18.5 THEN DO;
4154 18904 +   _BRANCH_ = 1;
4155 18905 +   END;
4156 18906 + IF _BRANCH_ LT 0 THEN DO;
4157 18907 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
4158 18908 + END;
4159 18909 + IF _BRANCH_ GT 0 THEN DO;
4160 18910 +
4161 18911 +   _BRANCH_ = -1;
4162 18912 +   IF NOT MISSING(IMP_TotalSpent ) AND
4163 18913 +   IMP_TotalSpent <                      3010.5 THEN D
O;
4164 18914 +   _BRANCH_ = 1;
4165 18915 +   END;
4166 18916 +
4167 18917 +   IF _BRANCH_ GT 0 THEN DO;
4168 18918 +   _ARB_F_ + -0.003719785;
4169 18919 +   END;
4170 18920 +   END;
4171 18921 + END;
4172 18922 +
4173 18923 +***** LEAF      70  NODE      462 *****;
4174 18924 +IF _ARB_BADF_ EQ 0 THEN DO;
4175 18925 +
4176 18926 +   _BRANCH_ = -1;
4177 18927 +   IF NOT MISSING(TotalPurchases ) AND
4178 18928 +   TotalPurchases <                      18.5 THEN DO;
4179 18929 +   _BRANCH_ = 1;
4180 18930 +   END;

```

```

4181 18931 + IF _BRANCH_ LT 0 THEN DO;
4182 18932 +     IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
4183 18933 + END;
4184 18934 + IF _BRANCH_ GT 0 THEN DO;
4185 18935 +
4186 18936 +     _BRANCH_ = -1;
4187 18937 +     IF NOT MISSING(IMP_TotalSpent ) AND
4188 18938 +         3010.5 <= IMP_TotalSpent THEN
      DO;
4189 18939 +         _BRANCH_ = 2;
4190 18940 +     END;
4191 18941 + IF _BRANCH_ LT 0 THEN DO;
4192 18942 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
4193 18943 + END;
4194 18944 + IF _BRANCH_ GT 0 THEN DO;
4195 18945 +     _ARB_F_ + 0.0012695799;
4196 18946 + END;
4197 18947 + END;
4198 18948 + END;
4199 18949 +
4200 18950 +***** LEAF      71  NODE      463 *****;
4201 18951 +IF _ARB_BADF_ EQ 0 THEN DO;
4202 18952 +
4203 18953 +     _BRANCH_ = -1;
4204 18954 +     IF NOT MISSING(TotalPurchases ) AND
4205 18955 +         18.5 <= TotalPurchases THEN DO
      ;
4206 18956 +         _BRANCH_ = 2;
4207 18957 +     END;
4208 18958 +
4209 18959 + IF _BRANCH_ GT 0 THEN DO;
4210 18960 +
4211 18961 +     _BRANCH_ = -1;
4212 18962 +     IF NOT MISSING(IMP_TotalSpent ) AND

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4213 18963 +      IMP_TotalSpent  <      24000 THEN D
      O;
4214 18964 +      _BRANCH_ =      1;
4215 18965 +      END;
4216 18966 +      IF _BRANCH_ LT 0 THEN DO;
4217 18967 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
      = 1;
4218 18968 +      END;
4219 18969 +      IF _BRANCH_ GT 0 THEN DO;
4220 18970 +      _ARB_F_ + 0.0311350158;
4221 18971 +      END;
4222 18972 +      END;
4223 18973 +      END;
4224 18974 +
4225 18975 +***** LEAF      72  NODE      464 *****;
4226 18976 +IF _ARB_BADF_ EQ 0 THEN DO;
4227 18977 +
4228 18978 +      _BRANCH_ = -1;
4229 18979 +      IF NOT MISSING(TotalPurchases ) AND
4230 18980 +      18.5 <= TotalPurchases THEN DO
      ;
4231 18981 +      _BRANCH_ =      2;
4232 18982 +      END;
4233 18983 +
4234 18984 +      IF _BRANCH_ GT 0 THEN DO;
4235 18985 +
4236 18986 +      _BRANCH_ = -1;
4237 18987 +      IF NOT MISSING(IMP_TotalSpent ) AND
4238 18988 +      24000 <= IMP_TotalSpent THEN
      DO;
4239 18989 +      _BRANCH_ =      2;
4240 18990 +      END;
4241 18991 +
4242 18992 +      IF _BRANCH_ GT 0 THEN DO;
4243 18993 +      _ARB_F_ + -0.006093231;
4244 18994 +      END;

```

```

4245 18995 +      END;
4246 18996 +      END;
4247 18997 +
4248 18998 +***** LEAF      73  NODE      468 *****;
4249 18999 +IF _ARB_BADF_ EQ 0 THEN DO;
4250 19000 +
4251 19001 +      _BRANCH_ = -1;
4252 19002 +      IF NOT MISSING(TotalPurchases ) AND
4253 19003 +      TotalPurchases <                      16.5 THEN DO;
4254 19004 +      _BRANCH_ =      1;
4255 19005 +      END;
4256 19006 +      IF _BRANCH_ LT 0 THEN DO;
4257 19007 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
4258 19008 +      END;
4259 19009 +      IF _BRANCH_ GT 0 THEN DO;
4260 19010 +
4261 19011 +      _BRANCH_ = -1;
4262 19012 +      IF NOT MISSING(Age ) AND
4263 19013 +      Age <                      29.5 THEN DO;
4264 19014 +      _BRANCH_ =      1;
4265 19015 +      END;
4266 19016 +
4267 19017 +      IF _BRANCH_ GT 0 THEN DO;
4268 19018 +      _ARB_F_ + 0.0045485243;
4269 19019 +      END;
4270 19020 +      END;
4271 19021 +      END;
4272 19022 +
4273 19023 +***** LEAF      74  NODE      469 *****;
4274 19024 +IF _ARB_BADF_ EQ 0 THEN DO;
4275 19025 +
4276 19026 +      _BRANCH_ = -1;
4277 19027 +      IF NOT MISSING(TotalPurchases ) AND
4278 19028 +      TotalPurchases <                      16.5 THEN DO;
4279 19029 +      _BRANCH_ =      1;

```

```

4280 19030 +      END;
4281 19031 +      IF _BRANCH_ LT 0 THEN DO;
4282 19032 +          IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
4283 19033 +      END;
4284 19034 +      IF _BRANCH_ GT 0 THEN DO;
4285 19035 +
4286 19036 +          _BRANCH_ = -1;
4287 19037 +          IF NOT MISSING(Age ) AND
4288 19038 +              29.5 <= Age THEN DO;
4289 19039 +              _BRANCH_ = 2;
4290 19040 +          END;
4291 19041 +      IF _BRANCH_ LT 0 THEN DO;
4292 19042 +          IF MISSING( Age ) THEN _BRANCH_ = 2;
4293 19043 +      END;
4294 19044 +      IF _BRANCH_ GT 0 THEN DO;
4295 19045 +          _ARB_F_ + -0.001807958;
4296 19046 +      END;
4297 19047 +      END;
4298 19048 +      END;
4299 19049 +
4300 19050 +***** LEAF      75  NODE      470 *****;
4301 19051 +IF _ARB_BADF_ EQ 0 THEN DO;
4302 19052 +
4303 19053 +      _BRANCH_ = -1;
4304 19054 +          IF NOT MISSING(TotalPurchases ) AND
4305 19055 +              16.5 <= TotalPurchases THEN DO
;
4306 19056 +          _BRANCH_ = 2;
4307 19057 +      END;
4308 19058 +
4309 19059 +      IF _BRANCH_ GT 0 THEN DO;
4310 19060 +
4311 19061 +          _BRANCH_ = -1;
4312 19062 +          _ARBFMT_8 = PUT( MembershipLevel , $8.);
4313 19063 +          %DMNORMIP( _ARBFMT_8);

```



```

4314 19064 +      IF _ARBFMT_8 IN ('SILVER' ) THEN DO;
4315 19065 +      _BRANCH_ =      1;
4316 19066 +      END;
4317 19067 +
4318 19068 +      IF _BRANCH_ GT 0 THEN DO;
4319 19069 +      _ARB_F_ + -0.007672138;
4320 19070 +      END;
4321 19071 +      END;
4322 19072 +      END;
4323 19073 +
4324 19074 +***** LEAF      76  NODE      471 *****;
4325 19075 +IF _ARB_BADF_ EQ 0 THEN DO;
4326 19076 +
4327 19077 +      _BRANCH_ = -1;
4328 19078 +      IF NOT MISSING( TotalPurchases ) AND
4329 19079 +      16.5 <= TotalPurchases THEN DO
;
4330 19080 +      _BRANCH_ =      2;
4331 19081 +      END;
4332 19082 +
4333 19083 +      IF _BRANCH_ GT 0 THEN DO;
4334 19084 +
4335 19085 +      _BRANCH_ = -1;
4336 19086 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
4337 19087 +      %DMNORMIP( _ARBFMT_8);
4338 19088 +      IF _ARBFMT_8 IN ('GOLD' , 'PLATINUM' , 'BRONZE'
) THEN DO;
4339 19089 +      _BRANCH_ =      2;
4340 19090 +      END;
4341 19091 +      IF _BRANCH_ LT 0 THEN DO;
4342 19092 +      IF MISSING( MembershipLevel ) THEN _BRANCH_
= 2;
4343 19093 +      ELSE IF _ARBFMT_8 NOTIN (
4344 19094 +      'SILVER' , 'GOLD' , 'PLATINUM' , 'BRONZE'
4345 19095 +      ) THEN _BRANCH_ = 2;
4346 19096 +      END;

```

```

4347 19097 +      IF _BRANCH_ GT 0 THEN DO;
4348 19098 +          _ARB_F_ + 0.0273067307;
4349 19099 +      END;
4350 19100 +      END;
4351 19101 +  END;
4352 19102 +
4353 19103 +***** LEAF      77  NODE      475 *****;
4354 19104 +IF _ARB_BADF_ EQ 0 THEN DO;
4355 19105 +
4356 19106 +  _BRANCH_ = -1;
4357 19107 +      IF NOT MISSING(IMP_TotalSpent ) AND
4358 19108 +      IMP_TotalSpent <                28061.5 THEN DO;
4359 19109 +      _BRANCH_ =      1;
4360 19110 +      END;
4361 19111 +  IF _BRANCH_ LT 0 THEN DO;
4362 19112 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
4363 19113 +  END;
4364 19114 +  IF _BRANCH_ GT 0 THEN DO;
4365 19115 +
4366 19116 +      _BRANCH_ = -1;
4367 19117 +      IF NOT MISSING(IMP_TotalSpent ) AND
4368 19118 +      IMP_TotalSpent <                486.5 THEN D
      O;
4369 19119 +      _BRANCH_ =      1;
4370 19120 +      END;
4371 19121 +
4372 19122 +      IF _BRANCH_ GT 0 THEN DO;
4373 19123 +          _ARB_F_ + -0.017981726;
4374 19124 +      END;
4375 19125 +      END;
4376 19126 +  END;
4377 19127 +
4378 19128 +***** LEAF      78  NODE      476 *****;
4379 19129 +IF _ARB_BADF_ EQ 0 THEN DO;
4380 19130 +

```

```

4381 19131 + _BRANCH_ = -1;
4382 19132 + IF NOT MISSING(IMP_TotalSpent ) AND
4383 19133 + IMP_TotalSpent < 28061.5 THEN DO;
4384 19134 + _BRANCH_ = 1;
4385 19135 + END;
4386 19136 + IF _BRANCH_ LT 0 THEN DO;
4387 19137 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
4388 19138 + END;
4389 19139 + IF _BRANCH_ GT 0 THEN DO;
4390 19140 +
4391 19141 + _BRANCH_ = -1;
4392 19142 + IF NOT MISSING(IMP_TotalSpent ) AND
4393 19143 + 486.5 <= IMP_TotalSpent THEN
DO;
4394 19144 + _BRANCH_ = 2;
4395 19145 + END;
4396 19146 + IF _BRANCH_ LT 0 THEN DO;
4397 19147 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
4398 19148 + END;
4399 19149 + IF _BRANCH_ GT 0 THEN DO;
4400 19150 + _ARB_F_ + 0.0002939541;
4401 19151 + END;
4402 19152 + END;
4403 19153 + END;
4404 19154 +
4405 19155 +***** LEAF 79 NODE 474 *****;
4406 19156 +IF _ARB_BADF_ EQ 0 THEN DO;
4407 19157 +
4408 19158 + _BRANCH_ = -1;
4409 19159 + IF NOT MISSING(IMP_TotalSpent ) AND
4410 19160 + 28061.5 <= IMP_TotalSpent THEN DO
;
4411 19161 + _BRANCH_ = 2;
4412 19162 + END;

```

```

4413 19163 +
4414 19164 + IF _BRANCH_ GT 0 THEN DO;
4415 19165 +     _ARB_F_ + 0.0465749879;
4416 19166 +     END;
4417 19167 + END;
4418 19168 +
4419 19169 +***** LEAF      80  NODE      480 *****;
4420 19170 +IF _ARB_BADF_ EQ 0 THEN DO;
4421 19171 +
4422 19172 +     _BRANCH_ = -1;
4423 19173 +     IF NOT MISSING(IMP_TotalSpent ) AND
4424 19174 +     IMP_TotalSpent <                13435.5 THEN DO;
4425 19175 +     _BRANCH_ =     1;
4426 19176 +     END;
4427 19177 + IF _BRANCH_ LT 0 THEN DO;
4428 19178 +     IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
        1;
4429 19179 + END;
4430 19180 + IF _BRANCH_ GT 0 THEN DO;
4431 19181 +
4432 19182 +     _BRANCH_ = -1;
4433 19183 +     IF NOT MISSING(IMP_TotalSpent ) AND
4434 19184 +     IMP_TotalSpent <                491 THEN D
        O;
4435 19185 +     _BRANCH_ =     1;
4436 19186 +     END;
4437 19187 +
4438 19188 + IF _BRANCH_ GT 0 THEN DO;
4439 19189 +     _ARB_F_ + -0.016884287;
4440 19190 +     END;
4441 19191 +     END;
4442 19192 + END;
4443 19193 +
4444 19194 +***** LEAF      81  NODE      481 *****;
4445 19195 +IF _ARB_BADF_ EQ 0 THEN DO;
4446 19196 +

```

```

4447 19197 +   _BRANCH_ = -1;
4448 19198 +       IF NOT MISSING(IMP_TotalSpent ) AND
4449 19199 +       IMP_TotalSpent < 13435.5 THEN DO;
4450 19200 +       _BRANCH_ = 1;
4451 19201 +       END;
4452 19202 +   IF _BRANCH_ LT 0 THEN DO;
4453 19203 +       IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
4454 19204 +   END;
4455 19205 +   IF _BRANCH_ GT 0 THEN DO;
4456 19206 +
4457 19207 +       _BRANCH_ = -1;
4458 19208 +       IF NOT MISSING(IMP_TotalSpent ) AND
4459 19209 +       491 <= IMP_TotalSpent THEN
DO;
4460 19210 +       _BRANCH_ = 2;
4461 19211 +       END;
4462 19212 +       IF _BRANCH_ LT 0 THEN DO;
4463 19213 +       IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
4464 19214 +       END;
4465 19215 +       IF _BRANCH_ GT 0 THEN DO;
4466 19216 +       _ARB_F_ + -0.000159681;
4467 19217 +       END;
4468 19218 +       END;
4469 19219 +   END;
4470 19220 +
4471 19221 +***** LEAF      82  NODE      482 *****;
4472 19222 +IF _ARB_BADF_ EQ 0 THEN DO;
4473 19223 +
4474 19224 +   _BRANCH_ = -1;
4475 19225 +       IF NOT MISSING(IMP_TotalSpent ) AND
4476 19226 +       13435.5 <= IMP_TotalSpent THEN DO
;
4477 19227 +       _BRANCH_ = 2;
4478 19228 +       END;

```

```

4479 19229 +
4480 19230 + IF _BRANCH_ GT 0 THEN DO;
4481 19231 +
4482 19232 +     _BRANCH_ = -1;
4483 19233 +     IF NOT MISSING(Age ) AND
4484 19234 +     Age < 39.5 THEN DO;
4485 19235 +     _BRANCH_ = 1;
4486 19236 +     END;
4487 19237 +
4488 19238 +     IF _BRANCH_ GT 0 THEN DO;
4489 19239 +     _ARB_F_ + -0.021557338;
4490 19240 +     END;
4491 19241 +     END;
4492 19242 + END;
4493 19243 +
4494 19244 +***** LEAF      83  NODE      483 *****;
4495 19245 +IF _ARB_BADF_ EQ 0 THEN DO;
4496 19246 +
4497 19247 +     _BRANCH_ = -1;
4498 19248 +     IF NOT MISSING(IMP_TotalSpent ) AND
4499 19249 +     13435.5 <= IMP_TotalSpent THEN DO
        ;
4500 19250 +     _BRANCH_ = 2;
4501 19251 +     END;
4502 19252 +
4503 19253 + IF _BRANCH_ GT 0 THEN DO;
4504 19254 +
4505 19255 +     _BRANCH_ = -1;
4506 19256 +     IF NOT MISSING(Age ) AND
4507 19257 +     39.5 <= Age THEN DO;
4508 19258 +     _BRANCH_ = 2;
4509 19259 +     END;
4510 19260 + IF _BRANCH_ LT 0 THEN DO;
4511 19261 +     IF MISSING( Age ) THEN _BRANCH_ = 2;
4512 19262 +     END;
4513 19263 + IF _BRANCH_ GT 0 THEN DO;

```

```

4514 19264 +      _ARB_F_ + 0.0185084939;
4515 19265 +      END;
4516 19266 +      END;
4517 19267 +      END;
4518 19268 +
4519 19269 +***** LEAF      84  NODE      487 *****;
4520 19270 +IF _ARB_BADF_ EQ 0 THEN DO;
4521 19271 +
4522 19272 +      _BRANCH_ = -1;
4523 19273 +      IF NOT MISSING(TotalPurchases ) AND
4524 19274 +      TotalPurchases <                  16.5 THEN DO;
4525 19275 +      _BRANCH_ =      1;
4526 19276 +      END;
4527 19277 +      IF _BRANCH_ LT 0 THEN DO;
4528 19278 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
4529 19279 +      END;
4530 19280 +      IF _BRANCH_ GT 0 THEN DO;
4531 19281 +
4532 19282 +      _BRANCH_ = -1;
4533 19283 +      IF NOT MISSING(Age ) AND
4534 19284 +      Age <                  19.5 THEN DO;
4535 19285 +      _BRANCH_ =      1;
4536 19286 +      END;
4537 19287 +
4538 19288 +      IF _BRANCH_ GT 0 THEN DO;
4539 19289 +      _ARB_F_ + -0.013781471;
4540 19290 +      END;
4541 19291 +      END;
4542 19292 +      END;
4543 19293 +
4544 19294 +***** LEAF      85  NODE      488 *****;
4545 19295 +IF _ARB_BADF_ EQ 0 THEN DO;
4546 19296 +
4547 19297 +      _BRANCH_ = -1;
4548 19298 +      IF NOT MISSING(TotalPurchases ) AND

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4549 19299 +      TotalPurchases  <                               16.5 THEN DO;
4550 19300 +      _BRANCH_ =      1;
4551 19301 +      END;
4552 19302 +      IF _BRANCH_ LT 0 THEN DO;
4553 19303 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
1;
4554 19304 +      END;
4555 19305 +      IF _BRANCH_ GT 0 THEN DO;
4556 19306 +
4557 19307 +          _BRANCH_ = -1;
4558 19308 +          IF NOT MISSING(Age ) AND
4559 19309 +              19.5 <= Age  THEN DO;
4560 19310 +          _BRANCH_ =      2;
4561 19311 +          END;
4562 19312 +          IF _BRANCH_ LT 0 THEN DO;
4563 19313 +              IF MISSING( Age  ) THEN _BRANCH_ = 2;
4564 19314 +          END;
4565 19315 +          IF _BRANCH_ GT 0 THEN DO;
4566 19316 +              _ARB_F_ + -0.000233373;
4567 19317 +          END;
4568 19318 +      END;
4569 19319 +      END;
4570 19320 +
4571 19321 +***** LEAF      86  NODE      489 *****;
4572 19322 +IF _ARB_BADF_ EQ 0 THEN DO;
4573 19323 +
4574 19324 +      _BRANCH_ = -1;
4575 19325 +          IF NOT MISSING(TotalPurchases ) AND
4576 19326 +              16.5 <= TotalPurchases  THEN DO
;
4577 19327 +          _BRANCH_ =      2;
4578 19328 +      END;
4579 19329 +
4580 19330 +      IF _BRANCH_ GT 0 THEN DO;
4581 19331 +
4582 19332 +          _BRANCH_ = -1;

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4583 19333 +      IF NOT MISSING(Age ) AND
4584 19334 +      Age < 60.5 THEN DO;
4585 19335 +      _BRANCH_ = 1;
4586 19336 +      END;
4587 19337 +      IF _BRANCH_ LT 0 THEN DO;
4588 19338 +      IF MISSING( Age ) THEN _BRANCH_ = 1;
4589 19339 +      END;
4590 19340 +      IF _BRANCH_ GT 0 THEN DO;
4591 19341 +      _ARB_F_ + 0.0372191251;
4592 19342 +      END;
4593 19343 +      END;
4594 19344 +      END;
4595 19345 +
4596 19346 +***** LEAF      87  NODE      490 *****;
4597 19347 +IF _ARB_BADF_ EQ 0 THEN DO;
4598 19348 +
4599 19349 +      _BRANCH_ = -1;
4600 19350 +      IF NOT MISSING(TotalPurchases ) AND
4601 19351 +      16.5 <= TotalPurchases THEN DO
;
4602 19352 +      _BRANCH_ = 2;
4603 19353 +      END;
4604 19354 +
4605 19355 +      IF _BRANCH_ GT 0 THEN DO;
4606 19356 +
4607 19357 +      _BRANCH_ = -1;
4608 19358 +      IF NOT MISSING(Age ) AND
4609 19359 +      60.5 <= Age THEN DO;
4610 19360 +      _BRANCH_ = 2;
4611 19361 +      END;
4612 19362 +
4613 19363 +      IF _BRANCH_ GT 0 THEN DO;
4614 19364 +      _ARB_F_ + 0.0009935821;
4615 19365 +      END;
4616 19366 +      END;
4617 19367 +      END;

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4618 19368 +
4619 19369 +***** LEAF      88  NODE      494 *****;
4620 19370 +IF _ARB_BADF_ EQ 0 THEN DO;
4621 19371 +
4622 19372 +   _BRANCH_ = -1;
4623 19373 +   IF NOT MISSING(Age ) AND
4624 19374 +   Age <                               19.5 THEN DO;
4625 19375 +   _BRANCH_ = 1;
4626 19376 +   END;
4627 19377 +
4628 19378 + IF _BRANCH_ GT 0 THEN DO;
4629 19379 +
4630 19380 +   _BRANCH_ = -1;
4631 19381 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
4632 19382 +   %DMNORMIP( _ARBFMT_8);
4633 19383 +   IF _ARBFMT_8 IN ('SILVER' , 'PLATINUM' ) THEN
DO;
4634 19384 +   _BRANCH_ = 1;
4635 19385 +   END;
4636 19386 +   IF _BRANCH_ LT 0 THEN DO;
4637 19387 +   IF MISSING( MembershipLevel ) THEN _BRANCH_
= 1;
4638 19388 +   ELSE IF _ARBFMT_8 NOTIN (
4639 19389 +   'SILVER' , 'PLATINUM' , 'GOLD' , 'BRONZE'
4640 19390 +   ) THEN _BRANCH_ = 1;
4641 19391 +   END;
4642 19392 +   IF _BRANCH_ GT 0 THEN DO;
4643 19393 +   _ARB_F_ + -0.010859518;
4644 19394 +   END;
4645 19395 +   END;
4646 19396 + END;
4647 19397 +
4648 19398 +***** LEAF      89  NODE      495 *****;
4649 19399 +IF _ARB_BADF_ EQ 0 THEN DO;
4650 19400 +
4651 19401 +   _BRANCH_ = -1;

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4652 19402 + IF NOT MISSING(Age ) AND
4653 19403 + Age < 19.5 THEN DO;
4654 19404 + _BRANCH_ = 1;
4655 19405 + END;
4656 19406 +
4657 19407 + IF _BRANCH_ GT 0 THEN DO;
4658 19408 +
4659 19409 + _BRANCH_ = -1;
4660 19410 + _ARBFMT_8 = PUT( MembershipLevel , $8.);
4661 19411 + %DMNORMIP( _ARBFMT_8);
4662 19412 + IF _ARBFMT_8 IN ('GOLD' , 'BRONZE' ) THEN DO;
4663 19413 + _BRANCH_ = 2;
4664 19414 + END;
4665 19415 +
4666 19416 + IF _BRANCH_ GT 0 THEN DO;
4667 19417 + _ARB_F_ + -0.029100888;
4668 19418 + END;
4669 19419 + END;
4670 19420 + END;
4671 19421 +
4672 19422 +***** LEAF 90 NODE 496 *****;
4673 19423 +IF _ARB_BADF_ EQ 0 THEN DO;
4674 19424 +
4675 19425 + _BRANCH_ = -1;
4676 19426 + IF NOT MISSING(Age ) AND
4677 19427 + 19.5 <= Age THEN DO;
4678 19428 + _BRANCH_ = 2;
4679 19429 + END;
4680 19430 + IF _BRANCH_ LT 0 THEN DO;
4681 19431 + IF MISSING( Age ) THEN _BRANCH_ = 2;
4682 19432 + END;
4683 19433 + IF _BRANCH_ GT 0 THEN DO;
4684 19434 +
4685 19435 + _BRANCH_ = -1;
4686 19436 + IF NOT MISSING(TotalPurchases ) AND
4687 19437 + TotalPurchases < 5.5 THEN D

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O;
4688 19438 +      _BRANCH_ =      1;
4689 19439 +      END;
4690 19440 +      IF _BRANCH_ LT 0 THEN DO;
4691 19441 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_
      = 1;
4692 19442 +      END;
4693 19443 +      IF _BRANCH_ GT 0 THEN DO;
4694 19444 +      _ARB_F_ + -0.001757945;
4695 19445 +      END;
4696 19446 +      END;
4697 19447 +      END;
4698 19448 +
4699 19449 +***** LEAF      91  NODE      497 *****;
4700 19450 +IF _ARB_BADF_ EQ 0 THEN DO;
4701 19451 +
4702 19452 +      _BRANCH_ = -1;
4703 19453 +      IF NOT MISSING(Age ) AND
4704 19454 +      19.5 <= Age THEN DO;
4705 19455 +      _BRANCH_ =      2;
4706 19456 +      END;
4707 19457 +      IF _BRANCH_ LT 0 THEN DO;
4708 19458 +      IF MISSING( Age  ) THEN _BRANCH_ = 2;
4709 19459 +      END;
4710 19460 +      IF _BRANCH_ GT 0 THEN DO;
4711 19461 +
4712 19462 +      _BRANCH_ = -1;
4713 19463 +      IF NOT MISSING(TotalPurchases ) AND
4714 19464 +      5.5 <= TotalPurchases THEN
      DO;
4715 19465 +      _BRANCH_ =      2;
4716 19466 +      END;
4717 19467 +
4718 19468 +      IF _BRANCH_ GT 0 THEN DO;
4719 19469 +      _ARB_F_ + 0.0047131229;
4720 19470 +      END;

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4721 19471 +      END;
4722 19472 +      END;
4723 19473 +
4724 19474 +***** LEAF      92  NODE      501 *****;
4725 19475 +IF _ARB_BADF_ EQ 0 THEN DO;
4726 19476 +
4727 19477 +      _BRANCH_ = -1;
4728 19478 +      IF NOT MISSING(Age ) AND
4729 19479 +      Age <                      19.5 THEN DO;
4730 19480 +      _BRANCH_ =      1;
4731 19481 +      END;
4732 19482 +
4733 19483 +      IF _BRANCH_ GT 0 THEN DO;
4734 19484 +
4735 19485 +      _BRANCH_ = -1;
4736 19486 +      IF NOT MISSING(IMP_TotalSpent ) AND
4737 19487 +      IMP_TotalSpent <                      4529.5 THEN D
O;
4738 19488 +      _BRANCH_ =      1;
4739 19489 +      END;
4740 19490 +      IF _BRANCH_ LT 0 THEN DO;
4741 19491 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
= 1;
4742 19492 +      END;
4743 19493 +      IF _BRANCH_ GT 0 THEN DO;
4744 19494 +      _ARB_F_ + -0.001573395;
4745 19495 +      END;
4746 19496 +      END;
4747 19497 +      END;
4748 19498 +
4749 19499 +***** LEAF      93  NODE      502 *****;
4750 19500 +IF _ARB_BADF_ EQ 0 THEN DO;
4751 19501 +
4752 19502 +      _BRANCH_ = -1;
4753 19503 +      IF NOT MISSING(Age ) AND
4754 19504 +      Age <                      19.5 THEN DO;

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4755 19505 +      _BRANCH_ =      1;
4756 19506 +      END;
4757 19507 +
4758 19508 +  IF _BRANCH_ GT 0 THEN DO;
4759 19509 +
4760 19510 +      _BRANCH_ = -1;
4761 19511 +      IF NOT MISSING(IMP_TotalSpent ) AND
4762 19512 +      4529.5 <= IMP_TotalSpent THEN
      DO;
4763 19513 +      _BRANCH_ =      2;
4764 19514 +      END;
4765 19515 +
4766 19516 +  IF _BRANCH_ GT 0 THEN DO;
4767 19517 +      _ARB_F_ + -0.027770116;
4768 19518 +      END;
4769 19519 +      END;
4770 19520 +  END;
4771 19521 +
4772 19522 +***** LEAF      94  NODE      503 *****;
4773 19523 +IF _ARB_BADF_ EQ 0 THEN DO;
4774 19524 +
4775 19525 +      _BRANCH_ = -1;
4776 19526 +      IF NOT MISSING(Age ) AND
4777 19527 +      19.5 <= Age THEN DO;
4778 19528 +      _BRANCH_ =      2;
4779 19529 +      END;
4780 19530 +  IF _BRANCH_ LT 0 THEN DO;
4781 19531 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
4782 19532 +  END;
4783 19533 +  IF _BRANCH_ GT 0 THEN DO;
4784 19534 +
4785 19535 +      _BRANCH_ = -1;
4786 19536 +      IF NOT MISSING(Age ) AND
4787 19537 +      Age <      29.5 THEN DO;
4788 19538 +      _BRANCH_ =      1;
4789 19539 +      END;

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```

4790 19540 +
4791 19541 +     IF _BRANCH_ GT 0 THEN DO;
4792 19542 +         _ARB_F_ + 0.0057029716;
4793 19543 +     END;
4794 19544 +     END;
4795 19545 + END;
4796 19546 +
4797 19547 +***** LEAF      95  NODE      504 *****;
4798 19548 +IF _ARB_BADF_ EQ 0 THEN DO;
4799 19549 +
4800 19550 +     _BRANCH_ = -1;
4801 19551 +     IF NOT MISSING(Age ) AND
4802 19552 +         19.5 <= Age THEN DO;
4803 19553 +         _BRANCH_ = 2;
4804 19554 +     END;
4805 19555 + IF _BRANCH_ LT 0 THEN DO;
4806 19556 +     IF MISSING( Age ) THEN _BRANCH_ = 2;
4807 19557 + END;
4808 19558 + IF _BRANCH_ GT 0 THEN DO;
4809 19559 +
4810 19560 +     _BRANCH_ = -1;
4811 19561 +     IF NOT MISSING(Age ) AND
4812 19562 +         29.5 <= Age THEN DO;
4813 19563 +         _BRANCH_ = 2;
4814 19564 +     END;
4815 19565 + IF _BRANCH_ LT 0 THEN DO;
4816 19566 +     IF MISSING( Age ) THEN _BRANCH_ = 2;
4817 19567 + END;
4818 19568 + IF _BRANCH_ GT 0 THEN DO;
4819 19569 +         _ARB_F_ + -0.000837549;
4820 19570 +     END;
4821 19571 +     END;
4822 19572 + END;
4823 19573 +
4824 19574 +***** LEAF      96  NODE      508 *****;
4825 19575 +IF _ARB_BADF_ EQ 0 THEN DO;

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4826 19576 +
4827 19577 +   _BRANCH_ = -1;
4828 19578 +   IF NOT MISSING(Age ) AND
4829 19579 +   Age < 65.5 THEN DO;
4830 19580 +   _BRANCH_ = 1;
4831 19581 +   END;
4832 19582 + IF _BRANCH_ LT 0 THEN DO;
4833 19583 +   IF MISSING( Age ) THEN _BRANCH_ = 1;
4834 19584 + END;
4835 19585 + IF _BRANCH_ GT 0 THEN DO;
4836 19586 +
4837 19587 +   _BRANCH_ = -1;
4838 19588 +   IF NOT MISSING(IMP_TotalSpent ) AND
4839 19589 +   IMP_TotalSpent < 24474 THEN D
    O;
4840 19590 +   _BRANCH_ = 1;
4841 19591 +   END;
4842 19592 + IF _BRANCH_ LT 0 THEN DO;
4843 19593 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
    = 1;
4844 19594 +   END;
4845 19595 + IF _BRANCH_ GT 0 THEN DO;
4846 19596 +   _ARB_F_ + -0.000895791;
4847 19597 +   END;
4848 19598 +   END;
4849 19599 + END;
4850 19600 +
4851 19601 +***** LEAF 97 NODE 509 *****;
4852 19602 +IF _ARB_BADF_ EQ 0 THEN DO;
4853 19603 +
4854 19604 +   _BRANCH_ = -1;
4855 19605 +   IF NOT MISSING(Age ) AND
4856 19606 +   Age < 65.5 THEN DO;
4857 19607 +   _BRANCH_ = 1;
4858 19608 +   END;
4859 19609 + IF _BRANCH_ LT 0 THEN DO;

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4860 19610 +      IF MISSING( Age  ) THEN _BRANCH_ = 1;
4861 19611 +      END;
4862 19612 +      IF _BRANCH_ GT 0 THEN DO;
4863 19613 +
4864 19614 +          _BRANCH_ = -1;
4865 19615 +          IF NOT MISSING(IMP_TotalSpent ) AND
4866 19616 +              24474 <= IMP_TotalSpent THEN
DO;
4867 19617 +              _BRANCH_ =      2;
4868 19618 +          END;
4869 19619 +
4870 19620 +      IF _BRANCH_ GT 0 THEN DO;
4871 19621 +          _ARB_F_ + -0.035501352;
4872 19622 +      END;
4873 19623 +      END;
4874 19624 +      END;
4875 19625 +
4876 19626 +***** LEAF      98  NODE      510 *****;
4877 19627 +IF _ARB_BADF_ EQ 0 THEN DO;
4878 19628 +
4879 19629 +      _BRANCH_ = -1;
4880 19630 +      IF NOT MISSING(Age ) AND
4881 19631 +          65.5 <= Age THEN DO;
4882 19632 +          _BRANCH_ =      2;
4883 19633 +      END;
4884 19634 +
4885 19635 +      IF _BRANCH_ GT 0 THEN DO;
4886 19636 +
4887 19637 +          _BRANCH_ = -1;
4888 19638 +          IF NOT MISSING(IMP_TotalSpent ) AND
4889 19639 +              IMP_TotalSpent <              3163 THEN D
O;
4890 19640 +          _BRANCH_ =      1;
4891 19641 +      END;
4892 19642 +
4893 19643 +      IF _BRANCH_ GT 0 THEN DO;

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4894 19644 +      _ARB_F_ + -0.005992489;
4895 19645 +      END;
4896 19646 +      END;
4897 19647 +      END;
4898 19648 +
4899 19649 +***** LEAF      99  NODE      511 *****;
4900 19650 +IF _ARB_BADF_ EQ 0 THEN DO;
4901 19651 +
4902 19652 +      _BRANCH_ = -1;
4903 19653 +      IF NOT MISSING(Age ) AND
4904 19654 +                  65.5 <= Age THEN DO;
4905 19655 +      _BRANCH_ =      2;
4906 19656 +      END;
4907 19657 +
4908 19658 +      IF _BRANCH_ GT 0 THEN DO;
4909 19659 +
4910 19660 +      _BRANCH_ = -1;
4911 19661 +      IF NOT MISSING(IMP_TotalSpent ) AND
4912 19662 +                  3163 <= IMP_TotalSpent THEN
DO;
4913 19663 +      _BRANCH_ =      2;
4914 19664 +      END;
4915 19665 +      IF _BRANCH_ LT 0 THEN DO;
4916 19666 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
4917 19667 +      END;
4918 19668 +      IF _BRANCH_ GT 0 THEN DO;
4919 19669 +      _ARB_F_ + 0.0121463803;
4920 19670 +      END;
4921 19671 +      END;
4922 19672 +      END;
4923 19673 +
4924 19674 +***** LEAF      100  NODE      515 *****;
4925 19675 +IF _ARB_BADF_ EQ 0 THEN DO;
4926 19676 +
4927 19677 +      _BRANCH_ = -1;

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4928 19678 +      IF NOT MISSING(TotalPurchases ) AND
4929 19679 +      TotalPurchases  <                26.5 THEN DO;
4930 19680 +      _BRANCH_ =      1;
4931 19681 +      END;
4932 19682 +      IF _BRANCH_ LT 0 THEN DO;
4933 19683 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
4934 19684 +      END;
4935 19685 +      IF _BRANCH_ GT 0 THEN DO;
4936 19686 +
4937 19687 +      _BRANCH_ = -1;
4938 19688 +      IF NOT MISSING(TotalPurchases ) AND
4939 19689 +      TotalPurchases  <                23.5 THEN D
      O;
4940 19690 +      _BRANCH_ =      1;
4941 19691 +      END;
4942 19692 +      IF _BRANCH_ LT 0 THEN DO;
4943 19693 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_
      = 1;
4944 19694 +      END;
4945 19695 +      IF _BRANCH_ GT 0 THEN DO;
4946 19696 +      _ARB_F_ + 0.000071794;
4947 19697 +      END;
4948 19698 +      END;
4949 19699 +      END;
4950 19700 +
4951 19701 +***** LEAF      101      NODE      516 *****;
4952 19702 +IF _ARB_BADF_ EQ 0 THEN DO;
4953 19703 +
4954 19704 +      _BRANCH_ = -1;
4955 19705 +      IF NOT MISSING(TotalPurchases ) AND
4956 19706 +      TotalPurchases  <                26.5 THEN DO;
4957 19707 +      _BRANCH_ =      1;
4958 19708 +      END;
4959 19709 +      IF _BRANCH_ LT 0 THEN DO;
4960 19710 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =

```

```

1;
4961 19711 + END;
4962 19712 + IF _BRANCH_ GT 0 THEN DO;
4963 19713 +
4964 19714 +     _BRANCH_ = -1;
4965 19715 +     IF NOT MISSING(TotalPurchases ) AND
4966 19716 +         23.5 <= TotalPurchases THEN
DO;
4967 19717 +     _BRANCH_ = 2;
4968 19718 + END;
4969 19719 +
4970 19720 + IF _BRANCH_ GT 0 THEN DO;
4971 19721 +     _ARB_F_ + -0.034760532;
4972 19722 + END;
4973 19723 + END;
4974 19724 + END;
4975 19725 +
4976 19726 +***** LEAF 102 NODE 514 *****;
4977 19727 +IF _ARB_BADF_ EQ 0 THEN DO;
4978 19728 +
4979 19729 + _BRANCH_ = -1;
4980 19730 + IF NOT MISSING(TotalPurchases ) AND
4981 19731 +     26.5 <= TotalPurchases THEN DO
;
4982 19732 +     _BRANCH_ = 2;
4983 19733 + END;
4984 19734 +
4985 19735 + IF _BRANCH_ GT 0 THEN DO;
4986 19736 +     _ARB_F_ + 0.0349287727;
4987 19737 + END;
4988 19738 + END;
4989 19739 +
4990 19740 +***** LEAF 103 NODE 520 *****;
4991 19741 +IF _ARB_BADF_ EQ 0 THEN DO;
4992 19742 +
4993 19743 + _BRANCH_ = -1;

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4994 19744 + IF NOT MISSING( TotalPurchases ) AND
4995 19745 + TotalPurchases < 18.5 THEN DO;
4996 19746 + _BRANCH_ = 1;
4997 19747 + END;
4998 19748 + IF _BRANCH_ LT 0 THEN DO;
4999 19749 + IF MISSING( TotalPurchases ) THEN _BRANCH_ =
5000 19750 + 1;
5001 19751 + END;
5002 19752 + IF _BRANCH_ GT 0 THEN DO;
5003 19753 + _BRANCH_ = -1;
5004 19754 + IF NOT MISSING( IMP_TotalSpent ) AND
5005 19755 + IMP_TotalSpent < 18722.5 THEN D
5006 19756 + O;
5007 19757 + _BRANCH_ = 1;
5008 19758 + END;
5009 19759 + IF _BRANCH_ LT 0 THEN DO;
5010 19760 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
5011 19761 + = 1;
5012 19762 + END;
5013 19763 + IF _BRANCH_ GT 0 THEN DO;
5014 19764 + _ARB_F_ + -0.000214929;
5015 19765 + END;
5016 19766 + END;
5017 19767 + ***** LEAF 104 NODE 521 *****;
5018 19768 + IF _ARB_BADF_ EQ 0 THEN DO;
5019 19769 +
5020 19770 + _BRANCH_ = -1;
5021 19771 + IF NOT MISSING( TotalPurchases ) AND
5022 19772 + TotalPurchases < 18.5 THEN DO;
5023 19773 + _BRANCH_ = 1;
5024 19774 + END;
5025 19775 + IF _BRANCH_ LT 0 THEN DO;
5026 19776 + IF MISSING( TotalPurchases ) THEN _BRANCH_ =

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1;
5027 19777 + END;
5028 19778 + IF _BRANCH_ GT 0 THEN DO;
5029 19779 +
5030 19780 +     _BRANCH_ = -1;
5031 19781 +     IF NOT MISSING(IMP_TotalSpent ) AND
5032 19782 +         18722.5 <= IMP_TotalSpent THEN
DO;
5033 19783 +     _BRANCH_ = 2;
5034 19784 + END;
5035 19785 +
5036 19786 + IF _BRANCH_ GT 0 THEN DO;
5037 19787 +     _ARB_F_ + -0.035771391;
5038 19788 + END;
5039 19789 + END;
5040 19790 + END;
5041 19791 +
5042 19792 +***** LEAF 105 NODE 522 *****;
5043 19793 +IF _ARB_BADF_ EQ 0 THEN DO;
5044 19794 +
5045 19795 +     _BRANCH_ = -1;
5046 19796 +     IF NOT MISSING(TotalPurchases ) AND
5047 19797 +         18.5 <= TotalPurchases THEN DO
;
5048 19798 +     _BRANCH_ = 2;
5049 19799 + END;
5050 19800 +
5051 19801 + IF _BRANCH_ GT 0 THEN DO;
5052 19802 +
5053 19803 +     _BRANCH_ = -1;
5054 19804 +     IF NOT MISSING(Age ) AND
5055 19805 +         Age < 63.5 THEN DO;
5056 19806 +         _BRANCH_ = 1;
5057 19807 +     END;
5058 19808 + IF _BRANCH_ LT 0 THEN DO;
5059 19809 +     IF MISSING( Age ) THEN _BRANCH_ = 1;

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5060 19810 +      END;
5061 19811 +      IF _BRANCH_ GT 0 THEN DO;
5062 19812 +          _ARB_F_ + 0.0314097579;
5063 19813 +      END;
5064 19814 +      END;
5065 19815 +  END;
5066 19816 +
5067 19817 +***** LEAF    106  NODE    523 *****;
5068 19818 +IF _ARB_BADF_ EQ 0 THEN DO;
5069 19819 +
5070 19820 +  _BRANCH_ = -1;
5071 19821 +      IF NOT MISSING(TotalPurchases ) AND
5072 19822 +          18.5 <= TotalPurchases THEN DO
;
5073 19823 +      _BRANCH_ =    2;
5074 19824 +      END;
5075 19825 +
5076 19826 +  IF _BRANCH_ GT 0 THEN DO;
5077 19827 +
5078 19828 +      _BRANCH_ = -1;
5079 19829 +      IF NOT MISSING(Age ) AND
5080 19830 +          63.5 <= Age THEN DO;
5081 19831 +          _BRANCH_ =    2;
5082 19832 +      END;
5083 19833 +
5084 19834 +      IF _BRANCH_ GT 0 THEN DO;
5085 19835 +          _ARB_F_ + -0.00315442;
5086 19836 +      END;
5087 19837 +      END;
5088 19838 +  END;
5089 19839 +
5090 19840 +***** LEAF    107  NODE    527 *****;
5091 19841 +IF _ARB_BADF_ EQ 0 THEN DO;
5092 19842 +
5093 19843 +  _BRANCH_ = -1;
5094 19844 +      IF NOT MISSING(IMP_TotalSpent ) AND

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5095 19845 +      IMP_TotalSpent  <                               5184.5 THEN DO;
5096 19846 +      _BRANCH_ =      1;
5097 19847 +      END;
5098 19848 +      IF _BRANCH_ LT 0 THEN DO;
5099 19849 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
1;
5100 19850 +      END;
5101 19851 +      IF _BRANCH_ GT 0 THEN DO;
5102 19852 +
5103 19853 +          _BRANCH_ = -1;
5104 19854 +          _ARBFMT_8 = PUT( MembershipLevel , $8.);
5105 19855 +          %DMNORMIP( _ARBFMT_8);
5106 19856 +          IF _ARBFMT_8 IN ('SILVER' , 'GOLD' , 'BRONZE' )
      THEN DO;
5107 19857 +              _BRANCH_ =      1;
5108 19858 +          END;
5109 19859 +          IF _BRANCH_ LT 0 THEN DO;
5110 19860 +              IF MISSING( MembershipLevel  ) THEN _BRANCH_
      = 1;
5111 19861 +              ELSE IF _ARBFMT_8 NOTIN (
5112 19862 +                  'SILVER' , 'GOLD' , 'BRONZE' , 'PLATINUM'
5113 19863 +                  ) THEN _BRANCH_ = 1;
5114 19864 +          END;
5115 19865 +          IF _BRANCH_ GT 0 THEN DO;
5116 19866 +              _ARB_F_ + -0.003462002;
5117 19867 +          END;
5118 19868 +      END;
5119 19869 +      END;
5120 19870 +
5121 19871 +***** LEAF      108      NODE      528 *****;
5122 19872 +IF _ARB_BADF_ EQ 0 THEN DO;
5123 19873 +
5124 19874 +      _BRANCH_ = -1;
5125 19875 +      IF NOT MISSING(IMP_TotalSpent ) AND
5126 19876 +      IMP_TotalSpent  <                               5184.5 THEN DO;
5127 19877 +          _BRANCH_ =      1;

```



```

5128 19878 +      END;
5129 19879 +      IF _BRANCH_ LT 0 THEN DO;
5130 19880 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
5131 19881 +      END;
5132 19882 +      IF _BRANCH_ GT 0 THEN DO;
5133 19883 +
5134 19884 +          _BRANCH_ = -1;
5135 19885 +          _ARBFMT_8 = PUT( MembershipLevel , $8.);
5136 19886 +          %DMNORMIP( _ARBFMT_8);
5137 19887 +          IF _ARBFMT_8 IN ('PLATINUM' ) THEN DO;
5138 19888 +              _BRANCH_ =      2;
5139 19889 +          END;
5140 19890 +
5141 19891 +          IF _BRANCH_ GT 0 THEN DO;
5142 19892 +              _ARB_F_ + 0.0032365196;
5143 19893 +          END;
5144 19894 +      END;
5145 19895 +  END;
5146 19896 +
5147 19897 +***** LEAF      109      NODE      529 *****;
5148 19898 +IF _ARB_BADF_ EQ 0 THEN DO;
5149 19899 +
5150 19900 +      _BRANCH_ = -1;
5151 19901 +          IF NOT MISSING(IMP_TotalSpent ) AND
5152 19902 +              5184.5 <= IMP_TotalSpent THEN DO
;
5153 19903 +          _BRANCH_ =      2;
5154 19904 +      END;
5155 19905 +
5156 19906 +      IF _BRANCH_ GT 0 THEN DO;
5157 19907 +
5158 19908 +          _BRANCH_ = -1;
5159 19909 +          IF NOT MISSING(Age ) AND
5160 19910 +              Age <              61.5 THEN DO;
5161 19911 +              _BRANCH_ =      1;

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5162 19912 +      END;
5163 19913 +      IF _BRANCH_ LT 0 THEN DO;
5164 19914 +          IF MISSING( Age  ) THEN _BRANCH_ = 1;
5165 19915 +      END;
5166 19916 +      IF _BRANCH_ GT 0 THEN DO;
5167 19917 +          _ARB_F_ + -0.000408516;
5168 19918 +      END;
5169 19919 +      END;
5170 19920 +  END;
5171 19921 +
5172 19922 +***** LEAF    110    NODE    530 *****;
5173 19923 +IF _ARB_BADF_ EQ 0 THEN DO;
5174 19924 +
5175 19925 +  _BRANCH_ = -1;
5176 19926 +      IF NOT MISSING(IMP_TotalSpent ) AND
5177 19927 +          5184.5 <= IMP_TotalSpent  THEN DO
;
5178 19928 +          _BRANCH_ =      2;
5179 19929 +      END;
5180 19930 +
5181 19931 +  IF _BRANCH_ GT 0 THEN DO;
5182 19932 +
5183 19933 +      _BRANCH_ = -1;
5184 19934 +          IF NOT MISSING(Age ) AND
5185 19935 +              61.5 <= Age  THEN DO;
5186 19936 +              _BRANCH_ =      2;
5187 19937 +          END;
5188 19938 +
5189 19939 +      IF _BRANCH_ GT 0 THEN DO;
5190 19940 +          _ARB_F_ + 0.0137557483;
5191 19941 +      END;
5192 19942 +      END;
5193 19943 +  END;
5194 19944 +
5195 19945 +***** LEAF    111    NODE    534 *****;
5196 19946 +IF _ARB_BADF_ EQ 0 THEN DO;

```

```

5197 19947 +
5198 19948 +   _BRANCH_ = -1;
5199 19949 +   IF NOT MISSING(TotalPurchases ) AND
5200 19950 +   TotalPurchases <                               3.5 THEN DO;
5201 19951 +   _BRANCH_ = 1;
5202 19952 +   END;
5203 19953 +
5204 19954 +   IF _BRANCH_ GT 0 THEN DO;
5205 19955 +
5206 19956 +   _BRANCH_ = -1;
5207 19957 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
5208 19958 +   %DMNORMIP( _ARBFMT_8);
5209 19959 +   IF _ARBFMT_8 IN ('SILVER' , 'GOLD' , 'BRONZE' )
      THEN DO;
5210 19960 +   _BRANCH_ = 1;
5211 19961 +   END;
5212 19962 +   IF _BRANCH_ LT 0 THEN DO;
5213 19963 +   IF MISSING( MembershipLevel ) THEN _BRANCH_
      = 1;
5214 19964 +   ELSE IF _ARBFMT_8 NOTIN (
5215 19965 +   'SILVER' , 'GOLD' , 'BRONZE' , 'PLATINUM'
5216 19966 +   ) THEN _BRANCH_ = 1;
5217 19967 +   END;
5218 19968 +   IF _BRANCH_ GT 0 THEN DO;
5219 19969 +   _ARB_F_ + -0.007145748;
5220 19970 +   END;
5221 19971 +   END;
5222 19972 +   END;
5223 19973 +
5224 19974 +***** LEAF 112 NODE 535 *****;
5225 19975 +IF _ARB_BADF_ EQ 0 THEN DO;
5226 19976 +
5227 19977 +   _BRANCH_ = -1;
5228 19978 +   IF NOT MISSING(TotalPurchases ) AND
5229 19979 +   TotalPurchases <                               3.5 THEN DO;
5230 19980 +   _BRANCH_ = 1;

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```

5231 19981 +      END;
5232 19982 +
5233 19983 +      IF _BRANCH_ GT 0 THEN DO;
5234 19984 +
5235 19985 +      _BRANCH_ = -1;
5236 19986 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
5237 19987 +      %DMNORMIP( _ARBFMT_8);
5238 19988 +      IF _ARBFMT_8 IN ('PLATINUM' ) THEN DO;
5239 19989 +      _BRANCH_ =      2;
5240 19990 +      END;
5241 19991 +
5242 19992 +      IF _BRANCH_ GT 0 THEN DO;
5243 19993 +      _ARB_F_ + 0.0022376844;
5244 19994 +      END;
5245 19995 +      END;
5246 19996 +      END;
5247 19997 +
5248 19998 +***** LEAF      113      NODE      536 *****;
5249 19999 +IF _ARB_BADF_ EQ 0 THEN DO;
5250 20000 +
5251 20001 +      _BRANCH_ = -1;
5252 20002 +      IF NOT MISSING(TotalPurchases ) AND
5253 20003 +      3.5 <= TotalPurchases THEN DO
;
5254 20004 +      _BRANCH_ =      2;
5255 20005 +      END;
5256 20006 +      IF _BRANCH_ LT 0 THEN DO;
5257 20007 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
2;
5258 20008 +      END;
5259 20009 +      IF _BRANCH_ GT 0 THEN DO;
5260 20010 +
5261 20011 +      _BRANCH_ = -1;
5262 20012 +      IF NOT MISSING(Age ) AND
5263 20013 +      Age <      67.5 THEN DO;
5264 20014 +      _BRANCH_ =      1;

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5265 20015 +      END;
5266 20016 +      IF _BRANCH_ LT 0 THEN DO;
5267 20017 +          IF MISSING( Age ) THEN _BRANCH_ = 1;
5268 20018 +      END;
5269 20019 +      IF _BRANCH_ GT 0 THEN DO;
5270 20020 +          _ARB_F_ + 0.0037218338;
5271 20021 +      END;
5272 20022 +      END;
5273 20023 +  END;
5274 20024 +
5275 20025 +***** LEAF    114    NODE    537 *****;
5276 20026 +IF _ARB_BADF_ EQ 0 THEN DO;
5277 20027 +
5278 20028 +    _BRANCH_ = -1;
5279 20029 +      IF NOT MISSING(TotalPurchases ) AND
5280 20030 +          3.5 <= TotalPurchases THEN DO
;
5281 20031 +      _BRANCH_ =    2;
5282 20032 +      END;
5283 20033 +  IF _BRANCH_ LT 0 THEN DO;
5284 20034 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
2;
5285 20035 +  END;
5286 20036 +  IF _BRANCH_ GT 0 THEN DO;
5287 20037 +
5288 20038 +      _BRANCH_ = -1;
5289 20039 +      IF NOT MISSING(Age ) AND
5290 20040 +          67.5 <= Age THEN DO;
5291 20041 +          _BRANCH_ =    2;
5292 20042 +      END;
5293 20043 +
5294 20044 +      IF _BRANCH_ GT 0 THEN DO;
5295 20045 +          _ARB_F_ + -0.011078356;
5296 20046 +      END;
5297 20047 +      END;
5298 20048 +  END;

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```

5299 20049 +
5300 20050 +***** LEAF 115 NODE 541 *****;
5301 20051 +IF _ARB_BADF_ EQ 0 THEN DO;
5302 20052 +
5303 20053 + _BRANCH_ = -1;
5304 20054 + IF NOT MISSING(TotalPurchases ) AND
5305 20055 + TotalPurchases < 26.5 THEN DO;
5306 20056 + _BRANCH_ = 1;
5307 20057 + END;
5308 20058 + IF _BRANCH_ LT 0 THEN DO;
5309 20059 + IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
5310 20060 + END;
5311 20061 + IF _BRANCH_ GT 0 THEN DO;
5312 20062 +
5313 20063 + _BRANCH_ = -1;
5314 20064 + IF NOT MISSING(Age ) AND
5315 20065 + Age < 19.5 THEN DO;
5316 20066 + _BRANCH_ = 1;
5317 20067 + END;
5318 20068 +
5319 20069 + IF _BRANCH_ GT 0 THEN DO;
5320 20070 + _ARB_F_ + -0.015812192;
5321 20071 + END;
5322 20072 + END;
5323 20073 + END;
5324 20074 +
5325 20075 +***** LEAF 116 NODE 542 *****;
5326 20076 +IF _ARB_BADF_ EQ 0 THEN DO;
5327 20077 +
5328 20078 + _BRANCH_ = -1;
5329 20079 + IF NOT MISSING(TotalPurchases ) AND
5330 20080 + TotalPurchases < 26.5 THEN DO;
5331 20081 + _BRANCH_ = 1;
5332 20082 + END;
5333 20083 + IF _BRANCH_ LT 0 THEN DO;

```

```

5334 20084 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
5335 20085 +  END;
5336 20086 +  IF _BRANCH_ GT 0 THEN DO;
5337 20087 +
5338 20088 +      _BRANCH_ = -1;
5339 20089 +      IF NOT MISSING(Age ) AND
5340 20090 +          19.5 <= Age THEN DO;
5341 20091 +          _BRANCH_ = 2;
5342 20092 +      END;
5343 20093 +  IF _BRANCH_ LT 0 THEN DO;
5344 20094 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
5345 20095 +  END;
5346 20096 +  IF _BRANCH_ GT 0 THEN DO;
5347 20097 +      _ARB_F_ + 0.0002780839;
5348 20098 +  END;
5349 20099 +  END;
5350 20100 +  END;
5351 20101 +
5352 20102 +***** LEAF 117 NODE 540 *****;
5353 20103 +IF _ARB_BADF_ EQ 0 THEN DO;
5354 20104 +
5355 20105 +  _BRANCH_ = -1;
5356 20106 +      IF NOT MISSING(TotalPurchases ) AND
5357 20107 +          26.5 <= TotalPurchases THEN DO
      ;
5358 20108 +      _BRANCH_ = 2;
5359 20109 +  END;
5360 20110 +
5361 20111 +  IF _BRANCH_ GT 0 THEN DO;
5362 20112 +      _ARB_F_ + 0.0454917738;
5363 20113 +  END;
5364 20114 +  END;
5365 20115 +
5366 20116 +***** LEAF 118 NODE 546 *****;
5367 20117 +IF _ARB_BADF_ EQ 0 THEN DO;

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5368 20118 +
5369 20119 +   _BRANCH_ = -1;
5370 20120 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
5371 20121 +   %DMNORMIP( _ARBFMT_8);
5372 20122 +   IF _ARBFMT_8 IN ( 'SILVER' , 'PLATINUM' , 'BRONZE'
      ) THEN DO;
5373 20123 +       _BRANCH_ = 1;
5374 20124 +   END;
5375 20125 +   IF _BRANCH_ LT 0 THEN DO;
5376 20126 +       IF MISSING( MembershipLevel ) THEN _BRANCH_ =
      1;
5377 20127 +       ELSE IF _ARBFMT_8 NOTIN (
5378 20128 +           'SILVER' , 'PLATINUM' , 'BRONZE' , 'GOLD'
5379 20129 +       ) THEN _BRANCH_ = 1;
5380 20130 +   END;
5381 20131 +   IF _BRANCH_ GT 0 THEN DO;
5382 20132 +
5383 20133 +       _BRANCH_ = -1;
5384 20134 +       IF NOT MISSING(IMP_TotalSpent ) AND
5385 20135 +       IMP_TotalSpent < 9816.5 THEN D
      O;
5386 20136 +       _BRANCH_ = 1;
5387 20137 +   END;
5388 20138 +   IF _BRANCH_ LT 0 THEN DO;
5389 20139 +       IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 1;
5390 20140 +   END;
5391 20141 +   IF _BRANCH_ GT 0 THEN DO;
5392 20142 +       _ARB_F_ + 0.0005851958;
5393 20143 +   END;
5394 20144 +   END;
5395 20145 +   END;
5396 20146 +
5397 20147 +***** LEAF 119 NODE 547 *****;
5398 20148 +IF _ARB_BADF_ EQ 0 THEN DO;
5399 20149 +

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5400 20150 +   _BRANCH_ = -1;
5401 20151 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
5402 20152 +   %DMNORMIP( _ARBFMT_8);
5403 20153 +   IF _ARBFMT_8 IN ( 'SILVER' , 'PLATINUM' , 'BRONZE'
      ) THEN DO;
5404 20154 +       _BRANCH_ = 1;
5405 20155 +   END;
5406 20156 +   IF _BRANCH_ LT 0 THEN DO;
5407 20157 +       IF MISSING( MembershipLevel ) THEN _BRANCH_ =
      1;
5408 20158 +       ELSE IF _ARBFMT_8 NOTIN (
5409 20159 +           'SILVER' , 'PLATINUM' , 'BRONZE' , 'GOLD'
5410 20160 +       ) THEN _BRANCH_ = 1;
5411 20161 +   END;
5412 20162 +   IF _BRANCH_ GT 0 THEN DO;
5413 20163 +
5414 20164 +       _BRANCH_ = -1;
5415 20165 +       IF NOT MISSING(IMP_TotalSpent ) AND
5416 20166 +           9816.5 <= IMP_TotalSpent THEN
      DO;
5417 20167 +           _BRANCH_ = 2;
5418 20168 +       END;
5419 20169 +
5420 20170 +       IF _BRANCH_ GT 0 THEN DO;
5421 20171 +           _ARB_F_ + 0.0108738221;
5422 20172 +       END;
5423 20173 +   END;
5424 20174 + END;
5425 20175 +
5426 20176 +***** LEAF 120 NODE 548 *****;
5427 20177 +IF _ARB_BADF_ EQ 0 THEN DO;
5428 20178 +
5429 20179 +   _BRANCH_ = -1;
5430 20180 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
5431 20181 +   %DMNORMIP( _ARBFMT_8);
5432 20182 +   IF _ARBFMT_8 IN ( 'GOLD' ) THEN DO;

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5433 20183 +      _BRANCH_ =      2;
5434 20184 +      END;
5435 20185 +
5436 20186 +  IF _BRANCH_ GT 0 THEN DO;
5437 20187 +
5438 20188 +      _BRANCH_ = -1;
5439 20189 +      IF NOT MISSING(IMP_TotalSpent ) AND
5440 20190 +      IMP_TotalSpent <      1537.5 THEN D
      O;
5441 20191 +      _BRANCH_ =      1;
5442 20192 +      END;
5443 20193 +
5444 20194 +  IF _BRANCH_ GT 0 THEN DO;
5445 20195 +      _ARB_F_ + 0.0036821909;
5446 20196 +      END;
5447 20197 +      END;
5448 20198 +  END;
5449 20199 +
5450 20200 +***** LEAF      121      NODE      549 *****;
5451 20201 +IF _ARB_BADF_ EQ 0 THEN DO;
5452 20202 +
5453 20203 +  _BRANCH_ = -1;
5454 20204 +  _ARBFMT_8 = PUT( MembershipLevel , $8.);
5455 20205 +  %DMNORMIP( _ARBFMT_8);
5456 20206 +  IF _ARBFMT_8 IN ('GOLD' ) THEN DO;
5457 20207 +      _BRANCH_ =      2;
5458 20208 +      END;
5459 20209 +
5460 20210 +  IF _BRANCH_ GT 0 THEN DO;
5461 20211 +
5462 20212 +      _BRANCH_ = -1;
5463 20213 +      IF NOT MISSING(IMP_TotalSpent ) AND
5464 20214 +      1537.5 <= IMP_TotalSpent THEN
      DO;
5465 20215 +      _BRANCH_ =      2;
5466 20216 +      END;

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5467 20217 + IF _BRANCH_ LT 0 THEN DO;
5468 20218 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
5469 20219 + END;
5470 20220 + IF _BRANCH_ GT 0 THEN DO;
5471 20221 + _ARB_F_ + -0.005509475;
5472 20222 + END;
5473 20223 + END;
5474 20224 + END;
5475 20225 +
5476 20226 +***** LEAF 122 NODE 553 *****;
5477 20227 +IF _ARB_BADF_ EQ 0 THEN DO;
5478 20228 +
5479 20229 + _BRANCH_ = -1;
5480 20230 + IF NOT MISSING(IMP_TotalSpent ) AND
5481 20231 + IMP_TotalSpent < 9104.5 THEN DO;
5482 20232 + _BRANCH_ = 1;
5483 20233 + END;
5484 20234 + IF _BRANCH_ LT 0 THEN DO;
5485 20235 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
5486 20236 + END;
5487 20237 + IF _BRANCH_ GT 0 THEN DO;
5488 20238 +
5489 20239 + _BRANCH_ = -1;
5490 20240 + IF NOT MISSING(IMP_TotalSpent ) AND
5491 20241 + IMP_TotalSpent < 4321.5 THEN D
      O;
5492 20242 + _BRANCH_ = 1;
5493 20243 + END;
5494 20244 + IF _BRANCH_ LT 0 THEN DO;
5495 20245 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 1;
5496 20246 + END;
5497 20247 + IF _BRANCH_ GT 0 THEN DO;
5498 20248 + _ARB_F_ + 0.0017801314;

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5499 20249 +      END;
5500 20250 +      END;
5501 20251 +  END;
5502 20252 +
5503 20253 +***** LEAF    123  NODE    554 *****;
5504 20254 +IF _ARB_BADF_ EQ 0 THEN DO;
5505 20255 +
5506 20256 +  _BRANCH_ = -1;
5507 20257 +      IF NOT MISSING(IMP_TotalSpent ) AND
5508 20258 +      IMP_TotalSpent <                      9104.5 THEN DO;
5509 20259 +      _BRANCH_ =      1;
5510 20260 +      END;
5511 20261 +  IF _BRANCH_ LT 0 THEN DO;
5512 20262 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
5513 20263 +  END;
5514 20264 +  IF _BRANCH_ GT 0 THEN DO;
5515 20265 +
5516 20266 +      _BRANCH_ = -1;
5517 20267 +      IF NOT MISSING(IMP_TotalSpent ) AND
5518 20268 +      4321.5 <= IMP_TotalSpent  THEN
      DO;
5519 20269 +      _BRANCH_ =      2;
5520 20270 +      END;
5521 20271 +
5522 20272 +      IF _BRANCH_ GT 0 THEN DO;
5523 20273 +      _ARB_F_ + -0.00459065;
5524 20274 +      END;
5525 20275 +      END;
5526 20276 +  END;
5527 20277 +
5528 20278 +***** LEAF    124  NODE    555 *****;
5529 20279 +IF _ARB_BADF_ EQ 0 THEN DO;
5530 20280 +
5531 20281 +  _BRANCH_ = -1;
5532 20282 +      IF NOT MISSING(IMP_TotalSpent ) AND

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5533 20283 +          9104.5 <= IMP_TotalSpent  THEN DO
      ;
5534 20284 +      _BRANCH_ =      2;
5535 20285 +      END;
5536 20286 +
5537 20287 +  IF _BRANCH_ GT 0 THEN DO;
5538 20288 +
5539 20289 +      _BRANCH_ = -1;
5540 20290 +      IF NOT MISSING(IMP_TotalSpent ) AND
5541 20291 +      IMP_TotalSpent  <          9919.5 THEN D
      O;
5542 20292 +      _BRANCH_ =      1;
5543 20293 +      END;
5544 20294 +
5545 20295 +  IF _BRANCH_ GT 0 THEN DO;
5546 20296 +      _ARB_F_ + 0.0182280844;
5547 20297 +      END;
5548 20298 +      END;
5549 20299 +  END;
5550 20300 +
5551 20301 +***** LEAF      125  NODE      556 *****;
5552 20302 +IF _ARB_BADF_ EQ 0 THEN DO;
5553 20303 +
5554 20304 +      _BRANCH_ = -1;
5555 20305 +      IF NOT MISSING(IMP_TotalSpent ) AND
5556 20306 +          9104.5 <= IMP_TotalSpent  THEN DO
      ;
5557 20307 +      _BRANCH_ =      2;
5558 20308 +      END;
5559 20309 +
5560 20310 +  IF _BRANCH_ GT 0 THEN DO;
5561 20311 +
5562 20312 +      _BRANCH_ = -1;
5563 20313 +      IF NOT MISSING(IMP_TotalSpent ) AND
5564 20314 +          9919.5 <= IMP_TotalSpent  THEN
      DO;

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5565 20315 +      _BRANCH_ =      2;
5566 20316 +      END;
5567 20317 +      IF _BRANCH_ LT 0 THEN DO;
5568 20318 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 2;
5569 20319 +      END;
5570 20320 +      IF _BRANCH_ GT 0 THEN DO;
5571 20321 +          _ARB_F_ + 0.0016544791;
5572 20322 +      END;
5573 20323 +      END;
5574 20324 +  END;
5575 20325 +
5576 20326 +***** LEAF      126  NODE      560 *****;
5577 20327 +IF _ARB_BADF_ EQ 0 THEN DO;
5578 20328 +
5579 20329 +  _BRANCH_ = -1;
5580 20330 +      IF NOT MISSING(IMP_TotalSpent ) AND
5581 20331 +      IMP_TotalSpent <
          2927 THEN DO;
5582 20332 +          _BRANCH_ =      1;
5583 20333 +      END;
5584 20334 +
5585 20335 +  IF _BRANCH_ GT 0 THEN DO;
5586 20336 +
5587 20337 +      _BRANCH_ = -1;
5588 20338 +          IF NOT MISSING(Age ) AND
5589 20339 +          Age <
          48.5 THEN DO;
5590 20340 +          _BRANCH_ =      1;
5591 20341 +      END;
5592 20342 +      IF _BRANCH_ LT 0 THEN DO;
5593 20343 +          IF MISSING( Age ) THEN _BRANCH_ = 1;
5594 20344 +      END;
5595 20345 +      IF _BRANCH_ GT 0 THEN DO;
5596 20346 +          _ARB_F_ + 0.0007672447;
5597 20347 +      END;
5598 20348 +      END;
5599 20349 +  END;

```

```

5600 20350 +
5601 20351 +***** LEAF 127 NODE 561 *****;
5602 20352 +IF _ARB_BADF_ EQ 0 THEN DO;
5603 20353 +
5604 20354 + _BRANCH_ = -1;
5605 20355 + IF NOT MISSING(IMP_TotalSpent ) AND
5606 20356 + IMP_TotalSpent < 2927 THEN DO;
5607 20357 + _BRANCH_ = 1;
5608 20358 + END;
5609 20359 +
5610 20360 + IF _BRANCH_ GT 0 THEN DO;
5611 20361 +
5612 20362 + _BRANCH_ = -1;
5613 20363 + IF NOT MISSING(Age ) AND
5614 20364 + 48.5 <= Age THEN DO;
5615 20365 + _BRANCH_ = 2;
5616 20366 + END;
5617 20367 +
5618 20368 + IF _BRANCH_ GT 0 THEN DO;
5619 20369 + _ARB_F_ + -0.010934113;
5620 20370 + END;
5621 20371 + END;
5622 20372 + END;
5623 20373 +
5624 20374 +***** LEAF 128 NODE 562 *****;
5625 20375 +IF _ARB_BADF_ EQ 0 THEN DO;
5626 20376 +
5627 20377 + _BRANCH_ = -1;
5628 20378 + IF NOT MISSING(IMP_TotalSpent ) AND
5629 20379 + 2927 <= IMP_TotalSpent THEN DO
;
5630 20380 + _BRANCH_ = 2;
5631 20381 + END;
5632 20382 + IF _BRANCH_ LT 0 THEN DO;
5633 20383 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
2;

```

```

5634 20384 + END;
5635 20385 + IF _BRANCH_ GT 0 THEN DO;
5636 20386 +
5637 20387 +     _BRANCH_ = -1;
5638 20388 +     IF NOT MISSING(IMP_TotalSpent ) AND
5639 20389 +     IMP_TotalSpent < 4105.5 THEN D
    O;
5640 20390 +     _BRANCH_ = 1;
5641 20391 + END;
5642 20392 +
5643 20393 + IF _BRANCH_ GT 0 THEN DO;
5644 20394 +     _ARB_F_ + 0.0112302588;
5645 20395 + END;
5646 20396 + END;
5647 20397 + END;
5648 20398 +
5649 20399 +***** LEAF 129 NODE 563 *****;
5650 20400 +IF _ARB_BADF_ EQ 0 THEN DO;
5651 20401 +
5652 20402 +     _BRANCH_ = -1;
5653 20403 +     IF NOT MISSING(IMP_TotalSpent ) AND
5654 20404 +     2927 <= IMP_TotalSpent THEN DO
    ;
5655 20405 +     _BRANCH_ = 2;
5656 20406 + END;
5657 20407 + IF _BRANCH_ LT 0 THEN DO;
5658 20408 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
    2;
5659 20409 + END;
5660 20410 + IF _BRANCH_ GT 0 THEN DO;
5661 20411 +
5662 20412 +     _BRANCH_ = -1;
5663 20413 +     IF NOT MISSING(IMP_TotalSpent ) AND
5664 20414 +     4105.5 <= IMP_TotalSpent THEN
    DO;
5665 20415 +     _BRANCH_ = 2;

```



```

5666 20416 +      END;
5667 20417 +      IF _BRANCH_ LT 0 THEN DO;
5668 20418 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 2;
5669 20419 +      END;
5670 20420 +      IF _BRANCH_ GT 0 THEN DO;
5671 20421 +          _ARB_F_ + -0.001067677;
5672 20422 +      END;
5673 20423 +      END;
5674 20424 +      END;
5675 20425 +
5676 20426 +***** LEAF    130  NODE    567 *****;
5677 20427 +IF _ARB_BADF_ EQ 0 THEN DO;
5678 20428 +
5679 20429 +      _BRANCH_ = -1;
5680 20430 +      IF NOT MISSING(IMP_TotalSpent ) AND
5681 20431 +      IMP_TotalSpent <                27704 THEN DO;
5682 20432 +          _BRANCH_ =    1;
5683 20433 +      END;
5684 20434 +      IF _BRANCH_ LT 0 THEN DO;
5685 20435 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
          1;
5686 20436 +      END;
5687 20437 +      IF _BRANCH_ GT 0 THEN DO;
5688 20438 +
5689 20439 +          _BRANCH_ = -1;
5690 20440 +          IF NOT MISSING(IMP_TotalSpent ) AND
5691 20441 +          IMP_TotalSpent <                22255.5 THEN D
          O;
5692 20442 +          _BRANCH_ =    1;
5693 20443 +      END;
5694 20444 +      IF _BRANCH_ LT 0 THEN DO;
5695 20445 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 1;
5696 20446 +      END;
5697 20447 +      IF _BRANCH_ GT 0 THEN DO;

```

```

5698 20448 +      _ARB_F_ + -0.000031899;
5699 20449 +      END;
5700 20450 +      END;
5701 20451 +      END;
5702 20452 +
5703 20453 +***** LEAF    131  NODE    568 *****;
5704 20454 +IF _ARB_BADF_ EQ 0 THEN DO;
5705 20455 +
5706 20456 +      _BRANCH_ = -1;
5707 20457 +      IF NOT MISSING(IMP_TotalSpent ) AND
5708 20458 +      IMP_TotalSpent <                27704 THEN DO;
5709 20459 +      _BRANCH_ =      1;
5710 20460 +      END;
5711 20461 +      IF _BRANCH_ LT 0 THEN DO;
5712 20462 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
1;
5713 20463 +      END;
5714 20464 +      IF _BRANCH_ GT 0 THEN DO;
5715 20465 +
5716 20466 +      _BRANCH_ = -1;
5717 20467 +      IF NOT MISSING(IMP_TotalSpent ) AND
5718 20468 +      22255.5 <= IMP_TotalSpent  THEN
DO;
5719 20469 +      _BRANCH_ =      2;
5720 20470 +      END;
5721 20471 +
5722 20472 +      IF _BRANCH_ GT 0 THEN DO;
5723 20473 +      _ARB_F_ + -0.039634589;
5724 20474 +      END;
5725 20475 +      END;
5726 20476 +      END;
5727 20477 +
5728 20478 +***** LEAF    132  NODE    566 *****;
5729 20479 +IF _ARB_BADF_ EQ 0 THEN DO;
5730 20480 +
5731 20481 +      _BRANCH_ = -1;

```

```

5732 20482 +      IF NOT MISSING(IMP_TotalSpent ) AND
5733 20483 +                27704 <= IMP_TotalSpent  THEN DO
      ;
5734 20484 +      _BRANCH_ =      2;
5735 20485 +      END;
5736 20486 +
5737 20487 +      IF _BRANCH_ GT 0 THEN DO;
5738 20488 +          _ARB_F_ + 0.0494214166;
5739 20489 +      END;
5740 20490 +      END;
5741 20491 +
5742 20492 +***** LEAF      133  NODE      572 *****;
5743 20493 +IF _ARB_BADF_ EQ 0 THEN DO;
5744 20494 +
5745 20495 +      _BRANCH_ = -1;
5746 20496 +      IF NOT MISSING(IMP_TotalSpent ) AND
5747 20497 +          IMP_TotalSpent  <                28437.5 THEN DO;
5748 20498 +          _BRANCH_ =      1;
5749 20499 +      END;
5750 20500 +      IF _BRANCH_ LT 0 THEN DO;
5751 20501 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
5752 20502 +      END;
5753 20503 +      IF _BRANCH_ GT 0 THEN DO;
5754 20504 +
5755 20505 +          _BRANCH_ = -1;
5756 20506 +          IF NOT MISSING(Age ) AND
5757 20507 +              Age  <                48.5 THEN DO;
5758 20508 +              _BRANCH_ =      1;
5759 20509 +          END;
5760 20510 +          IF _BRANCH_ LT 0 THEN DO;
5761 20511 +              IF MISSING( Age  ) THEN _BRANCH_ = 1;
5762 20512 +          END;
5763 20513 +          IF _BRANCH_ GT 0 THEN DO;
5764 20514 +              _ARB_F_ + 0.0014565652;
5765 20515 +          END;

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```

5766 20516 +      END;
5767 20517 +      END;
5768 20518 +
5769 20519 +***** LEAF    134  NODE    573 *****;
5770 20520 +IF _ARB_BADF_ EQ 0 THEN DO;
5771 20521 +
5772 20522 +      _BRANCH_ = -1;
5773 20523 +      IF NOT MISSING(IMP_TotalSpent ) AND
5774 20524 +      IMP_TotalSpent <                28437.5 THEN DO;
5775 20525 +      _BRANCH_ =      1;
5776 20526 +      END;
5777 20527 +      IF _BRANCH_ LT 0 THEN DO;
5778 20528 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
5779 20529 +      1;
5780 20530 +      END;
5781 20531 +      IF _BRANCH_ GT 0 THEN DO;
5782 20532 +      _BRANCH_ = -1;
5783 20533 +      IF NOT MISSING(Age ) AND
5784 20534 +      48.5 <= Age THEN DO;
5785 20535 +      _BRANCH_ =      2;
5786 20536 +      END;
5787 20537 +
5788 20538 +      IF _BRANCH_ GT 0 THEN DO;
5789 20539 +      _ARB_F_ + -0.002047193;
5790 20540 +      END;
5791 20541 +      END;
5792 20542 +      END;
5793 20543 +
5794 20544 +***** LEAF    135  NODE    571 *****;
5795 20545 +IF _ARB_BADF_ EQ 0 THEN DO;
5796 20546 +
5797 20547 +      _BRANCH_ = -1;
5798 20548 +      IF NOT MISSING(IMP_TotalSpent ) AND
5799 20549 +      28437.5 <= IMP_TotalSpent THEN DO
5800 20550 +      ;

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5800 20550 +      _BRANCH_ =      2;
5801 20551 +      END;
5802 20552 +
5803 20553 +      IF _BRANCH_ GT 0 THEN DO;
5804 20554 +          _ARB_F_ + 0.054117347;
5805 20555 +      END;
5806 20556 +      END;
5807 20557 +
5808 20558 +***** LEAF      136      NODE      577 *****;
5809 20559 +IF _ARB_BADF_ EQ 0 THEN DO;
5810 20560 +
5811 20561 +      _BRANCH_ = -1;
5812 20562 +          IF NOT MISSING(IMP_TotalSpent ) AND
5813 20563 +              IMP_TotalSpent <                      22074 THEN DO;
5814 20564 +              _BRANCH_ =      1;
5815 20565 +          END;
5816 20566 +      IF _BRANCH_ LT 0 THEN DO;
5817 20567 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
5818 20568 +      END;
5819 20569 +      IF _BRANCH_ GT 0 THEN DO;
5820 20570 +
5821 20571 +          _BRANCH_ = -1;
5822 20572 +              IF NOT MISSING(TotalPurchases ) AND
5823 20573 +                  TotalPurchases <                      19.5 THEN D
O;
5824 20574 +          _BRANCH_ =      1;
5825 20575 +          END;
5826 20576 +      IF _BRANCH_ LT 0 THEN DO;
5827 20577 +          IF MISSING( TotalPurchases ) THEN _BRANCH_
= 1;
5828 20578 +      END;
5829 20579 +      IF _BRANCH_ GT 0 THEN DO;
5830 20580 +          _ARB_F_ + 0.0001399303;
5831 20581 +      END;
5832 20582 +      END;

```

```

5833 20583 + END;
5834 20584 +
5835 20585 +***** LEAF 137 NODE 578 *****;
5836 20586 +IF _ARB_BADF_ EQ 0 THEN DO;
5837 20587 +
5838 20588 + _BRANCH_ = -1;
5839 20589 + IF NOT MISSING(IMP_TotalSpent ) AND
5840 20590 + IMP_TotalSpent < 22074 THEN DO;
5841 20591 + _BRANCH_ = 1;
5842 20592 + END;
5843 20593 + IF _BRANCH_ LT 0 THEN DO;
5844 20594 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
5845 20595 + END;
5846 20596 + IF _BRANCH_ GT 0 THEN DO;
5847 20597 +
5848 20598 + _BRANCH_ = -1;
5849 20599 + IF NOT MISSING(TotalPurchases ) AND
5850 20600 + 19.5 <= TotalPurchases THEN
DO;
5851 20601 + _BRANCH_ = 2;
5852 20602 + END;
5853 20603 +
5854 20604 + IF _BRANCH_ GT 0 THEN DO;
5855 20605 + _ARB_F_ + 0.0154626614;
5856 20606 + END;
5857 20607 + END;
5858 20608 + END;
5859 20609 +
5860 20610 +***** LEAF 138 NODE 579 *****;
5861 20611 +IF _ARB_BADF_ EQ 0 THEN DO;
5862 20612 +
5863 20613 + _BRANCH_ = -1;
5864 20614 + IF NOT MISSING(IMP_TotalSpent ) AND
5865 20615 + 22074 <= IMP_TotalSpent THEN DO
;

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5866 20616 +      _BRANCH_ =      2;
5867 20617 +      END;
5868 20618 +
5869 20619 +  IF _BRANCH_ GT 0 THEN DO;
5870 20620 +
5871 20621 +      _BRANCH_ = -1;
5872 20622 +      IF NOT MISSING(IMP_TotalSpent ) AND
5873 20623 +      IMP_TotalSpent <
5874 20624 +      27912 THEN D
5875 20625 +      O;
5876 20626 +      _BRANCH_ =      1;
5877 20627 +      END;
5878 20628 +      IF _BRANCH_ LT 0 THEN DO;
5879 20629 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
5880 20630 +      = 1;
5881 20631 +      END;
5882 20632 +      IF _BRANCH_ GT 0 THEN DO;
5883 20633 +      _ARB_F_ + -0.051792084;
5884 20634 +      END;
5885 20635 +      END;
5886 20636 +      IF _BRANCH_ GT 0 THEN DO;
5887 20637 +      _ARB_F_ + -0.051792084;
5888 20638 +      END;
5889 20639 +      END;
5890 20640 +      END;
5891 20641 +      END;
5892 20642 +      END;
5893 20643 +      END;
5894 20644 +      END;
5895 20645 +      END;
5896 20646 +      END;
5897 20647 +      END;
5898 20648 +      END;

```

```

DO;
5899 20649 +      _BRANCH_ =      2;
5900 20650 +      END;
5901 20651 +
5902 20652 +      IF _BRANCH_ GT 0 THEN DO;
5903 20653 +          _ARB_F_ + -0.010803852;
5904 20654 +      END;
5905 20655 +      END;
5906 20656 +  END;
5907 20657 +
5908 20658 +***** LEAF      140      NODE      584 *****;
5909 20659 +IF _ARB_BADF_ EQ 0 THEN DO;
5910 20660 +
5911 20661 +      _BRANCH_ = -1;
5912 20662 +      IF NOT MISSING(IMP_TotalSpent ) AND
5913 20663 +      IMP_TotalSpent <                      8113 THEN DO;
5914 20664 +          _BRANCH_ =      1;
5915 20665 +      END;
5916 20666 +  IF _BRANCH_ LT 0 THEN DO;
5917 20667 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
          1;
5918 20668 +  END;
5919 20669 +  IF _BRANCH_ GT 0 THEN DO;
5920 20670 +
5921 20671 +      _BRANCH_ = -1;
5922 20672 +      IF NOT MISSING(IMP_TotalSpent ) AND
5923 20673 +      IMP_TotalSpent <                      6221.5 THEN D
          O;
5924 20674 +          _BRANCH_ =      1;
5925 20675 +      END;
5926 20676 +      IF _BRANCH_ LT 0 THEN DO;
5927 20677 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
          = 1;
5928 20678 +      END;
5929 20679 +      IF _BRANCH_ GT 0 THEN DO;
5930 20680 +          _ARB_F_ + 0.0004913325;

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5931 20681 +      END;
5932 20682 +      END;
5933 20683 +    END;
5934 20684 +
5935 20685 +***** LEAF    141  NODE    585 *****;
5936 20686 +IF _ARB_BADF_ EQ 0 THEN DO;
5937 20687 +
5938 20688 +  _BRANCH_ = -1;
5939 20689 +    IF NOT MISSING(IMP_TotalSpent ) AND
5940 20690 +    IMP_TotalSpent <                8113 THEN DO;
5941 20691 +    _BRANCH_ =    1;
5942 20692 +    END;
5943 20693 +  IF _BRANCH_ LT 0 THEN DO;
5944 20694 +    IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
    1;
5945 20695 +  END;
5946 20696 +  IF _BRANCH_ GT 0 THEN DO;
5947 20697 +
5948 20698 +    _BRANCH_ = -1;
5949 20699 +    IF NOT MISSING(IMP_TotalSpent ) AND
5950 20700 +    6221.5 <= IMP_TotalSpent  THEN
    DO;
5951 20701 +    _BRANCH_ =    2;
5952 20702 +    END;
5953 20703 +
5954 20704 +    IF _BRANCH_ GT 0 THEN DO;
5955 20705 +    _ARB_F_ + -0.012007251;
5956 20706 +    END;
5957 20707 +    END;
5958 20708 +  END;
5959 20709 +
5960 20710 +***** LEAF    142  NODE    586 *****;
5961 20711 +IF _ARB_BADF_ EQ 0 THEN DO;
5962 20712 +
5963 20713 +  _BRANCH_ = -1;
5964 20714 +    IF NOT MISSING(IMP_TotalSpent ) AND

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5965 20715 +                8113 <= IMP_TotalSpent  THEN DO
      ;
5966 20716 +      _BRANCH_ =      2;
5967 20717 +      END;
5968 20718 +
5969 20719 +      IF _BRANCH_ GT 0 THEN DO;
5970 20720 +
5971 20721 +      _BRANCH_ = -1;
5972 20722 +      IF NOT MISSING(Age ) AND
5973 20723 +      Age <                31.5 THEN DO;
5974 20724 +      _BRANCH_ =      1;
5975 20725 +      END;
5976 20726 +
5977 20727 +      IF _BRANCH_ GT 0 THEN DO;
5978 20728 +      _ARB_F_ + -0.013820801;
5979 20729 +      END;
5980 20730 +      END;
5981 20731 +      END;
5982 20732 +
5983 20733 +***** LEAF      143  NODE      587 *****;
5984 20734 +IF _ARB_BADF_ EQ 0 THEN DO;
5985 20735 +
5986 20736 +      _BRANCH_ = -1;
5987 20737 +      IF NOT MISSING(IMP_TotalSpent ) AND
5988 20738 +                8113 <= IMP_TotalSpent  THEN DO
      ;
5989 20739 +      _BRANCH_ =      2;
5990 20740 +      END;
5991 20741 +
5992 20742 +      IF _BRANCH_ GT 0 THEN DO;
5993 20743 +
5994 20744 +      _BRANCH_ = -1;
5995 20745 +      IF NOT MISSING(Age ) AND
5996 20746 +                31.5 <= Age  THEN DO;
5997 20747 +      _BRANCH_ =      2;
5998 20748 +      END;

```

```

5999 20749 +      IF _BRANCH_ LT 0 THEN DO;
6000 20750 +          IF MISSING( Age ) THEN _BRANCH_ = 2;
6001 20751 +      END;
6002 20752 +      IF _BRANCH_ GT 0 THEN DO;
6003 20753 +          _ARB_F_ + 0.0080374173;
6004 20754 +      END;
6005 20755 +      END;
6006 20756 +  END;
6007 20757 +
6008 20758 +***** LEAF    144  NODE    591 *****;
6009 20759 +IF _ARB_BADF_ EQ 0 THEN DO;
6010 20760 +
6011 20761 +  _BRANCH_ = -1;
6012 20762 +      IF NOT MISSING(IMP_TotalSpent ) AND
6013 20763 +      IMP_TotalSpent <                      322 THEN DO;
6014 20764 +          _BRANCH_ =      1;
6015 20765 +      END;
6016 20766 +
6017 20767 +  IF _BRANCH_ GT 0 THEN DO;
6018 20768 +
6019 20769 +      _BRANCH_ = -1;
6020 20770 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
6021 20771 +      %DMNORMIP( _ARBFMT_8);
6022 20772 +          IF _ARBFMT_8 IN ('SILVER' , 'PLATINUM' ) THEN
DO;
6023 20773 +          _BRANCH_ =      1;
6024 20774 +      END;
6025 20775 +
6026 20776 +      IF _BRANCH_ GT 0 THEN DO;
6027 20777 +          _ARB_F_ + -0.053846019;
6028 20778 +      END;
6029 20779 +      END;
6030 20780 +  END;
6031 20781 +
6032 20782 +***** LEAF    145  NODE    592 *****;
6033 20783 +IF _ARB_BADF_ EQ 0 THEN DO;

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```

6034 20784 +
6035 20785 +   _BRANCH_ = -1;
6036 20786 +   IF NOT MISSING(IMP_TotalSpent ) AND
6037 20787 +   IMP_TotalSpent < 322 THEN DO;
6038 20788 +   _BRANCH_ = 1;
6039 20789 +   END;
6040 20790 +
6041 20791 + IF _BRANCH_ GT 0 THEN DO;
6042 20792 +
6043 20793 +   _BRANCH_ = -1;
6044 20794 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
6045 20795 +   %DMNORMIP( _ARBFMT_8);
6046 20796 +   IF _ARBFMT_8 IN ('GOLD' , 'BRONZE' ) THEN DO;
6047 20797 +   _BRANCH_ = 2;
6048 20798 +   END;
6049 20799 +   IF _BRANCH_ LT 0 THEN DO;
6050 20800 +   IF MISSING( MembershipLevel ) THEN _BRANCH_
        = 2;
6051 20801 +   ELSE IF _ARBFMT_8 NOTIN (
6052 20802 +   'SILVER' , 'PLATINUM' , 'GOLD' , 'BRONZE'
6053 20803 +   ) THEN _BRANCH_ = 2;
6054 20804 +   END;
6055 20805 +   IF _BRANCH_ GT 0 THEN DO;
6056 20806 +   _ARB_F_ + -0.013980504;
6057 20807 +   END;
6058 20808 +   END;
6059 20809 + END;
6060 20810 +
6061 20811 +***** LEAF 146 NODE 593 *****;
6062 20812 +IF _ARB_BADF_ EQ 0 THEN DO;
6063 20813 +
6064 20814 +   _BRANCH_ = -1;
6065 20815 +   IF NOT MISSING(IMP_TotalSpent ) AND
6066 20816 +   322 <= IMP_TotalSpent THEN DO
        ;
6067 20817 +   _BRANCH_ = 2;

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```

6068 20818 +      END;
6069 20819 +      IF _BRANCH_ LT 0 THEN DO;
6070 20820 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
        2;
6071 20821 +      END;
6072 20822 +      IF _BRANCH_ GT 0 THEN DO;
6073 20823 +
6074 20824 +          _BRANCH_ = -1;
6075 20825 +          IF NOT MISSING(Age ) AND
6076 20826 +          Age < 19.5 THEN DO;
6077 20827 +              _BRANCH_ = 1;
6078 20828 +          END;
6079 20829 +
6080 20830 +      IF _BRANCH_ GT 0 THEN DO;
6081 20831 +          _ARB_F_ + -0.013216429;
6082 20832 +      END;
6083 20833 +      END;
6084 20834 +      END;
6085 20835 +
6086 20836 +***** LEAF 147 NODE 594 *****;
6087 20837 +IF _ARB_BADF_ EQ 0 THEN DO;
6088 20838 +
6089 20839 +      _BRANCH_ = -1;
6090 20840 +          IF NOT MISSING(IMP_TotalSpent ) AND
6091 20841 +          322 <= IMP_TotalSpent THEN DO
        ;
6092 20842 +          _BRANCH_ = 2;
6093 20843 +      END;
6094 20844 +      IF _BRANCH_ LT 0 THEN DO;
6095 20845 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
        2;
6096 20846 +      END;
6097 20847 +      IF _BRANCH_ GT 0 THEN DO;
6098 20848 +
6099 20849 +          _BRANCH_ = -1;
6100 20850 +          IF NOT MISSING(Age ) AND

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6101 20851 +          19.5 <= Age THEN DO;
6102 20852 +          _BRANCH_ = 2;
6103 20853 +          END;
6104 20854 +          IF _BRANCH_ LT 0 THEN DO;
6105 20855 +              IF MISSING( Age ) THEN _BRANCH_ = 2;
6106 20856 +          END;
6107 20857 +          IF _BRANCH_ GT 0 THEN DO;
6108 20858 +              _ARB_F_ + 0.0006581938;
6109 20859 +          END;
6110 20860 +          END;
6111 20861 +      END;
6112 20862 +
6113 20863 +***** LEAF 148 NODE 598 *****;
6114 20864 +IF _ARB_BADF_ EQ 0 THEN DO;
6115 20865 +
6116 20866 +    _BRANCH_ = -1;
6117 20867 +    IF NOT MISSING( TotalPurchases ) AND
6118 20868 +    TotalPurchases < 15.5 THEN DO;
6119 20869 +        _BRANCH_ = 1;
6120 20870 +    END;
6121 20871 +    IF _BRANCH_ LT 0 THEN DO;
6122 20872 +        IF MISSING( TotalPurchases ) THEN _BRANCH_ =
        1;
6123 20873 +    END;
6124 20874 +    IF _BRANCH_ GT 0 THEN DO;
6125 20875 +
6126 20876 +        _BRANCH_ = -1;
6127 20877 +        IF NOT MISSING( IMP_TotalSpent ) AND
6128 20878 +        IMP_TotalSpent < 13632 THEN D
        O;
6129 20879 +        _BRANCH_ = 1;
6130 20880 +    END;
6131 20881 +    IF _BRANCH_ LT 0 THEN DO;
6132 20882 +        IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
        = 1;
6133 20883 +    END;

```

```

6134 20884 +      IF _BRANCH_ GT 0 THEN DO;
6135 20885 +          _ARB_F_ + -0.000789838;
6136 20886 +      END;
6137 20887 +      END;
6138 20888 +  END;
6139 20889 +
6140 20890 +***** LEAF    149  NODE    599 *****;
6141 20891 +IF _ARB_BADF_ EQ 0 THEN DO;
6142 20892 +
6143 20893 +  _BRANCH_ = -1;
6144 20894 +      IF NOT MISSING(TotalPurchases ) AND
6145 20895 +      TotalPurchases <                      15.5 THEN DO;
6146 20896 +          _BRANCH_ =    1;
6147 20897 +      END;
6148 20898 +  IF _BRANCH_ LT 0 THEN DO;
6149 20899 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
        1;
6150 20900 +  END;
6151 20901 +  IF _BRANCH_ GT 0 THEN DO;
6152 20902 +
6153 20903 +      _BRANCH_ = -1;
6154 20904 +          IF NOT MISSING(IMP_TotalSpent ) AND
6155 20905 +          13632 <= IMP_TotalSpent  THEN
        DO;
6156 20906 +              _BRANCH_ =    2;
6157 20907 +          END;
6158 20908 +
6159 20909 +      IF _BRANCH_ GT 0 THEN DO;
6160 20910 +          _ARB_F_ + 0.0230173506;
6161 20911 +      END;
6162 20912 +      END;
6163 20913 +  END;
6164 20914 +
6165 20915 +***** LEAF    150  NODE    600 *****;
6166 20916 +IF _ARB_BADF_ EQ 0 THEN DO;
6167 20917 +

```

```

6168 20918 +  _BRANCH_ = -1;
6169 20919 +      IF NOT MISSING(TotalPurchases ) AND
6170 20920 +                      15.5 <= TotalPurchases THEN DO
        ;
6171 20921 +      _BRANCH_ =      2;
6172 20922 +      END;
6173 20923 +
6174 20924 +      IF _BRANCH_ GT 0 THEN DO;
6175 20925 +
6176 20926 +      _BRANCH_ = -1;
6177 20927 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
6178 20928 +      %DMNORMIP( _ARBFMT_8);
6179 20929 +      IF _ARBFMT_8 IN ('SILVER' ) THEN DO;
6180 20930 +      _BRANCH_ =      1;
6181 20931 +      END;
6182 20932 +
6183 20933 +      IF _BRANCH_ GT 0 THEN DO;
6184 20934 +      _ARB_F_ + -0.019056279;
6185 20935 +      END;
6186 20936 +      END;
6187 20937 +      END;
6188 20938 +
6189 20939 +***** LEAF      151      NODE      601 *****;
6190 20940 +IF _ARB_BADF_ EQ 0 THEN DO;
6191 20941 +
6192 20942 +  _BRANCH_ = -1;
6193 20943 +      IF NOT MISSING(TotalPurchases ) AND
6194 20944 +                      15.5 <= TotalPurchases THEN DO
        ;
6195 20945 +      _BRANCH_ =      2;
6196 20946 +      END;
6197 20947 +
6198 20948 +      IF _BRANCH_ GT 0 THEN DO;
6199 20949 +
6200 20950 +      _BRANCH_ = -1;
6201 20951 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);

```



```

6202 20952 +      %DMNORMIP( _ARBFMT_8);
6203 20953 +      IF _ARBFMT_8 IN ( 'GOLD' , 'PLATINUM' , 'BRONZE'
        ) THEN DO;
6204 20954 +          _BRANCH_ =      2;
6205 20955 +      END;
6206 20956 +      IF _BRANCH_ LT 0 THEN DO;
6207 20957 +          IF MISSING( MembershipLevel ) THEN _BRANCH_
        = 2;
6208 20958 +          ELSE IF _ARBFMT_8 NOTIN (
6209 20959 +              'SILVER' , 'GOLD' , 'PLATINUM' , 'BRONZE'
6210 20960 +              ) THEN _BRANCH_ = 2;
6211 20961 +      END;
6212 20962 +      IF _BRANCH_ GT 0 THEN DO;
6213 20963 +          _ARB_F_ + 0.0243281683;
6214 20964 +      END;
6215 20965 +      END;
6216 20966 +  END;
6217 20967 +
6218 20968 +***** LEAF      152      NODE      605 *****;
6219 20969 +IF _ARB_BADF_ EQ 0 THEN DO;
6220 20970 +
6221 20971 +      _BRANCH_ = -1;
6222 20972 +      IF NOT MISSING( TotalPurchases ) AND
6223 20973 +      TotalPurchases <
        18.5 THEN DO;
6224 20974 +          _BRANCH_ =      1;
6225 20975 +      END;
6226 20976 +      IF _BRANCH_ LT 0 THEN DO;
6227 20977 +          IF MISSING( TotalPurchases ) THEN _BRANCH_ =
        1;
6228 20978 +      END;
6229 20979 +      IF _BRANCH_ GT 0 THEN DO;
6230 20980 +
6231 20981 +          _BRANCH_ = -1;
6232 20982 +          IF NOT MISSING( IMP_TotalSpent ) AND
6233 20983 +          IMP_TotalSpent <
        1356.5 THEN D
O;

```

```

6234 20984 +      _BRANCH_ =      1;
6235 20985 +      END;
6236 20986 +
6237 20987 +      IF _BRANCH_ GT 0 THEN DO;
6238 20988 +          _ARB_F_ + 0.0046736308;
6239 20989 +      END;
6240 20990 +      END;
6241 20991 +  END;
6242 20992 +
6243 20993 +***** LEAF      153  NODE      606 *****;
6244 20994 +IF _ARB_BADF_ EQ 0 THEN DO;
6245 20995 +
6246 20996 +      _BRANCH_ = -1;
6247 20997 +      IF NOT MISSING( TotalPurchases ) AND
6248 20998 +      TotalPurchases <
6249 20999 +          18.5 THEN DO;
6250 21000 +          _BRANCH_ =      1;
6251 21001 +      END;
6252 21002 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
6253 21003 +      1;
6254 21004 +      END;
6255 21005 +      IF _BRANCH_ GT 0 THEN DO;
6256 21006 +          _BRANCH_ = -1;
6257 21007 +          IF NOT MISSING(IMP_TotalSpent ) AND
6258 21008 +          1356.5 <= IMP_TotalSpent THEN
6259 21009 +          DO;
6260 21010 +              _BRANCH_ =      2;
6261 21011 +          END;
6262 21012 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
6263 21013 +          = 2;
6264 21014 +          END;
6265 21015 +          IF _BRANCH_ GT 0 THEN DO;
6266 21016 +              _ARB_F_ + -0.001130118;
6267 21017 +          END;

```

```

6267 21017 +      END;
6268 21018 +      END;
6269 21019 +
6270 21020 +***** LEAF      154      NODE      607 *****;
6271 21021 +IF _ARB_BADF_ EQ 0 THEN DO;
6272 21022 +
6273 21023 +      _BRANCH_ = -1;
6274 21024 +      IF NOT MISSING(TotalPurchases ) AND
6275 21025 +                      18.5 <= TotalPurchases THEN DO
;
6276 21026 +      _BRANCH_ =      2;
6277 21027 +      END;
6278 21028 +
6279 21029 +      IF _BRANCH_ GT 0 THEN DO;
6280 21030 +
6281 21031 +      _BRANCH_ = -1;
6282 21032 +      IF NOT MISSING(IMP_TotalSpent ) AND
6283 21033 +      IMP_TotalSpent <                      13176.5 THEN D
O;
6284 21034 +      _BRANCH_ =      1;
6285 21035 +      END;
6286 21036 +
6287 21037 +      IF _BRANCH_ GT 0 THEN DO;
6288 21038 +      _ARB_F_ + 0.0658143695;
6289 21039 +      END;
6290 21040 +      END;
6291 21041 +      END;
6292 21042 +
6293 21043 +***** LEAF      155      NODE      608 *****;
6294 21044 +IF _ARB_BADF_ EQ 0 THEN DO;
6295 21045 +
6296 21046 +      _BRANCH_ = -1;
6297 21047 +      IF NOT MISSING(TotalPurchases ) AND
6298 21048 +                      18.5 <= TotalPurchases THEN DO
;
6299 21049 +      _BRANCH_ =      2;

```

```

6300 21050 +      END;
6301 21051 +
6302 21052 +      IF _BRANCH_ GT 0 THEN DO;
6303 21053 +
6304 21054 +      _BRANCH_ = -1;
6305 21055 +      IF NOT MISSING(IMP_TotalSpent ) AND
6306 21056 +      13176.5 <= IMP_TotalSpent THEN
DO;
6307 21057 +      _BRANCH_ = 2;
6308 21058 +      END;
6309 21059 +      IF _BRANCH_ LT 0 THEN DO;
6310 21060 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
6311 21061 +      END;
6312 21062 +      IF _BRANCH_ GT 0 THEN DO;
6313 21063 +      _ARB_F_ + 0.0072768432;
6314 21064 +      END;
6315 21065 +      END;
6316 21066 +      END;
6317 21067 +
6318 21068 +***** LEAF 156 NODE 612 *****;
6319 21069 +IF _ARB_BADF_ EQ 0 THEN DO;
6320 21070 +
6321 21071 +      _BRANCH_ = -1;
6322 21072 +      IF NOT MISSING(TotalPurchases ) AND
6323 21073 +      TotalPurchases < 4.5 THEN DO;
6324 21074 +      _BRANCH_ = 1;
6325 21075 +      END;
6326 21076 +      IF _BRANCH_ LT 0 THEN DO;
6327 21077 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
6328 21078 +      END;
6329 21079 +      IF _BRANCH_ GT 0 THEN DO;
6330 21080 +
6331 21081 +      _BRANCH_ = -1;
6332 21082 +      IF NOT MISSING(Age ) AND

```

```

6333 21083 +      Age  <                                42.5 THEN DO;
6334 21084 +      _BRANCH_ =      1;
6335 21085 +      END;
6336 21086 +
6337 21087 +      IF _BRANCH_ GT 0 THEN DO;
6338 21088 +      _ARB_F_ + 0.0035734506;
6339 21089 +      END;
6340 21090 +      END;
6341 21091 +      END;
6342 21092 +
6343 21093 +***** LEAF      157      NODE      613 *****;
6344 21094 +IF _ARB_BADF_ EQ 0 THEN DO;
6345 21095 +
6346 21096 +      _BRANCH_ = -1;
6347 21097 +      IF NOT MISSING( TotalPurchases ) AND
6348 21098 +      TotalPurchases <                                4.5 THEN DO;
6349 21099 +      _BRANCH_ =      1;
6350 21100 +      END;
6351 21101 +      IF _BRANCH_ LT 0 THEN DO;
6352 21102 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
        1;
6353 21103 +      END;
6354 21104 +      IF _BRANCH_ GT 0 THEN DO;
6355 21105 +
6356 21106 +      _BRANCH_ = -1;
6357 21107 +      IF NOT MISSING( Age ) AND
6358 21108 +      42.5 <= Age THEN DO;
6359 21109 +      _BRANCH_ =      2;
6360 21110 +      END;
6361 21111 +      IF _BRANCH_ LT 0 THEN DO;
6362 21112 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
6363 21113 +      END;
6364 21114 +      IF _BRANCH_ GT 0 THEN DO;
6365 21115 +      _ARB_F_ + -0.007721923;
6366 21116 +      END;
6367 21117 +      END;

```

```

6368 21118 + END;
6369 21119 +
6370 21120 +***** LEAF 158 NODE 614 *****;
6371 21121 +IF _ARB_BADF_ EQ 0 THEN DO;
6372 21122 +
6373 21123 + _BRANCH_ = -1;
6374 21124 + IF NOT MISSING(TotalPurchases ) AND
6375 21125 + 4.5 <= TotalPurchases THEN DO
;
6376 21126 + _BRANCH_ = 2;
6377 21127 + END;
6378 21128 +
6379 21129 + IF _BRANCH_ GT 0 THEN DO;
6380 21130 +
6381 21131 + _BRANCH_ = -1;
6382 21132 + IF NOT MISSING(Age ) AND
6383 21133 + Age < 58.5 THEN DO;
6384 21134 + _BRANCH_ = 1;
6385 21135 + END;
6386 21136 + IF _BRANCH_ LT 0 THEN DO;
6387 21137 + IF MISSING( Age ) THEN _BRANCH_ = 1;
6388 21138 + END;
6389 21139 + IF _BRANCH_ GT 0 THEN DO;
6390 21140 + _ARB_F_ + 0.0002177972;
6391 21141 + END;
6392 21142 + END;
6393 21143 + END;
6394 21144 +
6395 21145 +***** LEAF 159 NODE 615 *****;
6396 21146 +IF _ARB_BADF_ EQ 0 THEN DO;
6397 21147 +
6398 21148 + _BRANCH_ = -1;
6399 21149 + IF NOT MISSING(TotalPurchases ) AND
6400 21150 + 4.5 <= TotalPurchases THEN DO
;
6401 21151 + _BRANCH_ = 2;

```

```

6402 21152 +      END;
6403 21153 +
6404 21154 +      IF _BRANCH_ GT 0 THEN DO;
6405 21155 +
6406 21156 +          _BRANCH_ = -1;
6407 21157 +          IF NOT MISSING(Age ) AND
6408 21158 +              58.5 <= Age THEN DO;
6409 21159 +              _BRANCH_ = 2;
6410 21160 +          END;
6411 21161 +
6412 21162 +      IF _BRANCH_ GT 0 THEN DO;
6413 21163 +          _ARB_F_ + 0.0080523358;
6414 21164 +      END;
6415 21165 +      END;
6416 21166 +      END;
6417 21167 +
6418 21168 +***** LEAF 160 NODE 619 *****;
6419 21169 +IF _ARB_BADF_ EQ 0 THEN DO;
6420 21170 +
6421 21171 +      _BRANCH_ = -1;
6422 21172 +      IF NOT MISSING(TotalPurchases ) AND
6423 21173 +          TotalPurchases < 3.5 THEN DO;
6424 21174 +          _BRANCH_ = 1;
6425 21175 +      END;
6426 21176 +
6427 21177 +      IF _BRANCH_ GT 0 THEN DO;
6428 21178 +
6429 21179 +          _BRANCH_ = -1;
6430 21180 +          IF NOT MISSING(IMP_TotalSpent ) AND
6431 21181 +              IMP_TotalSpent < 5707.5 THEN D
6432 21182 +              O;
6433 21183 +              _BRANCH_ = 1;
6434 21184 +          END;
6435 21185 +          IF _BRANCH_ LT 0 THEN DO;
6436 21186 +              IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
6437 21187 +              = 1;

```

```

6436 21186 +      END;
6437 21187 +      IF _BRANCH_ GT 0 THEN DO;
6438 21188 +          _ARB_F_ + -0.005549964;
6439 21189 +      END;
6440 21190 +      END;
6441 21191 +  END;
6442 21192 +
6443 21193 +***** LEAF    161  NODE    620 *****;
6444 21194 +IF _ARB_BADF_ EQ 0 THEN DO;
6445 21195 +
6446 21196 +  _BRANCH_ = -1;
6447 21197 +      IF NOT MISSING(TotalPurchases ) AND
6448 21198 +      TotalPurchases <                      3.5 THEN DO;
6449 21199 +          _BRANCH_ =      1;
6450 21200 +      END;
6451 21201 +
6452 21202 +  IF _BRANCH_ GT 0 THEN DO;
6453 21203 +
6454 21204 +      _BRANCH_ = -1;
6455 21205 +          IF NOT MISSING(IMP_TotalSpent ) AND
6456 21206 +                      5707.5 <= IMP_TotalSpent  THEN
DO;
6457 21207 +          _BRANCH_ =      2;
6458 21208 +      END;
6459 21209 +
6460 21210 +      IF _BRANCH_ GT 0 THEN DO;
6461 21211 +          _ARB_F_ + 0.0149730918;
6462 21212 +      END;
6463 21213 +      END;
6464 21214 +  END;
6465 21215 +
6466 21216 +***** LEAF    162  NODE    621 *****;
6467 21217 +IF _ARB_BADF_ EQ 0 THEN DO;
6468 21218 +
6469 21219 +  _BRANCH_ = -1;
6470 21220 +      IF NOT MISSING(TotalPurchases ) AND

```



```

6471 21221 +                3.5 <= TotalPurchases  THEN DO
        ;
6472 21222 +      _BRANCH_ =      2;
6473 21223 +      END;
6474 21224 +      IF _BRANCH_ LT 0 THEN DO;
6475 21225 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
        2;
6476 21226 +      END;
6477 21227 +      IF _BRANCH_ GT 0 THEN DO;
6478 21228 +
6479 21229 +          _BRANCH_ = -1;
6480 21230 +          IF NOT MISSING(Age ) AND
6481 21231 +          Age <                45.5 THEN DO;
6482 21232 +          _BRANCH_ =      1;
6483 21233 +          END;
6484 21234 +
6485 21235 +          IF _BRANCH_ GT 0 THEN DO;
6486 21236 +          _ARB_F_ + -0.00126995;
6487 21237 +          END;
6488 21238 +          END;
6489 21239 +      END;
6490 21240 +
6491 21241 +***** LEAF      163  NODE      622 *****;
6492 21242 +IF _ARB_BADF_ EQ 0 THEN DO;
6493 21243 +
6494 21244 +      _BRANCH_ = -1;
6495 21245 +          IF NOT MISSING(TotalPurchases ) AND
6496 21246 +                3.5 <= TotalPurchases  THEN DO
        ;
6497 21247 +          _BRANCH_ =      2;
6498 21248 +          END;
6499 21249 +      IF _BRANCH_ LT 0 THEN DO;
6500 21250 +          IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
        2;
6501 21251 +      END;
6502 21252 +      IF _BRANCH_ GT 0 THEN DO;

```

```

6503 21253 +
6504 21254 +     _BRANCH_ = -1;
6505 21255 +     IF NOT MISSING(Age ) AND
6506 21256 +             45.5 <= Age THEN DO;
6507 21257 +     _BRANCH_ = 2;
6508 21258 +     END;
6509 21259 +     IF _BRANCH_ LT 0 THEN DO;
6510 21260 +     IF MISSING( Age ) THEN _BRANCH_ = 2;
6511 21261 +     END;
6512 21262 +     IF _BRANCH_ GT 0 THEN DO;
6513 21263 +     _ARB_F_ + 0.0052101875;
6514 21264 +     END;
6515 21265 +     END;
6516 21266 + END;
6517 21267 +
6518 21268 +***** LEAF 164 NODE 626 *****;
6519 21269 +IF _ARB_BADF_ EQ 0 THEN DO;
6520 21270 +
6521 21271 +     _BRANCH_ = -1;
6522 21272 +     IF NOT MISSING(IMP_TotalSpent ) AND
6523 21273 +     IMP_TotalSpent < 19814 THEN DO;
6524 21274 +     _BRANCH_ = 1;
6525 21275 +     END;
6526 21276 + IF _BRANCH_ LT 0 THEN DO;
6527 21277 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
        1;
6528 21278 + END;
6529 21279 + IF _BRANCH_ GT 0 THEN DO;
6530 21280 +
6531 21281 +     _BRANCH_ = -1;
6532 21282 +     IF NOT MISSING(IMP_TotalSpent ) AND
6533 21283 +     IMP_TotalSpent < 10070.5 THEN D
        O;
6534 21284 +     _BRANCH_ = 1;
6535 21285 +     END;
6536 21286 + IF _BRANCH_ LT 0 THEN DO;

```

```

6537 21287 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
        = 1;
6538 21288 +          END;
6539 21289 +          IF _BRANCH_ GT 0 THEN DO;
6540 21290 +              _ARB_F_ + 0.0003786944;
6541 21291 +          END;
6542 21292 +          END;
6543 21293 +      END;
6544 21294 +
6545 21295 +***** LEAF    165    NODE    627 *****;
6546 21296 +IF _ARB_BADF_ EQ 0 THEN DO;
6547 21297 +
6548 21298 +    _BRANCH_ = -1;
6549 21299 +    IF NOT MISSING(IMP_TotalSpent ) AND
6550 21300 +    IMP_TotalSpent <
6551 21301 +    _BRANCH_ =    1;
6552 21302 +    END;
6553 21303 +    IF _BRANCH_ LT 0 THEN DO;
6554 21304 +        IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
        1;
6555 21305 +    END;
6556 21306 +    IF _BRANCH_ GT 0 THEN DO;
6557 21307 +
6558 21308 +        _BRANCH_ = -1;
6559 21309 +        IF NOT MISSING(IMP_TotalSpent ) AND
6560 21310 +        10070.5 <= IMP_TotalSpent THEN
        DO;
6561 21311 +            _BRANCH_ =    2;
6562 21312 +        END;
6563 21313 +
6564 21314 +    IF _BRANCH_ GT 0 THEN DO;
6565 21315 +        _ARB_F_ + -0.007740185;
6566 21316 +    END;
6567 21317 +    END;
6568 21318 +    END;
6569 21319 +

```

```

6570 21320 +***** LEAF 166 NODE 628 *****;
6571 21321 +IF _ARB_BADF_ EQ 0 THEN DO;
6572 21322 +
6573 21323 + _BRANCH_ = -1;
6574 21324 + IF NOT MISSING(IMP_TotalSpent ) AND
6575 21325 + 19814 <= IMP_TotalSpent THEN DO
;
6576 21326 + _BRANCH_ = 2;
6577 21327 + END;
6578 21328 +
6579 21329 + IF _BRANCH_ GT 0 THEN DO;
6580 21330 +
6581 21331 + _BRANCH_ = -1;
6582 21332 + _ARBFMT_8 = PUT( MembershipLevel , $8.);
6583 21333 + %DMNORMIP( _ARBFMT_8);
6584 21334 + IF _ARBFMT_8 IN ('SILVER' ) THEN DO;
6585 21335 + _BRANCH_ = 1;
6586 21336 + END;
6587 21337 +
6588 21338 + IF _BRANCH_ GT 0 THEN DO;
6589 21339 + _ARB_F_ + 0.0611607778;
6590 21340 + END;
6591 21341 + END;
6592 21342 + END;
6593 21343 +
6594 21344 +***** LEAF 167 NODE 629 *****;
6595 21345 +IF _ARB_BADF_ EQ 0 THEN DO;
6596 21346 +
6597 21347 + _BRANCH_ = -1;
6598 21348 + IF NOT MISSING(IMP_TotalSpent ) AND
6599 21349 + 19814 <= IMP_TotalSpent THEN DO
;
6600 21350 + _BRANCH_ = 2;
6601 21351 + END;
6602 21352 +
6603 21353 + IF _BRANCH_ GT 0 THEN DO;

```

```

6604 21354 +
6605 21355 +     _BRANCH_ = -1;
6606 21356 +     _ARBFMT_8 = PUT( MembershipLevel , $8.);
6607 21357 +     %DMNORMIP( _ARBFMT_8);
6608 21358 +     IF _ARBFMT_8 IN ('GOLD' , 'PLATINUM' , 'BRONZE'
        ) THEN DO;
6609 21359 +         _BRANCH_ = 2;
6610 21360 +     END;
6611 21361 +     IF _BRANCH_ LT 0 THEN DO;
6612 21362 +         IF MISSING( MembershipLevel ) THEN _BRANCH_
        = 2;
6613 21363 +         ELSE IF _ARBFMT_8 NOTIN (
6614 21364 +             'SILVER' , 'GOLD' , 'PLATINUM' , 'BRONZE'
6615 21365 +             ) THEN _BRANCH_ = 2;
6616 21366 +     END;
6617 21367 +     IF _BRANCH_ GT 0 THEN DO;
6618 21368 +         _ARB_F_ + 0.0139215868;
6619 21369 +     END;
6620 21370 +     END;
6621 21371 + END;
6622 21372 +
6623 21373 + _ARB_F_ = 2.0 * _ARB_F_;
6624 21374 + IF _ARB_BADF_ NE 0 THEN P_IMP_Churn1 = 0.223524032
        7;
6625 21375 + ELSE IF _ARB_F_ > 45.0 THEN P_IMP_Churn1 = 1.0;
6626 21376 + ELSE IF _ARB_F_ < -45.0 THEN P_IMP_Churn1 = 0.0;
6627 21377 + ELSE P_IMP_Churn1 = 1.0/(1.0 + EXP( - _ARB_F_));
6628 21378 + P_IMP_Churn0 = 1.0 - P_IMP_Churn1 ;
6629 21379 + ***** CREATE Q_: POSTERIORS WITHOUT PRIORS *****;
6630 21380 + Q_IMP_Churn0 = P_IMP_Churn0 ;
6631 21381 + Q_IMP_Churn1 = P_IMP_Churn1 ;
6632 21382 +
6633 21383 + ***** I_ AND U_ VARIABLES *****;
6634 21384 + DROP _ARB_I_ _ARB_IP_;
6635 21385 + _ARB_IP_ = -1.0;
6636 21386 + IF _ARB_IP_ + 1.0/32768.0 < P_IMP_Churn0 THEN DO;

```

```

6637 21387 +   _ARB_IP_ = P_IMP_Churn0 ;
6638 21388 +   _ARB_I_  = 1;
6639 21389 +   END;
6640 21390 + IF _ARB_IP_ + 1.0/32768.0 < P_IMP_Churn1 THEN DO;
6641 21391 +   _ARB_IP_ = P_IMP_Churn1 ;
6642 21392 +   _ARB_I_  = 2;
6643 21393 +   END;
6644 21394 + SELECT( _ARB_I_ );
6645 21395 +   WHEN( 1) DO;
6646 21396 +       I_IMP_Churn  = '0' ;
6647 21397 +       U_IMP_Churn  = 0;
6648 21398 +       END;
6649 21399 +   WHEN( 2) DO;
6650 21400 +       I_IMP_Churn  = '1' ;
6651 21401 +       U_IMP_Churn  = 1;
6652 21402 +       END;
6653 21403 +   END;
6654 21404 +
6655 21405 +***** RESIDUALS R_ *****;
6656 21406 +IF F_IMP_Churn NE '0'
6657 21407 +AND F_IMP_Churn NE '1' THEN DO;
6658 21408 +       R_IMP_Churn0 = .;
6659 21409 +       R_IMP_Churn1 = .;
6660 21410 + END;
6661 21411 + ELSE DO;
6662 21412 +       R_IMP_Churn0 = -P_IMP_Churn0 ;
6663 21413 +       R_IMP_Churn1 = -P_IMP_Churn1 ;
6664 21414 +       SELECT( F_IMP_Churn );
6665 21415 +           WHEN( '0' ) R_IMP_Churn0 = R_IMP_Churn0
+1;
6666 21416 +           WHEN( '1' ) R_IMP_Churn1 = R_IMP_Churn1
+1;
6667 21417 +       END;
6668 21418 + END;
6669 21419 +
6670 21420 +*****

```

```

*****;
6671 21421 +*****          END OF DECISION TREE SCORING CODE
          *****;
6672 21422 +*****
          *****;
6673 21423 +
6674 NOTE: %INCLUDE (level 1) ending.
6675 21424  run;
6676
6677 NOTE: DATA STEP view saved on file EMWS3.BOOST_TRAIN.
6678 NOTE: A stored DATA STEP view cannot run under a different
        operating system.
6679 NOTE: DATA statement used (Total process time):
6680      real time          0.04 seconds
6681      user cpu time      0.04 seconds
6682      system cpu time    0.00 seconds
6683      memory             158481.62k
6684      OS Memory          169620.00k
6685      Timestamp          07/01/2024 06:40:15 AM
6686      Step Count                1  Switch Count  0
6687      Page Faults                0
6688      Page Reclaims             653
6689      Page Swaps                0
6690      Voluntary Context Switches 17
6691      Involuntary Context Switches 0
6692      Block Input Operations     200
6693      Block Output Operations   1680
6694
6695
6696 21425  quit;
6697 21426  filename emflow;
6698 NOTE: Fileref EMFLOW has been deassigned.
6699
6700 21427  filename emflow "/home/u63452984/case-study-s219285
        2/Workspaces/EMWS3/Boost/EMFLOWSCORE.sas";
6701 21428  *-----

```

```

-----*;
6702 21429 * Boost: Scoring VALIDATE data;
6703 21430 *-----
-----*;
6704 21431 data EMWS3.Boost_VALIDATE
6705 21432 / view=EMWS3.Boost_VALIDATE
6706 21433 ;
6707 21434 set EMWS3.Part2_VALIDATE
6708 21435 ;
6709 21436 %inc emflow;
6710 NOTE: %INCLUDE (level 1) file EMFLOW is file /home/u634529
      84/case-study-s2192852/Workspaces/EMWS3/Boost/EMFLOWSCORE.
      sas.
6711 21437 +*****
      *****;
6712 21438 +*****          DECISION TREE SCORING CODE
      *****;
6713 21439 +*****
      *****;
6714 21440 +
6715 21441 +*****          LENGTHS OF NEW CHARACTER VARIABLES
      *****;
6716 21442 +LENGTH F_IMP_Churn $ 12;
6717 21443 +LENGTH I_IMP_Churn $ 12;
6718 21444 +LENGTH _WARN_ $ 4;
6719 21445 +
6720 21446 +*****          LABELS FOR NEW VARIABLES
      *****;
6721 21447 +label P_IMP_Churn0 = 'Predicted: IMP_Churn=0' ;
6722 21448 +      P_IMP_Churn0 = 0;
6723 21449 +label P_IMP_Churn1 = 'Predicted: IMP_Churn=1' ;
6724 21450 +      P_IMP_Churn1 = 0;
6725 21451 +label Q_IMP_Churn0 = 'Unadjusted P: IMP_Churn=0' ;
6726 21452 +      Q_IMP_Churn0 = 0;
6727 21453 +label Q_IMP_Churn1 = 'Unadjusted P: IMP_Churn=1' ;
6728 21454 +      Q_IMP_Churn1 = 0;

```



```

6729 21455 +label R_IMP_Churn0 = 'Residual: IMP_Churn=0' ;
6730 21456 +label R_IMP_Churn1 = 'Residual: IMP_Churn=1' ;
6731 21457 +label F_IMP_Churn = 'From: IMP_Churn' ;
6732 21458 +label I_IMP_Churn = 'Into: IMP_Churn' ;
6733 21459 +label U_IMP_Churn = 'Unnormalized Into: IMP_Churn'
      ;
6734 21460 +label _WARN_ = 'Warnings' ;
6735 21461 +
6736 21462 +
6737 21463 +*****          TEMPORARY VARIABLES FOR FORMATTED VALUE
      S          *****;
6738 21464 +LENGTH _ARBFMT_12 $          12; DROP _ARBFMT_12;
6739 21465 +_ARBFMT_12 = ' '; /* Initialize to avoid warning. */
      /
6740 21466 +LENGTH _ARBFMT_8 $          8; DROP _ARBFMT_8;
6741 21467 +_ARBFMT_8 = ' '; /* Initialize to avoid warning. */
6742 21468 +
6743 21469 +
6744 21470 +_ARBFMT_12 = PUT( IMP_Churn , BEST12.);
6745 21471 + %DMNORMCP( _ARBFMT_12, F_IMP_Churn );
6746 21472 +
6747 21473 + DROP _ARB_F_;
6748 21474 + DROP _ARB_BADF_;
6749 21475 +          _ARB_F_ = -0.622623377;
6750 21476 +          _ARB_BADF_ = 0;
6751 21477 +*****          ASSIGN OBSERVATION TO NODE
      *****;
6752 21478 + DROP _ARB_P_;
6753 21479 + _ARB_P_ = 0;
6754 21480 + DROP _ARB_PPATH_; _ARB_PPATH_ = 1;
6755 21481 +
6756 21482 +***** LEAF          1  NODE          342 *****;
6757 21483 +IF _ARB_BADF_ EQ 0 THEN DO;
6758 21484 +
6759 21485 +          DROP _BRANCH_;
6760 21486 +          _BRANCH_ = -1;

```

```

6761 21487 +      IF NOT MISSING(TotalPurchases ) AND
6762 21488 +      TotalPurchases  <                15.5 THEN DO;
6763 21489 +      _BRANCH_ =      1;
6764 21490 +      END;
6765 21491 +      IF _BRANCH_ LT 0 THEN DO;
6766 21492 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
        1;
6767 21493 +      END;
6768 21494 +      IF _BRANCH_ GT 0 THEN DO;
6769 21495 +
6770 21496 +      _BRANCH_ = -1;
6771 21497 +      IF NOT MISSING(TotalPurchases ) AND
6772 21498 +      TotalPurchases  <                5.5 THEN D
        O;
6773 21499 +      _BRANCH_ =      1;
6774 21500 +      END;
6775 21501 +      IF _BRANCH_ LT 0 THEN DO;
6776 21502 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_
        = 1;
6777 21503 +      END;
6778 21504 +      IF _BRANCH_ GT 0 THEN DO;
6779 21505 +      _ARB_F_ + -0.006102709;
6780 21506 +      END;
6781 21507 +      END;
6782 21508 +      END;
6783 21509 +
6784 21510 +***** LEAF      2  NODE      343 *****;
6785 21511 +IF _ARB_BADF_ EQ 0 THEN DO;
6786 21512 +
6787 21513 +      _BRANCH_ = -1;
6788 21514 +      IF NOT MISSING(TotalPurchases ) AND
6789 21515 +      TotalPurchases  <                15.5 THEN DO;
6790 21516 +      _BRANCH_ =      1;
6791 21517 +      END;
6792 21518 +      IF _BRANCH_ LT 0 THEN DO;
6793 21519 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =

```

```

1;
6794 21520 + END;
6795 21521 + IF _BRANCH_ GT 0 THEN DO;
6796 21522 +
6797 21523 +     _BRANCH_ = -1;
6798 21524 +     IF NOT MISSING(TotalPurchases ) AND
6799 21525 +         5.5 <= TotalPurchases THEN
DO;
6800 21526 +     _BRANCH_ = 2;
6801 21527 + END;
6802 21528 +
6803 21529 + IF _BRANCH_ GT 0 THEN DO;
6804 21530 +     _ARB_F_ + 0.0076496243;
6805 21531 + END;
6806 21532 + END;
6807 21533 + END;
6808 21534 +
6809 21535 +***** LEAF      3  NODE      344 *****;
6810 21536 +IF _ARB_BADF_ EQ 0 THEN DO;
6811 21537 +
6812 21538 +     _BRANCH_ = -1;
6813 21539 +     IF NOT MISSING(TotalPurchases ) AND
6814 21540 +         15.5 <= TotalPurchases THEN DO
;
6815 21541 +     _BRANCH_ = 2;
6816 21542 + END;
6817 21543 +
6818 21544 + IF _BRANCH_ GT 0 THEN DO;
6819 21545 +
6820 21546 +     _BRANCH_ = -1;
6821 21547 +     IF NOT MISSING(IMP_TotalSpent ) AND
6822 21548 +     IMP_TotalSpent < 19137.5 THEN D
O;
6823 21549 +     _BRANCH_ = 1;
6824 21550 + END;
6825 21551 + IF _BRANCH_ LT 0 THEN DO;

```

```

6826 21552 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
        = 1;
6827 21553 +          END;
6828 21554 +          IF _BRANCH_ GT 0 THEN DO;
6829 21555 +              _ARB_F_ + 0.0490009132;
6830 21556 +          END;
6831 21557 +          END;
6832 21558 +      END;
6833 21559 +
6834 21560 +***** LEAF          4  NODE      345 *****;
6835 21561 +IF _ARB_BADF_ EQ 0 THEN DO;
6836 21562 +
6837 21563 +      _BRANCH_ = -1;
6838 21564 +          IF NOT MISSING(TotalPurchases ) AND
6839 21565 +              15.5 <= TotalPurchases THEN DO
        ;
6840 21566 +          _BRANCH_ =      2;
6841 21567 +          END;
6842 21568 +
6843 21569 +      IF _BRANCH_ GT 0 THEN DO;
6844 21570 +
6845 21571 +          _BRANCH_ = -1;
6846 21572 +          IF NOT MISSING(IMP_TotalSpent ) AND
6847 21573 +              19137.5 <= IMP_TotalSpent THEN
        DO;
6848 21574 +          _BRANCH_ =      2;
6849 21575 +          END;
6850 21576 +
6851 21577 +          IF _BRANCH_ GT 0 THEN DO;
6852 21578 +              _ARB_F_ + 0.1142909529;
6853 21579 +          END;
6854 21580 +          END;
6855 21581 +      END;
6856 21582 +
6857 21583 +***** LEAF          5  NODE      349 *****;
6858 21584 +IF _ARB_BADF_ EQ 0 THEN DO;

```

```

6859 21585 +
6860 21586 +   _BRANCH_ = -1;
6861 21587 +   IF NOT MISSING(TotalPurchases ) AND
6862 21588 +   TotalPurchases < 15.5 THEN DO;
6863 21589 +   _BRANCH_ = 1;
6864 21590 +   END;
6865 21591 + IF _BRANCH_ LT 0 THEN DO;
6866 21592 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
        1;
6867 21593 + END;
6868 21594 + IF _BRANCH_ GT 0 THEN DO;
6869 21595 +
6870 21596 +   _BRANCH_ = -1;
6871 21597 +   IF NOT MISSING(IMP_TotalSpent ) AND
6872 21598 +   IMP_TotalSpent < 5166.5 THEN D
        O;
6873 21599 +   _BRANCH_ = 1;
6874 21600 +   END;
6875 21601 +   IF _BRANCH_ LT 0 THEN DO;
6876 21602 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
        = 1;
6877 21603 +   END;
6878 21604 +   IF _BRANCH_ GT 0 THEN DO;
6879 21605 +   _ARB_F_ + -0.005778204;
6880 21606 +   END;
6881 21607 +   END;
6882 21608 + END;
6883 21609 +
6884 21610 +***** LEAF      6  NODE      350 *****;
6885 21611 +IF _ARB_BADF_ EQ 0 THEN DO;
6886 21612 +
6887 21613 +   _BRANCH_ = -1;
6888 21614 +   IF NOT MISSING(TotalPurchases ) AND
6889 21615 +   TotalPurchases < 15.5 THEN DO;
6890 21616 +   _BRANCH_ = 1;
6891 21617 +   END;

```

```

6892 21618 + IF _BRANCH_ LT 0 THEN DO;
6893 21619 +     IF MISSING( TotalPurchases ) THEN _BRANCH_ =
        1;
6894 21620 + END;
6895 21621 + IF _BRANCH_ GT 0 THEN DO;
6896 21622 +
6897 21623 +     _BRANCH_ = -1;
6898 21624 +     IF NOT MISSING(IMP_TotalSpent ) AND
6899 21625 +         5166.5 <= IMP_TotalSpent THEN
        DO;
6900 21626 +         _BRANCH_ = 2;
6901 21627 +     END;
6902 21628 +
6903 21629 +     IF _BRANCH_ GT 0 THEN DO;
6904 21630 +         _ARB_F_ + 0.0076511639;
6905 21631 +     END;
6906 21632 + END;
6907 21633 + END;
6908 21634 +
6909 21635 +***** LEAF      7  NODE    351 *****;
6910 21636 +IF _ARB_BADF_ EQ 0 THEN DO;
6911 21637 +
6912 21638 +     _BRANCH_ = -1;
6913 21639 +     IF NOT MISSING(TotalPurchases ) AND
6914 21640 +         15.5 <= TotalPurchases THEN DO
        ;
6915 21641 +         _BRANCH_ = 2;
6916 21642 +     END;
6917 21643 +
6918 21644 + IF _BRANCH_ GT 0 THEN DO;
6919 21645 +
6920 21646 +     _BRANCH_ = -1;
6921 21647 +     IF NOT MISSING(Age ) AND
6922 21648 +         Age < 44.5 THEN DO;
6923 21649 +         _BRANCH_ = 1;
6924 21650 +     END;

```

```

6925 21651 +
6926 21652 +      IF _BRANCH_ GT 0 THEN DO;
6927 21653 +          _ARB_F_ + 0.0195981388;
6928 21654 +      END;
6929 21655 +      END;
6930 21656 +      END;
6931 21657 +
6932 21658 +***** LEAF      8  NODE      352 *****;
6933 21659 +IF _ARB_BADF_ EQ 0 THEN DO;
6934 21660 +
6935 21661 +      _BRANCH_ = -1;
6936 21662 +      IF NOT MISSING(TotalPurchases ) AND
6937 21663 +          15.5 <= TotalPurchases THEN DO
        ;
6938 21664 +          _BRANCH_ =      2;
6939 21665 +      END;
6940 21666 +
6941 21667 +      IF _BRANCH_ GT 0 THEN DO;
6942 21668 +
6943 21669 +          _BRANCH_ = -1;
6944 21670 +          IF NOT MISSING(Age ) AND
6945 21671 +              44.5 <= Age THEN DO;
6946 21672 +              _BRANCH_ =      2;
6947 21673 +          END;
6948 21674 +      IF _BRANCH_ LT 0 THEN DO;
6949 21675 +          IF MISSING( Age ) THEN _BRANCH_ = 2;
6950 21676 +      END;
6951 21677 +      IF _BRANCH_ GT 0 THEN DO;
6952 21678 +          _ARB_F_ + 0.0707741637;
6953 21679 +      END;
6954 21680 +      END;
6955 21681 +      END;
6956 21682 +
6957 21683 +***** LEAF      9  NODE      356 *****;
6958 21684 +IF _ARB_BADF_ EQ 0 THEN DO;
6959 21685 +

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```

6960 21686 +  _BRANCH_ = -1;
6961 21687 +      IF NOT MISSING( TotalPurchases ) AND
6962 21688 +      TotalPurchases < 14.5 THEN DO;
6963 21689 +      _BRANCH_ = 1;
6964 21690 +      END;
6965 21691 +  IF _BRANCH_ LT 0 THEN DO;
6966 21692 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
        1;
6967 21693 +  END;
6968 21694 +  IF _BRANCH_ GT 0 THEN DO;
6969 21695 +
6970 21696 +      _BRANCH_ = -1;
6971 21697 +      IF NOT MISSING( IMP_TotalSpent ) AND
6972 21698 +      IMP_TotalSpent < 6780 THEN D
        O;
6973 21699 +      _BRANCH_ = 1;
6974 21700 +      END;
6975 21701 +      IF _BRANCH_ LT 0 THEN DO;
6976 21702 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
        = 1;
6977 21703 +      END;
6978 21704 +      IF _BRANCH_ GT 0 THEN DO;
6979 21705 +      _ARB_F_ + -0.004419704;
6980 21706 +      END;
6981 21707 +      END;
6982 21708 +  END;
6983 21709 +
6984 21710 +***** LEAF 10 NODE 357 *****;
6985 21711 +IF _ARB_BADF_ EQ 0 THEN DO;
6986 21712 +
6987 21713 +  _BRANCH_ = -1;
6988 21714 +      IF NOT MISSING( TotalPurchases ) AND
6989 21715 +      TotalPurchases < 14.5 THEN DO;
6990 21716 +      _BRANCH_ = 1;
6991 21717 +      END;
6992 21718 +  IF _BRANCH_ LT 0 THEN DO;

```



```

6993 21719 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
        1;
6994 21720 +      END;
6995 21721 +      IF _BRANCH_ GT 0 THEN DO;
6996 21722 +
6997 21723 +          _BRANCH_ = -1;
6998 21724 +          IF NOT MISSING(IMP_TotalSpent ) AND
6999 21725 +              6780 <= IMP_TotalSpent THEN
        DO;
7000 21726 +              _BRANCH_ =      2;
7001 21727 +          END;
7002 21728 +
7003 21729 +      IF _BRANCH_ GT 0 THEN DO;
7004 21730 +          _ARB_F_ + 0.0093245027;
7005 21731 +      END;
7006 21732 +      END;
7007 21733 +      END;
7008 21734 +
7009 21735 +***** LEAF      11  NODE      358 *****;
7010 21736 +IF _ARB_BADF_ EQ 0 THEN DO;
7011 21737 +
7012 21738 +      _BRANCH_ = -1;
7013 21739 +      IF NOT MISSING(TotalPurchases ) AND
7014 21740 +          14.5 <= TotalPurchases THEN DO
        ;
7015 21741 +          _BRANCH_ =      2;
7016 21742 +      END;
7017 21743 +
7018 21744 +      IF _BRANCH_ GT 0 THEN DO;
7019 21745 +
7020 21746 +          _BRANCH_ = -1;
7021 21747 +          IF NOT MISSING(IMP_TotalSpent ) AND
7022 21748 +              IMP_TotalSpent <              19401.5 THEN D
        O;
7023 21749 +          _BRANCH_ =      1;
7024 21750 +      END;

```

```

7025 21751 + IF _BRANCH_ LT 0 THEN DO;
7026 21752 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 1;
7027 21753 + END;
7028 21754 + IF _BRANCH_ GT 0 THEN DO;
7029 21755 + _ARB_F_ + 0.0314122125;
7030 21756 + END;
7031 21757 + END;
7032 21758 + END;
7033 21759 +
7034 21760 +***** LEAF 12 NODE 359 *****;
7035 21761 +IF _ARB_BADF_ EQ 0 THEN DO;
7036 21762 +
7037 21763 + _BRANCH_ = -1;
7038 21764 + IF NOT MISSING( TotalPurchases ) AND
7039 21765 + 14.5 <= TotalPurchases THEN DO
      ;
7040 21766 + _BRANCH_ = 2;
7041 21767 + END;
7042 21768 +
7043 21769 + IF _BRANCH_ GT 0 THEN DO;
7044 21770 +
7045 21771 + _BRANCH_ = -1;
7046 21772 + IF NOT MISSING( IMP_TotalSpent ) AND
7047 21773 + 19401.5 <= IMP_TotalSpent THEN
      DO;
7048 21774 + _BRANCH_ = 2;
7049 21775 + END;
7050 21776 +
7051 21777 + IF _BRANCH_ GT 0 THEN DO;
7052 21778 + _ARB_F_ + 0.0898268026;
7053 21779 + END;
7054 21780 + END;
7055 21781 + END;
7056 21782 +
7057 21783 +***** LEAF 13 NODE 363 *****;

```

```

7058 21784 +IF _ARB_BADF_ EQ 0 THEN DO;
7059 21785 +
7060 21786 +   _BRANCH_ = -1;
7061 21787 +   IF NOT MISSING(IMP_TotalSpent ) AND
7062 21788 +   IMP_TotalSpent < 8145 THEN DO;
7063 21789 +   _BRANCH_ = 1;
7064 21790 +   END;
7065 21791 + IF _BRANCH_ LT 0 THEN DO;
7066 21792 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
7067 21793 +   1;
7068 21794 +   END;
7069 21795 +   IF _BRANCH_ GT 0 THEN DO;
7070 21796 +   _BRANCH_ = -1;
7071 21797 +   IF NOT MISSING(TotalPurchases ) AND
7072 21798 +   TotalPurchases < 6.5 THEN D
7073 21799 +   _BRANCH_ = 1;
7074 21800 +   END;
7075 21801 +   IF _BRANCH_ LT 0 THEN DO;
7076 21802 +   IF MISSING( TotalPurchases ) THEN _BRANCH_
7077 21803 +   = 1;
7078 21804 +   END;
7079 21805 +   IF _BRANCH_ GT 0 THEN DO;
7080 21806 +   _ARB_F_ + -0.005076494;
7081 21807 +   END;
7082 21808 +   END;
7083 21809 +
7084 21810 +***** LEAF 14 NODE 364 *****;
7085 21811 +IF _ARB_BADF_ EQ 0 THEN DO;
7086 21812 +
7087 21813 +   _BRANCH_ = -1;
7088 21814 +   IF NOT MISSING(IMP_TotalSpent ) AND
7089 21815 +   IMP_TotalSpent < 8145 THEN DO;
7090 21816 +   _BRANCH_ = 1;

```

```

7091 21817 +      END;
7092 21818 +      IF _BRANCH_ LT 0 THEN DO;
7093 21819 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
7094 21820 +      END;
7095 21821 +      IF _BRANCH_ GT 0 THEN DO;
7096 21822 +
7097 21823 +          _BRANCH_ = -1;
7098 21824 +          IF NOT MISSING( TotalPurchases ) AND
7099 21825 +              6.5 <= TotalPurchases THEN
DO;
7100 21826 +              _BRANCH_ =      2;
7101 21827 +          END;
7102 21828 +
7103 21829 +      IF _BRANCH_ GT 0 THEN DO;
7104 21830 +          _ARB_F_ + 0.0032276607;
7105 21831 +      END;
7106 21832 +      END;
7107 21833 +      END;
7108 21834 +
7109 21835 +***** LEAF      15  NODE      365 *****;
7110 21836 +IF _ARB_BADF_ EQ 0 THEN DO;
7111 21837 +
7112 21838 +      _BRANCH_ = -1;
7113 21839 +      IF NOT MISSING( IMP_TotalSpent ) AND
7114 21840 +          8145 <= IMP_TotalSpent THEN DO
;
7115 21841 +          _BRANCH_ =      2;
7116 21842 +      END;
7117 21843 +
7118 21844 +      IF _BRANCH_ GT 0 THEN DO;
7119 21845 +
7120 21846 +          _BRANCH_ = -1;
7121 21847 +          IF NOT MISSING( Age ) AND
7122 21848 +              Age <              45.5 THEN DO;
7123 21849 +              _BRANCH_ =      1;

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```

7124 21850 +      END;
7125 21851 +
7126 21852 +      IF _BRANCH_ GT 0 THEN DO;
7127 21853 +          _ARB_F_ + -0.000616866;
7128 21854 +      END;
7129 21855 +      END;
7130 21856 +  END;
7131 21857 +
7132 21858 +***** LEAF      16  NODE      366 *****;
7133 21859 +IF _ARB_BADF_ EQ 0 THEN DO;
7134 21860 +
7135 21861 +  _BRANCH_ = -1;
7136 21862 +      IF NOT MISSING(IMP_TotalSpent ) AND
7137 21863 +          8145 <= IMP_TotalSpent THEN DO
;
7138 21864 +      _BRANCH_ =      2;
7139 21865 +      END;
7140 21866 +
7141 21867 +  IF _BRANCH_ GT 0 THEN DO;
7142 21868 +
7143 21869 +      _BRANCH_ = -1;
7144 21870 +      IF NOT MISSING(Age ) AND
7145 21871 +          45.5 <= Age THEN DO;
7146 21872 +          _BRANCH_ =      2;
7147 21873 +      END;
7148 21874 +      IF _BRANCH_ LT 0 THEN DO;
7149 21875 +          IF MISSING( Age ) THEN _BRANCH_ = 2;
7150 21876 +      END;
7151 21877 +      IF _BRANCH_ GT 0 THEN DO;
7152 21878 +          _ARB_F_ + 0.0314096173;
7153 21879 +      END;
7154 21880 +      END;
7155 21881 +  END;
7156 21882 +
7157 21883 +***** LEAF      17  NODE      370 *****;
7158 21884 +IF _ARB_BADF_ EQ 0 THEN DO;

```

```

7159 21885 +
7160 21886 +   _BRANCH_ = -1;
7161 21887 +   IF NOT MISSING(IMP_TotalSpent ) AND
7162 21888 +   IMP_TotalSpent < 13417.5 THEN DO;
7163 21889 +   _BRANCH_ = 1;
7164 21890 +   END;
7165 21891 + IF _BRANCH_ LT 0 THEN DO;
7166 21892 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
7167 21893 +   1;
7168 21894 +   END;
7169 21895 +   IF _BRANCH_ GT 0 THEN DO;
7170 21896 +   _BRANCH_ = -1;
7171 21897 +   IF NOT MISSING(IMP_TotalSpent ) AND
7172 21898 +   IMP_TotalSpent < 6859 THEN D
7173 21899 +   O;
7174 21900 +   _BRANCH_ = 1;
7175 21901 +   END;
7176 21902 +   IF _BRANCH_ LT 0 THEN DO;
7177 21903 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
7178 21904 +   = 1;
7179 21905 +   END;
7180 21906 +   IF _BRANCH_ GT 0 THEN DO;
7181 21907 +   _ARB_F_ + -0.00416765;
7182 21908 +   END;
7183 21909 +   END;
7184 21910 +***** LEAF 18 NODE 371 *****;
7185 21911 +IF _ARB_BADF_ EQ 0 THEN DO;
7186 21912 +
7187 21913 +   _BRANCH_ = -1;
7188 21914 +   IF NOT MISSING(IMP_TotalSpent ) AND
7189 21915 +   IMP_TotalSpent < 13417.5 THEN DO;
7190 21916 +   _BRANCH_ = 1;
7191 21917 +   END;

```

```

7192 21918 + IF _BRANCH_ LT 0 THEN DO;
7193 21919 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
7194 21920 + END;
7195 21921 + IF _BRANCH_ GT 0 THEN DO;
7196 21922 +
7197 21923 +     _BRANCH_ = -1;
7198 21924 +     IF NOT MISSING(IMP_TotalSpent ) AND
7199 21925 +         6859 <= IMP_TotalSpent THEN
      DO;
7200 21926 +         _BRANCH_ = 2;
7201 21927 +     END;
7202 21928 +
7203 21929 +     IF _BRANCH_ GT 0 THEN DO;
7204 21930 +         _ARB_F_ + 0.0087232238;
7205 21931 +     END;
7206 21932 + END;
7207 21933 + END;
7208 21934 +
7209 21935 +***** LEAF      19  NODE      372 *****;
7210 21936 +IF _ARB_BADF_ EQ 0 THEN DO;
7211 21937 +
7212 21938 +     _BRANCH_ = -1;
7213 21939 +     IF NOT MISSING(IMP_TotalSpent ) AND
7214 21940 +         13417.5 <= IMP_TotalSpent THEN DO
      ;
7215 21941 +         _BRANCH_ = 2;
7216 21942 +     END;
7217 21943 +
7218 21944 + IF _BRANCH_ GT 0 THEN DO;
7219 21945 +
7220 21946 +     _BRANCH_ = -1;
7221 21947 +     IF NOT MISSING(TotalPurchases ) AND
7222 21948 +         TotalPurchases < 21.5 THEN D
      O;
7223 21949 +         _BRANCH_ = 1;

```

```

7224 21950 +      END;
7225 21951 +      IF _BRANCH_ LT 0 THEN DO;
7226 21952 +          IF MISSING( TotalPurchases ) THEN _BRANCH_
          = 1;
7227 21953 +      END;
7228 21954 +      IF _BRANCH_ GT 0 THEN DO;
7229 21955 +          _ARB_F_ + 0.0314032826;
7230 21956 +      END;
7231 21957 +      END;
7232 21958 +      END;
7233 21959 +
7234 21960 +***** LEAF      20  NODE      373 *****;
7235 21961 +IF _ARB_BADF_ EQ 0 THEN DO;
7236 21962 +
7237 21963 +      _BRANCH_ = -1;
7238 21964 +      IF NOT MISSING(IMP_TotalSpent ) AND
7239 21965 +          13417.5 <= IMP_TotalSpent THEN DO
          ;
7240 21966 +          _BRANCH_ =      2;
7241 21967 +      END;
7242 21968 +
7243 21969 +      IF _BRANCH_ GT 0 THEN DO;
7244 21970 +
7245 21971 +          _BRANCH_ = -1;
7246 21972 +          IF NOT MISSING(TotalPurchases ) AND
7247 21973 +              21.5 <= TotalPurchases THEN
          DO;
7248 21974 +              _BRANCH_ =      2;
7249 21975 +          END;
7250 21976 +
7251 21977 +      IF _BRANCH_ GT 0 THEN DO;
7252 21978 +          _ARB_F_ + 0.0766258071;
7253 21979 +      END;
7254 21980 +      END;
7255 21981 +      END;
7256 21982 +

```



```

7257 21983 +***** LEAF      21  NODE      377 *****;
7258 21984 +IF _ARB_BADF_ EQ 0 THEN DO;
7259 21985 +
7260 21986 +   _BRANCH_ = -1;
7261 21987 +   IF NOT MISSING(IMP_TotalSpent ) AND
7262 21988 +   IMP_TotalSpent <                        8897.5 THEN DO;
7263 21989 +   _BRANCH_ = 1;
7264 21990 +   END;
7265 21991 + IF _BRANCH_ LT 0 THEN DO;
7266 21992 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
       1;
7267 21993 + END;
7268 21994 + IF _BRANCH_ GT 0 THEN DO;
7269 21995 +
7270 21996 +   _BRANCH_ = -1;
7271 21997 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
7272 21998 +   %DMNORMIP( _ARBFMT_8);
7273 21999 +   IF _ARBFMT_8 IN ('SILVER' , 'GOLD' ) THEN DO;
7274 22000 +   _BRANCH_ = 1;
7275 22001 +   END;
7276 22002 + IF _BRANCH_ LT 0 THEN DO;
7277 22003 +   IF MISSING( MembershipLevel ) THEN _BRANCH_
       = 1;
7278 22004 +   ELSE IF _ARBFMT_8 NOTIN (
7279 22005 +   'SILVER' , 'GOLD' , 'PLATINUM' , 'BRONZE'
7280 22006 +   ) THEN _BRANCH_ = 1;
7281 22007 +   END;
7282 22008 + IF _BRANCH_ GT 0 THEN DO;
7283 22009 +   _ARB_F_ + -0.005750422;
7284 22010 +   END;
7285 22011 +   END;
7286 22012 + END;
7287 22013 +
7288 22014 +***** LEAF      22  NODE      378 *****;
7289 22015 +IF _ARB_BADF_ EQ 0 THEN DO;
7290 22016 +

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7291 22017 +   _BRANCH_ = -1;
7292 22018 +       IF NOT MISSING(IMP_TotalSpent ) AND
7293 22019 +       IMP_TotalSpent <                8897.5 THEN DO;
7294 22020 +       _BRANCH_ = 1;
7295 22021 +       END;
7296 22022 +   IF _BRANCH_ LT 0 THEN DO;
7297 22023 +       IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
7298 22024 +   END;
7299 22025 +   IF _BRANCH_ GT 0 THEN DO;
7300 22026 +
7301 22027 +       _BRANCH_ = -1;
7302 22028 +       _ARBFMT_8 = PUT( MembershipLevel , $8.);
7303 22029 +       %DMNORMIP( _ARBFMT_8);
7304 22030 +       IF _ARBFMT_8 IN ('PLATINUM' , 'BRONZE' ) THEN
DO;
7305 22031 +           _BRANCH_ = 2;
7306 22032 +       END;
7307 22033 +
7308 22034 +       IF _BRANCH_ GT 0 THEN DO;
7309 22035 +           _ARB_F_ + 0.0001036489;
7310 22036 +       END;
7311 22037 +       END;
7312 22038 +   END;
7313 22039 +
7314 22040 +***** LEAF      23  NODE      379 *****;
7315 22041 +IF _ARB_BADF_ EQ 0 THEN DO;
7316 22042 +
7317 22043 +   _BRANCH_ = -1;
7318 22044 +       IF NOT MISSING(IMP_TotalSpent ) AND
7319 22045 +               8897.5 <= IMP_TotalSpent  THEN DO
;
7320 22046 +       _BRANCH_ = 2;
7321 22047 +       END;
7322 22048 +
7323 22049 +   IF _BRANCH_ GT 0 THEN DO;

```

```

7324 22050 +
7325 22051 +     _BRANCH_ = -1;
7326 22052 +     IF NOT MISSING(Age ) AND
7327 22053 +         Age < 39.5 THEN DO;
7328 22054 +         _BRANCH_ = 1;
7329 22055 +     END;
7330 22056 +
7331 22057 +     IF _BRANCH_ GT 0 THEN DO;
7332 22058 +         _ARB_F_ + -0.00525956;
7333 22059 +     END;
7334 22060 +     END;
7335 22061 + END;
7336 22062 +
7337 22063 +***** LEAF 24 NODE 380 *****;
7338 22064 +IF _ARB_BADF_ EQ 0 THEN DO;
7339 22065 +
7340 22066 +     _BRANCH_ = -1;
7341 22067 +     IF NOT MISSING(IMP_TotalSpent ) AND
7342 22068 +         8897.5 <= IMP_TotalSpent THEN DO
;
7343 22069 +         _BRANCH_ = 2;
7344 22070 +     END;
7345 22071 +
7346 22072 +     IF _BRANCH_ GT 0 THEN DO;
7347 22073 +
7348 22074 +         _BRANCH_ = -1;
7349 22075 +         IF NOT MISSING(Age ) AND
7350 22076 +             39.5 <= Age THEN DO;
7351 22077 +             _BRANCH_ = 2;
7352 22078 +         END;
7353 22079 +     IF _BRANCH_ LT 0 THEN DO;
7354 22080 +         IF MISSING( Age ) THEN _BRANCH_ = 2;
7355 22081 +     END;
7356 22082 +     IF _BRANCH_ GT 0 THEN DO;
7357 22083 +         _ARB_F_ + 0.027981933;
7358 22084 +     END;

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7359 22085 +      END;
7360 22086 +      END;
7361 22087 +
7362 22088 +***** LEAF      25  NODE      384 *****;
7363 22089 +IF _ARB_BADF_ EQ 0 THEN DO;
7364 22090 +
7365 22091 +      _BRANCH_ = -1;
7366 22092 +      IF NOT MISSING(TotalPurchases ) AND
7367 22093 +      TotalPurchases <                      18.5 THEN DO;
7368 22094 +      _BRANCH_ =      1;
7369 22095 +      END;
7370 22096 +      IF _BRANCH_ LT 0 THEN DO;
7371 22097 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
7372 22098 +      END;
7373 22099 +      IF _BRANCH_ GT 0 THEN DO;
7374 22100 +
7375 22101 +      _BRANCH_ = -1;
7376 22102 +      IF NOT MISSING(TotalPurchases ) AND
7377 22103 +      TotalPurchases <                      5.5 THEN D
      O;
7378 22104 +      _BRANCH_ =      1;
7379 22105 +      END;
7380 22106 +      IF _BRANCH_ LT 0 THEN DO;
7381 22107 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_
      = 1;
7382 22108 +      END;
7383 22109 +      IF _BRANCH_ GT 0 THEN DO;
7384 22110 +      _ARB_F_ + -0.003899332;
7385 22111 +      END;
7386 22112 +      END;
7387 22113 +      END;
7388 22114 +
7389 22115 +***** LEAF      26  NODE      385 *****;
7390 22116 +IF _ARB_BADF_ EQ 0 THEN DO;
7391 22117 +

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7392 22118 +  _BRANCH_ = -1;
7393 22119 +      IF NOT MISSING(TotalPurchases ) AND
7394 22120 +      TotalPurchases < 18.5 THEN DO;
7395 22121 +      _BRANCH_ = 1;
7396 22122 +      END;
7397 22123 +  IF _BRANCH_ LT 0 THEN DO;
7398 22124 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
7399 22125 +  END;
7400 22126 +  IF _BRANCH_ GT 0 THEN DO;
7401 22127 +
7402 22128 +      _BRANCH_ = -1;
7403 22129 +      IF NOT MISSING(TotalPurchases ) AND
7404 22130 +      5.5 <= TotalPurchases THEN
DO;
7405 22131 +      _BRANCH_ = 2;
7406 22132 +      END;
7407 22133 +
7408 22134 +      IF _BRANCH_ GT 0 THEN DO;
7409 22135 +      _ARB_F_ + 0.0050632004;
7410 22136 +      END;
7411 22137 +      END;
7412 22138 +  END;
7413 22139 +
7414 22140 +***** LEAF 27 NODE 386 *****;
7415 22141 +IF _ARB_BADF_ EQ 0 THEN DO;
7416 22142 +
7417 22143 +  _BRANCH_ = -1;
7418 22144 +      IF NOT MISSING(TotalPurchases ) AND
7419 22145 +      18.5 <= TotalPurchases THEN DO
;
7420 22146 +      _BRANCH_ = 2;
7421 22147 +      END;
7422 22148 +
7423 22149 +  IF _BRANCH_ GT 0 THEN DO;
7424 22150 +

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7425 22151 +      _BRANCH_ = -1;
7426 22152 +      IF NOT MISSING(Age ) AND
7427 22153 +      Age < 43.5 THEN DO;
7428 22154 +      _BRANCH_ = 1;
7429 22155 +      END;
7430 22156 +
7431 22157 +      IF _BRANCH_ GT 0 THEN DO;
7432 22158 +      _ARB_F_ + -0.011847815;
7433 22159 +      END;
7434 22160 +      END;
7435 22161 +      END;
7436 22162 +
7437 22163 +***** LEAF 28 NODE 387 *****;
7438 22164 +IF _ARB_BADF_ EQ 0 THEN DO;
7439 22165 +
7440 22166 +      _BRANCH_ = -1;
7441 22167 +      IF NOT MISSING(TotalPurchases ) AND
7442 22168 +      18.5 <= TotalPurchases THEN DO
;
7443 22169 +      _BRANCH_ = 2;
7444 22170 +      END;
7445 22171 +
7446 22172 +      IF _BRANCH_ GT 0 THEN DO;
7447 22173 +
7448 22174 +      _BRANCH_ = -1;
7449 22175 +      IF NOT MISSING(Age ) AND
7450 22176 +      43.5 <= Age THEN DO;
7451 22177 +      _BRANCH_ = 2;
7452 22178 +      END;
7453 22179 +      IF _BRANCH_ LT 0 THEN DO;
7454 22180 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
7455 22181 +      END;
7456 22182 +      IF _BRANCH_ GT 0 THEN DO;
7457 22183 +      _ARB_F_ + 0.04670247;
7458 22184 +      END;
7459 22185 +      END;

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7460 22186 + END;
7461 22187 +
7462 22188 +***** LEAF      29  NODE      391 *****;
7463 22189 +IF _ARB_BADF_ EQ 0 THEN DO;
7464 22190 +
7465 22191 +   _BRANCH_ = -1;
7466 22192 +   IF NOT MISSING(IMP_TotalSpent ) AND
7467 22193 +   IMP_TotalSpent <                15313 THEN DO;
7468 22194 +   _BRANCH_ = 1;
7469 22195 +   END;
7470 22196 + IF _BRANCH_ LT 0 THEN DO;
7471 22197 +   IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
    1;
7472 22198 + END;
7473 22199 + IF _BRANCH_ GT 0 THEN DO;
7474 22200 +
7475 22201 +   _BRANCH_ = -1;
7476 22202 +   IF NOT MISSING(IMP_TotalSpent ) AND
7477 22203 +   IMP_TotalSpent <                5112.5 THEN D
    O;
7478 22204 +   _BRANCH_ = 1;
7479 22205 +   END;
7480 22206 + IF _BRANCH_ LT 0 THEN DO;
7481 22207 +   IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
    = 1;
7482 22208 +   END;
7483 22209 + IF _BRANCH_ GT 0 THEN DO;
7484 22210 +   _ARB_F_ + -0.003500646;
7485 22211 +   END;
7486 22212 +   END;
7487 22213 + END;
7488 22214 +
7489 22215 +***** LEAF      30  NODE      392 *****;
7490 22216 +IF _ARB_BADF_ EQ 0 THEN DO;
7491 22217 +
7492 22218 +   _BRANCH_ = -1;

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7493 22219 +      IF NOT MISSING(IMP_TotalSpent ) AND
7494 22220 +      IMP_TotalSpent  <                      15313 THEN DO;
7495 22221 +      _BRANCH_ =      1;
7496 22222 +      END;
7497 22223 +      IF _BRANCH_ LT 0 THEN DO;
7498 22224 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
7499 22225 +      END;
7500 22226 +      IF _BRANCH_ GT 0 THEN DO;
7501 22227 +
7502 22228 +      _BRANCH_ = -1;
7503 22229 +      IF NOT MISSING(IMP_TotalSpent ) AND
7504 22230 +      5112.5 <= IMP_TotalSpent  THEN
      DO;
7505 22231 +      _BRANCH_ =      2;
7506 22232 +      END;
7507 22233 +
7508 22234 +      IF _BRANCH_ GT 0 THEN DO;
7509 22235 +      _ARB_F_ + 0.0043757916;
7510 22236 +      END;
7511 22237 +      END;
7512 22238 +      END;
7513 22239 +
7514 22240 +***** LEAF      31  NODE      393 *****;
7515 22241 +IF _ARB_BADF_ EQ 0 THEN DO;
7516 22242 +
7517 22243 +      _BRANCH_ = -1;
7518 22244 +      IF NOT MISSING(IMP_TotalSpent ) AND
7519 22245 +      15313 <= IMP_TotalSpent  THEN DO
      ;
7520 22246 +      _BRANCH_ =      2;
7521 22247 +      END;
7522 22248 +
7523 22249 +      IF _BRANCH_ GT 0 THEN DO;
7524 22250 +
7525 22251 +      _BRANCH_ = -1;

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7526 22252 +      IF NOT MISSING(Age ) AND
7527 22253 +      Age  <      39.5 THEN DO;
7528 22254 +      _BRANCH_ =      1;
7529 22255 +      END;
7530 22256 +
7531 22257 +      IF _BRANCH_ GT 0 THEN DO;
7532 22258 +      _ARB_F_ + -0.034504607;
7533 22259 +      END;
7534 22260 +      END;
7535 22261 +      END;
7536 22262 +
7537 22263 +***** LEAF      32  NODE      394 *****;
7538 22264 +IF _ARB_BADF_ EQ 0 THEN DO;
7539 22265 +
7540 22266 +      _BRANCH_ = -1;
7541 22267 +      IF NOT MISSING(IMP_TotalSpent ) AND
7542 22268 +      15313 <= IMP_TotalSpent  THEN DO
;
7543 22269 +      _BRANCH_ =      2;
7544 22270 +      END;
7545 22271 +
7546 22272 +      IF _BRANCH_ GT 0 THEN DO;
7547 22273 +
7548 22274 +      _BRANCH_ = -1;
7549 22275 +      IF NOT MISSING(Age ) AND
7550 22276 +      39.5 <= Age  THEN DO;
7551 22277 +      _BRANCH_ =      2;
7552 22278 +      END;
7553 22279 +      IF _BRANCH_ LT 0 THEN DO;
7554 22280 +      IF MISSING( Age  ) THEN _BRANCH_ = 2;
7555 22281 +      END;
7556 22282 +      IF _BRANCH_ GT 0 THEN DO;
7557 22283 +      _ARB_F_ + 0.0404612033;
7558 22284 +      END;
7559 22285 +      END;
7560 22286 +      END;

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7561 22287 +
7562 22288 +***** LEAF      33  NODE      398 *****;
7563 22289 +IF _ARB_BADF_ EQ 0 THEN DO;
7564 22290 +
7565 22291 +   _BRANCH_ = -1;
7566 22292 +   IF NOT MISSING(TotalPurchases ) AND
7567 22293 +   TotalPurchases <                      13.5 THEN DO;
7568 22294 +   _BRANCH_ = 1;
7569 22295 +   END;
7570 22296 + IF _BRANCH_ LT 0 THEN DO;
7571 22297 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
7572 22298 + END;
7573 22299 + IF _BRANCH_ GT 0 THEN DO;
7574 22300 +
7575 22301 +   _BRANCH_ = -1;
7576 22302 +   IF NOT MISSING(IMP_TotalSpent ) AND
7577 22303 +   IMP_TotalSpent <                      2289 THEN D
O;
7578 22304 +   _BRANCH_ = 1;
7579 22305 +   END;
7580 22306 +
7581 22307 +   IF _BRANCH_ GT 0 THEN DO;
7582 22308 +   _ARB_F_ + -0.008001997;
7583 22309 +   END;
7584 22310 +   END;
7585 22311 + END;
7586 22312 +
7587 22313 +***** LEAF      34  NODE      399 *****;
7588 22314 +IF _ARB_BADF_ EQ 0 THEN DO;
7589 22315 +
7590 22316 +   _BRANCH_ = -1;
7591 22317 +   IF NOT MISSING(TotalPurchases ) AND
7592 22318 +   TotalPurchases <                      13.5 THEN DO;
7593 22319 +   _BRANCH_ = 1;
7594 22320 +   END;

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7595 22321 + IF _BRANCH_ LT 0 THEN DO;
7596 22322 +     IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
7597 22323 + END;
7598 22324 + IF _BRANCH_ GT 0 THEN DO;
7599 22325 +
7600 22326 +     _BRANCH_ = -1;
7601 22327 +     IF NOT MISSING(IMP_TotalSpent ) AND
7602 22328 +         2289 <= IMP_TotalSpent THEN
      DO;
7603 22329 +         _BRANCH_ = 2;
7604 22330 +     END;
7605 22331 + IF _BRANCH_ LT 0 THEN DO;
7606 22332 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
7607 22333 + END;
7608 22334 + IF _BRANCH_ GT 0 THEN DO;
7609 22335 +     _ARB_F_ + 0.0004955054;
7610 22336 + END;
7611 22337 + END;
7612 22338 + END;
7613 22339 +
7614 22340 +***** LEAF      35  NODE      400 *****;
7615 22341 +IF _ARB_BADF_ EQ 0 THEN DO;
7616 22342 +
7617 22343 +     _BRANCH_ = -1;
7618 22344 +     IF NOT MISSING(TotalPurchases ) AND
7619 22345 +         13.5 <= TotalPurchases THEN DO
      ;
7620 22346 +         _BRANCH_ = 2;
7621 22347 +     END;
7622 22348 +
7623 22349 + IF _BRANCH_ GT 0 THEN DO;
7624 22350 +
7625 22351 +     _BRANCH_ = -1;
7626 22352 +     IF NOT MISSING(IMP_TotalSpent ) AND

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7627 22353 +      IMP_TotalSpent  <      9273.5 THEN D
      O;
7628 22354 +      _BRANCH_ =      1;
7629 22355 +      END;
7630 22356 +
7631 22357 +      IF _BRANCH_ GT 0 THEN DO;
7632 22358 +      _ARB_F_ + 0.0004001676;
7633 22359 +      END;
7634 22360 +      END;
7635 22361 +      END;
7636 22362 +
7637 22363 +***** LEAF      36  NODE      401 *****;
7638 22364 +IF _ARB_BADF_ EQ 0 THEN DO;
7639 22365 +
7640 22366 +      _BRANCH_ = -1;
7641 22367 +      IF NOT MISSING(TotalPurchases ) AND
7642 22368 +      13.5 <= TotalPurchases THEN DO
      ;
7643 22369 +      _BRANCH_ =      2;
7644 22370 +      END;
7645 22371 +
7646 22372 +      IF _BRANCH_ GT 0 THEN DO;
7647 22373 +
7648 22374 +      _BRANCH_ = -1;
7649 22375 +      IF NOT MISSING(IMP_TotalSpent ) AND
7650 22376 +      9273.5 <= IMP_TotalSpent THEN
      DO;
7651 22377 +      _BRANCH_ =      2;
7652 22378 +      END;
7653 22379 +      IF _BRANCH_ LT 0 THEN DO;
7654 22380 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
7655 22381 +      END;
7656 22382 +      IF _BRANCH_ GT 0 THEN DO;
7657 22383 +      _ARB_F_ + 0.0378346733;
7658 22384 +      END;

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7659 22385 +      END;
7660 22386 +      END;
7661 22387 +
7662 22388 +***** LEAF      37  NODE      405 *****;
7663 22389 +IF _ARB_BADF_ EQ 0 THEN DO;
7664 22390 +
7665 22391 +      _BRANCH_ = -1;
7666 22392 +      IF NOT MISSING(IMP_TotalSpent ) AND
7667 22393 +      IMP_TotalSpent <                      9087.5 THEN DO;
7668 22394 +      _BRANCH_ =      1;
7669 22395 +      END;
7670 22396 +      IF _BRANCH_ LT 0 THEN DO;
7671 22397 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
7672 22398 +      END;
7673 22399 +      IF _BRANCH_ GT 0 THEN DO;
7674 22400 +
7675 22401 +      _BRANCH_ = -1;
7676 22402 +      IF NOT MISSING(IMP_TotalSpent ) AND
7677 22403 +      IMP_TotalSpent <                      388.5 THEN D
      O;
7678 22404 +      _BRANCH_ =      1;
7679 22405 +      END;
7680 22406 +
7681 22407 +      IF _BRANCH_ GT 0 THEN DO;
7682 22408 +      _ARB_F_ + -0.029166635;
7683 22409 +      END;
7684 22410 +      END;
7685 22411 +      END;
7686 22412 +
7687 22413 +***** LEAF      38  NODE      406 *****;
7688 22414 +IF _ARB_BADF_ EQ 0 THEN DO;
7689 22415 +
7690 22416 +      _BRANCH_ = -1;
7691 22417 +      IF NOT MISSING(IMP_TotalSpent ) AND
7692 22418 +      IMP_TotalSpent <                      9087.5 THEN DO;

```

```

7693 22419 +      _BRANCH_ =      1;
7694 22420 +      END;
7695 22421 +      IF _BRANCH_ LT 0 THEN DO;
7696 22422 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
          1;
7697 22423 +      END;
7698 22424 +      IF _BRANCH_ GT 0 THEN DO;
7699 22425 +
7700 22426 +          _BRANCH_ = -1;
7701 22427 +          IF NOT MISSING(IMP_TotalSpent ) AND
7702 22428 +              388.5 <= IMP_TotalSpent THEN
          DO;
7703 22429 +              _BRANCH_ =      2;
7704 22430 +              END;
7705 22431 +              IF _BRANCH_ LT 0 THEN DO;
7706 22432 +                  IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 2;
7707 22433 +              END;
7708 22434 +              IF _BRANCH_ GT 0 THEN DO;
7709 22435 +                  _ARB_F_ + -0.001358249;
7710 22436 +              END;
7711 22437 +              END;
7712 22438 +      END;
7713 22439 +
7714 22440 +***** LEAF      39  NODE      407 *****;
7715 22441 +IF _ARB_BADF_ EQ 0 THEN DO;
7716 22442 +
7717 22443 +      _BRANCH_ = -1;
7718 22444 +          IF NOT MISSING(IMP_TotalSpent ) AND
7719 22445 +              9087.5 <= IMP_TotalSpent THEN DO
          ;
7720 22446 +              _BRANCH_ =      2;
7721 22447 +              END;
7722 22448 +
7723 22449 +      IF _BRANCH_ GT 0 THEN DO;
7724 22450 +

```

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7725 22451 +      _BRANCH_ = -1;
7726 22452 +      IF NOT MISSING(Age ) AND
7727 22453 +      Age < 45.5 THEN DO;
7728 22454 +      _BRANCH_ = 1;
7729 22455 +      END;
7730 22456 +
7731 22457 +      IF _BRANCH_ GT 0 THEN DO;
7732 22458 +      _ARB_F_ + -0.00213995;
7733 22459 +      END;
7734 22460 +      END;
7735 22461 +      END;
7736 22462 +
7737 22463 +***** LEAF 40 NODE 408 *****;
7738 22464 +IF _ARB_BADF_ EQ 0 THEN DO;
7739 22465 +
7740 22466 +      _BRANCH_ = -1;
7741 22467 +      IF NOT MISSING(IMP_TotalSpent ) AND
7742 22468 +      9087.5 <= IMP_TotalSpent THEN DO
;
7743 22469 +      _BRANCH_ = 2;
7744 22470 +      END;
7745 22471 +
7746 22472 +      IF _BRANCH_ GT 0 THEN DO;
7747 22473 +
7748 22474 +      _BRANCH_ = -1;
7749 22475 +      IF NOT MISSING(Age ) AND
7750 22476 +      45.5 <= Age THEN DO;
7751 22477 +      _BRANCH_ = 2;
7752 22478 +      END;
7753 22479 +      IF _BRANCH_ LT 0 THEN DO;
7754 22480 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
7755 22481 +      END;
7756 22482 +      IF _BRANCH_ GT 0 THEN DO;
7757 22483 +      _ARB_F_ + 0.0211235482;
7758 22484 +      END;
7759 22485 +      END;

```

```

7760 22486 + END;
7761 22487 +
7762 22488 +***** LEAF      41  NODE      412 *****;
7763 22489 +IF _ARB_BADF_ EQ 0 THEN DO;
7764 22490 +
7765 22491 + _BRANCH_ = -1;
7766 22492 + IF NOT MISSING(IMP_TotalSpent ) AND
7767 22493 + IMP_TotalSpent < 14847.5 THEN DO;
7768 22494 + _BRANCH_ = 1;
7769 22495 + END;
7770 22496 + IF _BRANCH_ LT 0 THEN DO;
7771 22497 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
7772 22498 + END;
7773 22499 + IF _BRANCH_ GT 0 THEN DO;
7774 22500 +
7775 22501 + _BRANCH_ = -1;
7776 22502 + IF NOT MISSING(TotalPurchases ) AND
7777 22503 + TotalPurchases < 3.5 THEN D
O;
7778 22504 + _BRANCH_ = 1;
7779 22505 + END;
7780 22506 +
7781 22507 + IF _BRANCH_ GT 0 THEN DO;
7782 22508 + _ARB_F_ + -0.006454924;
7783 22509 + END;
7784 22510 + END;
7785 22511 + END;
7786 22512 +
7787 22513 +***** LEAF      42  NODE      413 *****;
7788 22514 +IF _ARB_BADF_ EQ 0 THEN DO;
7789 22515 +
7790 22516 + _BRANCH_ = -1;
7791 22517 + IF NOT MISSING(IMP_TotalSpent ) AND
7792 22518 + IMP_TotalSpent < 14847.5 THEN DO;
7793 22519 + _BRANCH_ = 1;

```



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7794 22520 +      END;
7795 22521 +      IF _BRANCH_ LT 0 THEN DO;
7796 22522 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
7797 22523 +      END;
7798 22524 +      IF _BRANCH_ GT 0 THEN DO;
7799 22525 +
7800 22526 +          _BRANCH_ = -1;
7801 22527 +          IF NOT MISSING( TotalPurchases ) AND
7802 22528 +              3.5 <= TotalPurchases THEN
DO;
7803 22529 +              _BRANCH_ =      2;
7804 22530 +          END;
7805 22531 +      IF _BRANCH_ LT 0 THEN DO;
7806 22532 +          IF MISSING( TotalPurchases ) THEN _BRANCH_
= 2;
7807 22533 +      END;
7808 22534 +      IF _BRANCH_ GT 0 THEN DO;
7809 22535 +          _ARB_F_ + 0.0018956863;
7810 22536 +      END;
7811 22537 +      END;
7812 22538 +      END;
7813 22539 +
7814 22540 +***** LEAF      43  NODE      414 *****;
7815 22541 +IF _ARB_BADF_ EQ 0 THEN DO;
7816 22542 +
7817 22543 +      _BRANCH_ = -1;
7818 22544 +          IF NOT MISSING(IMP_TotalSpent ) AND
7819 22545 +              14847.5 <= IMP_TotalSpent THEN DO
;
7820 22546 +              _BRANCH_ =      2;
7821 22547 +          END;
7822 22548 +
7823 22549 +      IF _BRANCH_ GT 0 THEN DO;
7824 22550 +
7825 22551 +          _BRANCH_ = -1;

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```

7826 22552 +      IF NOT MISSING(Age ) AND
7827 22553 +      Age < 44.5 THEN DO;
7828 22554 +      _BRANCH_ = 1;
7829 22555 +      END;
7830 22556 +
7831 22557 +      IF _BRANCH_ GT 0 THEN DO;
7832 22558 +      _ARB_F_ + -0.008063166;
7833 22559 +      END;
7834 22560 +      END;
7835 22561 +      END;
7836 22562 +
7837 22563 +***** LEAF 44 NODE 415 *****;
7838 22564 +IF _ARB_BADF_ EQ 0 THEN DO;
7839 22565 +
7840 22566 +      _BRANCH_ = -1;
7841 22567 +      IF NOT MISSING(IMP_TotalSpent ) AND
7842 22568 +      14847.5 <= IMP_TotalSpent THEN DO
;
7843 22569 +      _BRANCH_ = 2;
7844 22570 +      END;
7845 22571 +
7846 22572 +      IF _BRANCH_ GT 0 THEN DO;
7847 22573 +
7848 22574 +      _BRANCH_ = -1;
7849 22575 +      IF NOT MISSING(Age ) AND
7850 22576 +      44.5 <= Age THEN DO;
7851 22577 +      _BRANCH_ = 2;
7852 22578 +      END;
7853 22579 +      IF _BRANCH_ LT 0 THEN DO;
7854 22580 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
7855 22581 +      END;
7856 22582 +      IF _BRANCH_ GT 0 THEN DO;
7857 22583 +      _ARB_F_ + 0.0424213187;
7858 22584 +      END;
7859 22585 +      END;
7860 22586 +      END;

```

```

7861 22587 +
7862 22588 +***** LEAF      45  NODE      419 *****;
7863 22589 +IF _ARB_BADF_ EQ 0 THEN DO;
7864 22590 +
7865 22591 +   _BRANCH_ = -1;
7866 22592 +   IF NOT MISSING(IMP_TotalSpent ) AND
7867 22593 +   IMP_TotalSpent <                14847.5 THEN DO;
7868 22594 +   _BRANCH_ =    1;
7869 22595 +   END;
7870 22596 + IF _BRANCH_ LT 0 THEN DO;
7871 22597 +   IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
    1;
7872 22598 + END;
7873 22599 + IF _BRANCH_ GT 0 THEN DO;
7874 22600 +
7875 22601 +   _BRANCH_ = -1;
7876 22602 +   IF NOT MISSING(IMP_TotalSpent ) AND
7877 22603 +   IMP_TotalSpent <                2924 THEN D
    O;
7878 22604 +   _BRANCH_ =    1;
7879 22605 +   END;
7880 22606 +
7881 22607 +   IF _BRANCH_ GT 0 THEN DO;
7882 22608 +   _ARB_F_ + -0.005050258;
7883 22609 +   END;
7884 22610 +   END;
7885 22611 + END;
7886 22612 +
7887 22613 +***** LEAF      46  NODE      420 *****;
7888 22614 +IF _ARB_BADF_ EQ 0 THEN DO;
7889 22615 +
7890 22616 +   _BRANCH_ = -1;
7891 22617 +   IF NOT MISSING(IMP_TotalSpent ) AND
7892 22618 +   IMP_TotalSpent <                14847.5 THEN DO;
7893 22619 +   _BRANCH_ =    1;
7894 22620 +   END;

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7895 22621 + IF _BRANCH_ LT 0 THEN DO;
7896 22622 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
7897 22623 + END;
7898 22624 + IF _BRANCH_ GT 0 THEN DO;
7899 22625 +
7900 22626 +     _BRANCH_ = -1;
7901 22627 +     IF NOT MISSING(IMP_TotalSpent ) AND
7902 22628 +         2924 <= IMP_TotalSpent THEN
      DO;
7903 22629 +         _BRANCH_ = 2;
7904 22630 +     END;
7905 22631 + IF _BRANCH_ LT 0 THEN DO;
7906 22632 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
7907 22633 + END;
7908 22634 + IF _BRANCH_ GT 0 THEN DO;
7909 22635 +     _ARB_F_ + 0.0010553892;
7910 22636 + END;
7911 22637 + END;
7912 22638 + END;
7913 22639 +
7914 22640 +***** LEAF      47  NODE      421 *****;
7915 22641 +IF _ARB_BADF_ EQ 0 THEN DO;
7916 22642 +
7917 22643 +     _BRANCH_ = -1;
7918 22644 +     IF NOT MISSING(IMP_TotalSpent ) AND
7919 22645 +         14847.5 <= IMP_TotalSpent THEN DO
      ;
7920 22646 +         _BRANCH_ = 2;
7921 22647 +     END;
7922 22648 +
7923 22649 + IF _BRANCH_ GT 0 THEN DO;
7924 22650 +
7925 22651 +     _BRANCH_ = -1;
7926 22652 +     IF NOT MISSING(Age ) AND

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7927 22653 +      Age <      44.5 THEN DO;
7928 22654 +      _BRANCH_ =      1;
7929 22655 +      END;
7930 22656 +
7931 22657 +      IF _BRANCH_ GT 0 THEN DO;
7932 22658 +      _ARB_F_ + -0.011772233;
7933 22659 +      END;
7934 22660 +      END;
7935 22661 +      END;
7936 22662 +
7937 22663 +***** LEAF      48  NODE      422 *****;
7938 22664 +IF _ARB_BADF_ EQ 0 THEN DO;
7939 22665 +
7940 22666 +      _BRANCH_ = -1;
7941 22667 +      IF NOT MISSING(IMP_TotalSpent ) AND
7942 22668 +      14847.5 <= IMP_TotalSpent THEN DO
;
7943 22669 +      _BRANCH_ =      2;
7944 22670 +      END;
7945 22671 +
7946 22672 +      IF _BRANCH_ GT 0 THEN DO;
7947 22673 +
7948 22674 +      _BRANCH_ = -1;
7949 22675 +      IF NOT MISSING(Age ) AND
7950 22676 +      44.5 <= Age THEN DO;
7951 22677 +      _BRANCH_ =      2;
7952 22678 +      END;
7953 22679 +      IF _BRANCH_ LT 0 THEN DO;
7954 22680 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
7955 22681 +      END;
7956 22682 +      IF _BRANCH_ GT 0 THEN DO;
7957 22683 +      _ARB_F_ + 0.0340186517;
7958 22684 +      END;
7959 22685 +      END;
7960 22686 +      END;
7961 22687 +

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7962 22688 +***** LEAF      49  NODE      426 *****;
7963 22689 +IF _ARB_BADF_ EQ 0 THEN DO;
7964 22690 +
7965 22691 +   _BRANCH_ = -1;
7966 22692 +   IF NOT MISSING( TotalPurchases ) AND
7967 22693 +   TotalPurchases <                               16.5 THEN DO;
7968 22694 +   _BRANCH_ = 1;
7969 22695 +   END;
7970 22696 + IF _BRANCH_ LT 0 THEN DO;
7971 22697 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
7972 22698 +   1;
7973 22699 +   END;
7974 22700 + IF _BRANCH_ GT 0 THEN DO;
7975 22701 +   _BRANCH_ = -1;
7976 22702 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
7977 22703 +   %DMNORMIP( _ARBFMT_8);
7978 22704 +   IF _ARBFMT_8 IN ( 'SILVER' , 'PLATINUM' , 'BRONZ
7979 22705 +   E' ) THEN DO;
7980 22706 +   _BRANCH_ = 1;
7981 22707 +   END;
7982 22708 +   IF MISSING( MembershipLevel ) THEN _BRANCH_
7983 22709 +   = 1;
7984 22710 +   ELSE IF _ARBFMT_8 NOTIN (
7985 22711 +   'SILVER' , 'PLATINUM' , 'BRONZE' , 'GOLD'
7986 22712 +   ) THEN _BRANCH_ = 1;
7987 22713 +   END;
7988 22714 +   IF _BRANCH_ GT 0 THEN DO;
7989 22715 +   _ARB_F_ + 0.0015560125;
7990 22716 +   END;
7991 22717 +   END;
7992 22718 +   END;
7993 22719 +***** LEAF      50  NODE      427 *****;
7994 22720 +IF _ARB_BADF_ EQ 0 THEN DO;

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7995 22721 +
7996 22722 +   _BRANCH_ = -1;
7997 22723 +   IF NOT MISSING(TotalPurchases ) AND
7998 22724 +   TotalPurchases < 16.5 THEN DO;
7999 22725 +   _BRANCH_ = 1;
8000 22726 +   END;
8001 22727 + IF _BRANCH_ LT 0 THEN DO;
8002 22728 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8003 22729 + END;
8004 22730 + IF _BRANCH_ GT 0 THEN DO;
8005 22731 +
8006 22732 +   _BRANCH_ = -1;
8007 22733 +   _ARBfmt_8 = PUT( MembershipLevel , $8.);
8008 22734 +   %DMNORMIP( _ARBfmt_8);
8009 22735 +   IF _ARBfmt_8 IN ('GOLD' ) THEN DO;
8010 22736 +   _BRANCH_ = 2;
8011 22737 +   END;
8012 22738 +
8013 22739 +   IF _BRANCH_ GT 0 THEN DO;
8014 22740 +   _ARB_F_ + -0.006424304;
8015 22741 +   END;
8016 22742 +   END;
8017 22743 + END;
8018 22744 +
8019 22745 +***** LEAF 51 NODE 428 *****;
8020 22746 +IF _ARB_BADF_ EQ 0 THEN DO;
8021 22747 +
8022 22748 +   _BRANCH_ = -1;
8023 22749 +   IF NOT MISSING(TotalPurchases ) AND
8024 22750 +   16.5 <= TotalPurchases THEN DO
      ;
8025 22751 +   _BRANCH_ = 2;
8026 22752 +   END;
8027 22753 +
8028 22754 + IF _BRANCH_ GT 0 THEN DO;

```

```

8029 22755 +
8030 22756 +     _BRANCH_ = -1;
8031 22757 +     IF NOT MISSING(Age ) AND
8032 22758 +     Age < 39.5 THEN DO;
8033 22759 +     _BRANCH_ = 1;
8034 22760 +     END;
8035 22761 +
8036 22762 +     IF _BRANCH_ GT 0 THEN DO;
8037 22763 +     _ARB_F_ + -0.019374845;
8038 22764 +     END;
8039 22765 +     END;
8040 22766 + END;
8041 22767 +
8042 22768 +***** LEAF 52 NODE 429 *****;
8043 22769 +IF _ARB_BADF_ EQ 0 THEN DO;
8044 22770 +
8045 22771 +     _BRANCH_ = -1;
8046 22772 +     IF NOT MISSING(TotalPurchases ) AND
8047 22773 +     16.5 <= TotalPurchases THEN DO
;
8048 22774 +     _BRANCH_ = 2;
8049 22775 +     END;
8050 22776 +
8051 22777 + IF _BRANCH_ GT 0 THEN DO;
8052 22778 +
8053 22779 +     _BRANCH_ = -1;
8054 22780 +     IF NOT MISSING(Age ) AND
8055 22781 +     39.5 <= Age THEN DO;
8056 22782 +     _BRANCH_ = 2;
8057 22783 +     END;
8058 22784 + IF _BRANCH_ LT 0 THEN DO;
8059 22785 +     IF MISSING( Age ) THEN _BRANCH_ = 2;
8060 22786 +     END;
8061 22787 + IF _BRANCH_ GT 0 THEN DO;
8062 22788 +     _ARB_F_ + 0.0268370873;
8063 22789 +     END;

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8064 22790 +      END;
8065 22791 +      END;
8066 22792 +
8067 22793 +***** LEAF      53  NODE      433 *****;
8068 22794 +IF _ARB_BADF_ EQ 0 THEN DO;
8069 22795 +
8070 22796 +      _BRANCH_ = -1;
8071 22797 +      IF NOT MISSING(TotalPurchases ) AND
8072 22798 +      TotalPurchases <                      18.5 THEN DO;
8073 22799 +      _BRANCH_ =      1;
8074 22800 +      END;
8075 22801 +      IF _BRANCH_ LT 0 THEN DO;
8076 22802 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8077 22803 +      END;
8078 22804 +      IF _BRANCH_ GT 0 THEN DO;
8079 22805 +
8080 22806 +      _BRANCH_ = -1;
8081 22807 +      IF NOT MISSING(IMP_TotalSpent ) AND
8082 22808 +      IMP_TotalSpent <                      7686.5 THEN D
      O;
8083 22809 +      _BRANCH_ =      1;
8084 22810 +      END;
8085 22811 +      IF _BRANCH_ LT 0 THEN DO;
8086 22812 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 1;
8087 22813 +      END;
8088 22814 +      IF _BRANCH_ GT 0 THEN DO;
8089 22815 +      _ARB_F_ + -0.001846263;
8090 22816 +      END;
8091 22817 +      END;
8092 22818 +      END;
8093 22819 +
8094 22820 +***** LEAF      54  NODE      434 *****;
8095 22821 +IF _ARB_BADF_ EQ 0 THEN DO;
8096 22822 +

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8097 22823 +  _BRANCH_ = -1;
8098 22824 +      IF NOT MISSING(TotalPurchases ) AND
8099 22825 +      TotalPurchases < 18.5 THEN DO;
8100 22826 +      _BRANCH_ = 1;
8101 22827 +      END;
8102 22828 +  IF _BRANCH_ LT 0 THEN DO;
8103 22829 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
8104 22830 +  END;
8105 22831 +  IF _BRANCH_ GT 0 THEN DO;
8106 22832 +
8107 22833 +      _BRANCH_ = -1;
8108 22834 +      IF NOT MISSING(IMP_TotalSpent ) AND
8109 22835 +      7686.5 <= IMP_TotalSpent THEN
DO;
8110 22836 +      _BRANCH_ = 2;
8111 22837 +      END;
8112 22838 +
8113 22839 +      IF _BRANCH_ GT 0 THEN DO;
8114 22840 +      _ARB_F_ + 0.0055006656;
8115 22841 +      END;
8116 22842 +      END;
8117 22843 +  END;
8118 22844 +
8119 22845 +***** LEAF 55 NODE 435 *****;
8120 22846 +IF _ARB_BADF_ EQ 0 THEN DO;
8121 22847 +
8122 22848 +  _BRANCH_ = -1;
8123 22849 +      IF NOT MISSING(TotalPurchases ) AND
8124 22850 +      18.5 <= TotalPurchases THEN DO
;
8125 22851 +      _BRANCH_ = 2;
8126 22852 +      END;
8127 22853 +
8128 22854 +  IF _BRANCH_ GT 0 THEN DO;
8129 22855 +

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```

8130 22856 +      _BRANCH_ = -1;
8131 22857 +      IF NOT MISSING(Age ) AND
8132 22858 +      Age < 68.5 THEN DO;
8133 22859 +      _BRANCH_ = 1;
8134 22860 +      END;
8135 22861 +      IF _BRANCH_ LT 0 THEN DO;
8136 22862 +      IF MISSING( Age ) THEN _BRANCH_ = 1;
8137 22863 +      END;
8138 22864 +      IF _BRANCH_ GT 0 THEN DO;
8139 22865 +      _ARB_F_ + 0.017028352;
8140 22866 +      END;
8141 22867 +      END;
8142 22868 +      END;
8143 22869 +
8144 22870 +***** LEAF 56 NODE 436 *****;
8145 22871 +IF _ARB_BADF_ EQ 0 THEN DO;
8146 22872 +
8147 22873 +      _BRANCH_ = -1;
8148 22874 +      IF NOT MISSING(TotalPurchases ) AND
8149 22875 +      18.5 <= TotalPurchases THEN DO
;
8150 22876 +      _BRANCH_ = 2;
8151 22877 +      END;
8152 22878 +
8153 22879 +      IF _BRANCH_ GT 0 THEN DO;
8154 22880 +
8155 22881 +      _BRANCH_ = -1;
8156 22882 +      IF NOT MISSING(Age ) AND
8157 22883 +      68.5 <= Age THEN DO;
8158 22884 +      _BRANCH_ = 2;
8159 22885 +      END;
8160 22886 +
8161 22887 +      IF _BRANCH_ GT 0 THEN DO;
8162 22888 +      _ARB_F_ + 0.0731436783;
8163 22889 +      END;
8164 22890 +      END;

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8165 22891 + END;
8166 22892 +
8167 22893 +***** LEAF      57  NODE      440 *****;
8168 22894 +IF _ARB_BADF_ EQ 0 THEN DO;
8169 22895 +
8170 22896 +   _BRANCH_ = -1;
8171 22897 +   IF NOT MISSING(TotalPurchases ) AND
8172 22898 +   TotalPurchases <                               5.5 THEN DO;
8173 22899 +   _BRANCH_ = 1;
8174 22900 +   END;
8175 22901 + IF _BRANCH_ LT 0 THEN DO;
8176 22902 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8177 22903 + END;
8178 22904 + IF _BRANCH_ GT 0 THEN DO;
8179 22905 +
8180 22906 +   _BRANCH_ = -1;
8181 22907 +   IF NOT MISSING(IMP_TotalSpent ) AND
8182 22908 +   IMP_TotalSpent <                               472.5 THEN D
      O;
8183 22909 +   _BRANCH_ = 1;
8184 22910 +   END;
8185 22911 +
8186 22912 +   IF _BRANCH_ GT 0 THEN DO;
8187 22913 +   _ARB_F_ + -0.024786733;
8188 22914 +   END;
8189 22915 +   END;
8190 22916 + END;
8191 22917 +
8192 22918 +***** LEAF      58  NODE      441 *****;
8193 22919 +IF _ARB_BADF_ EQ 0 THEN DO;
8194 22920 +
8195 22921 +   _BRANCH_ = -1;
8196 22922 +   IF NOT MISSING(TotalPurchases ) AND
8197 22923 +   TotalPurchases <                               5.5 THEN DO;
8198 22924 +   _BRANCH_ = 1;

```

```

8199 22925 +      END;
8200 22926 +      IF _BRANCH_ LT 0 THEN DO;
8201 22927 +          IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
8202 22928 +      END;
8203 22929 +      IF _BRANCH_ GT 0 THEN DO;
8204 22930 +
8205 22931 +          _BRANCH_ = -1;
8206 22932 +          IF NOT MISSING(IMP_TotalSpent ) AND
8207 22933 +              472.5 <= IMP_TotalSpent THEN
DO;
8208 22934 +              _BRANCH_ =      2;
8209 22935 +          END;
8210 22936 +      IF _BRANCH_ LT 0 THEN DO;
8211 22937 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
8212 22938 +      END;
8213 22939 +      IF _BRANCH_ GT 0 THEN DO;
8214 22940 +          _ARB_F_ + -0.002291689;
8215 22941 +      END;
8216 22942 +      END;
8217 22943 +      END;
8218 22944 +
8219 22945 +***** LEAF      59  NODE      442 *****;
8220 22946 +IF _ARB_BADF_ EQ 0 THEN DO;
8221 22947 +
8222 22948 +      _BRANCH_ = -1;
8223 22949 +          IF NOT MISSING(TotalPurchases ) AND
8224 22950 +              5.5 <= TotalPurchases THEN DO
;
8225 22951 +              _BRANCH_ =      2;
8226 22952 +          END;
8227 22953 +
8228 22954 +      IF _BRANCH_ GT 0 THEN DO;
8229 22955 +
8230 22956 +          _BRANCH_ = -1;

```

```

8231 22957 +      IF NOT MISSING(Age ) AND
8232 22958 +      Age < 45.5 THEN DO;
8233 22959 +      _BRANCH_ = 1;
8234 22960 +      END;
8235 22961 +
8236 22962 +      IF _BRANCH_ GT 0 THEN DO;
8237 22963 +      _ARB_F_ + -0.001153384;
8238 22964 +      END;
8239 22965 +      END;
8240 22966 +      END;
8241 22967 +
8242 22968 +***** LEAF 60 NODE 443 *****;
8243 22969 +IF _ARB_BADF_ EQ 0 THEN DO;
8244 22970 +
8245 22971 +      _BRANCH_ = -1;
8246 22972 +      IF NOT MISSING(TotalPurchases ) AND
8247 22973 +      5.5 <= TotalPurchases THEN DO
;
8248 22974 +      _BRANCH_ = 2;
8249 22975 +      END;
8250 22976 +
8251 22977 +      IF _BRANCH_ GT 0 THEN DO;
8252 22978 +
8253 22979 +      _BRANCH_ = -1;
8254 22980 +      IF NOT MISSING(Age ) AND
8255 22981 +      45.5 <= Age THEN DO;
8256 22982 +      _BRANCH_ = 2;
8257 22983 +      END;
8258 22984 +      IF _BRANCH_ LT 0 THEN DO;
8259 22985 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
8260 22986 +      END;
8261 22987 +      IF _BRANCH_ GT 0 THEN DO;
8262 22988 +      _ARB_F_ + 0.0105484895;
8263 22989 +      END;
8264 22990 +      END;
8265 22991 +      END;

```

```

8266 22992 +
8267 22993 +***** LEAF      61  NODE      447 *****;
8268 22994 +IF _ARB_BADF_ EQ 0 THEN DO;
8269 22995 +
8270 22996 +   _BRANCH_ = -1;
8271 22997 +   IF NOT MISSING(IMP_TotalSpent ) AND
8272 22998 +   IMP_TotalSpent <                9170.5 THEN DO;
8273 22999 +   _BRANCH_ =    1;
8274 23000 +   END;
8275 23001 + IF _BRANCH_ LT 0 THEN DO;
8276 23002 +   IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
8277 23003 + END;
8278 23004 + IF _BRANCH_ GT 0 THEN DO;
8279 23005 +
8280 23006 +   _BRANCH_ = -1;
8281 23007 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
8282 23008 +   %DMNORMIP( _ARBFMT_8);
8283 23009 +   IF _ARBFMT_8 IN ('SILVER' , 'GOLD' , 'BRONZE' )
      THEN DO;
8284 23010 +       _BRANCH_ =    1;
8285 23011 +   END;
8286 23012 +   IF _BRANCH_ LT 0 THEN DO;
8287 23013 +       IF MISSING( MembershipLevel  ) THEN _BRANCH_
      = 1;
8288 23014 +       ELSE IF _ARBFMT_8 NOTIN (
8289 23015 +           'SILVER' , 'GOLD' , 'BRONZE' , 'PLATINUM'
8290 23016 +           ) THEN _BRANCH_ = 1;
8291 23017 +   END;
8292 23018 +   IF _BRANCH_ GT 0 THEN DO;
8293 23019 +       _ARB_F_ + -0.002825654;
8294 23020 +   END;
8295 23021 +   END;
8296 23022 + END;
8297 23023 +
8298 23024 +***** LEAF      62  NODE      448 *****;

```

```

8299 23025 +IF _ARB_BADF_ EQ 0 THEN DO;
8300 23026 +
8301 23027 +   _BRANCH_ = -1;
8302 23028 +   IF NOT MISSING(IMP_TotalSpent ) AND
8303 23029 +   IMP_TotalSpent < 9170.5 THEN DO;
8304 23030 +   _BRANCH_ = 1;
8305 23031 +   END;
8306 23032 + IF _BRANCH_ LT 0 THEN DO;
8307 23033 +   IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
      1;
8308 23034 + END;
8309 23035 + IF _BRANCH_ GT 0 THEN DO;
8310 23036 +
8311 23037 +   _BRANCH_ = -1;
8312 23038 +   _ARBFMT_8 = PUT( MembershipLevel , $8.);
8313 23039 +   %DMNORMIP( _ARBFMT_8);
8314 23040 +   IF _ARBFMT_8 IN ('PLATINUM' ) THEN DO;
8315 23041 +   _BRANCH_ = 2;
8316 23042 +   END;
8317 23043 +
8318 23044 +   IF _BRANCH_ GT 0 THEN DO;
8319 23045 +   _ARB_F_ + 0.0030238775;
8320 23046 +   END;
8321 23047 +   END;
8322 23048 + END;
8323 23049 +
8324 23050 +***** LEAF      63  NODE      449 *****;
8325 23051 +IF _ARB_BADF_ EQ 0 THEN DO;
8326 23052 +
8327 23053 +   _BRANCH_ = -1;
8328 23054 +   IF NOT MISSING(IMP_TotalSpent ) AND
8329 23055 +   9170.5 <= IMP_TotalSpent THEN DO
      ;
8330 23056 +   _BRANCH_ = 2;
8331 23057 +   END;
8332 23058 +

```



```

8333 23059 + IF _BRANCH_ GT 0 THEN DO;
8334 23060 +
8335 23061 +     _BRANCH_ = -1;
8336 23062 +     IF NOT MISSING(IMP_TotalSpent ) AND
8337 23063 +     IMP_TotalSpent < 9216 THEN D
      O;
8338 23064 +     _BRANCH_ = 1;
8339 23065 +     END;
8340 23066 +
8341 23067 + IF _BRANCH_ GT 0 THEN DO;
8342 23068 +     _ARB_F_ + 0.1016480801;
8343 23069 +     END;
8344 23070 + END;
8345 23071 + END;
8346 23072 +
8347 23073 +***** LEAF      64  NODE      450 *****;
8348 23074 +IF _ARB_BADF_ EQ 0 THEN DO;
8349 23075 +
8350 23076 +     _BRANCH_ = -1;
8351 23077 +     IF NOT MISSING(IMP_TotalSpent ) AND
8352 23078 +     9170.5 <= IMP_TotalSpent THEN DO
      ;
8353 23079 +     _BRANCH_ = 2;
8354 23080 +     END;
8355 23081 +
8356 23082 + IF _BRANCH_ GT 0 THEN DO;
8357 23083 +
8358 23084 +     _BRANCH_ = -1;
8359 23085 +     IF NOT MISSING(IMP_TotalSpent ) AND
8360 23086 +     9216 <= IMP_TotalSpent THEN
      DO;
8361 23087 +     _BRANCH_ = 2;
8362 23088 +     END;
8363 23089 + IF _BRANCH_ LT 0 THEN DO;
8364 23090 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;

```

```

8365 23091 +      END;
8366 23092 +      IF _BRANCH_ GT 0 THEN DO;
8367 23093 +          _ARB_F_ + 0.0067583203;
8368 23094 +      END;
8369 23095 +      END;
8370 23096 +  END;
8371 23097 +
8372 23098 +***** LEAF      65  NODE      454 *****;
8373 23099 +IF _ARB_BADF_ EQ 0 THEN DO;
8374 23100 +
8375 23101 +  _BRANCH_ = -1;
8376 23102 +      IF NOT MISSING(Age ) AND
8377 23103 +      Age <                      19.5 THEN DO;
8378 23104 +          _BRANCH_ =      1;
8379 23105 +      END;
8380 23106 +
8381 23107 +  IF _BRANCH_ GT 0 THEN DO;
8382 23108 +
8383 23109 +      _BRANCH_ = -1;
8384 23110 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
8385 23111 +      %DMNORMIP( _ARBFMT_8);
8386 23112 +      IF _ARBFMT_8 IN ('SILVER' , 'BRONZE' ) THEN DO
;
8387 23113 +          _BRANCH_ =      1;
8388 23114 +      END;
8389 23115 +
8390 23116 +      IF _BRANCH_ GT 0 THEN DO;
8391 23117 +          _ARB_F_ + 0.0024312948;
8392 23118 +      END;
8393 23119 +      END;
8394 23120 +  END;
8395 23121 +
8396 23122 +***** LEAF      66  NODE      455 *****;
8397 23123 +IF _ARB_BADF_ EQ 0 THEN DO;
8398 23124 +
8399 23125 +  _BRANCH_ = -1;

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8400 23126 +      IF NOT MISSING(Age ) AND
8401 23127 +      Age <                                19.5 THEN DO;
8402 23128 +      _BRANCH_ =      1;
8403 23129 +      END;
8404 23130 +
8405 23131 +      IF _BRANCH_ GT 0 THEN DO;
8406 23132 +
8407 23133 +      _BRANCH_ = -1;
8408 23134 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
8409 23135 +      %DMNORMIP( _ARBFMT_8);
8410 23136 +      IF _ARBFMT_8 IN ('GOLD' , 'PLATINUM' ) THEN DO
;
8411 23137 +      _BRANCH_ =      2;
8412 23138 +      END;
8413 23139 +      IF _BRANCH_ LT 0 THEN DO;
8414 23140 +      IF MISSING( MembershipLevel ) THEN _BRANCH_
= 2;
8415 23141 +      ELSE IF _ARBFMT_8 NOTIN (
8416 23142 +      'SILVER' , 'BRONZE' , 'GOLD' , 'PLATINUM'
8417 23143 +      ) THEN _BRANCH_ = 2;
8418 23144 +      END;
8419 23145 +      IF _BRANCH_ GT 0 THEN DO;
8420 23146 +      _ARB_F_ + -0.031121539;
8421 23147 +      END;
8422 23148 +      END;
8423 23149 +      END;
8424 23150 +
8425 23151 +***** LEAF      67  NODE      456 *****;
8426 23152 +IF _ARB_BADF_ EQ 0 THEN DO;
8427 23153 +
8428 23154 +      _BRANCH_ = -1;
8429 23155 +      IF NOT MISSING(Age ) AND
8430 23156 +      19.5 <= Age THEN DO;
8431 23157 +      _BRANCH_ =      2;
8432 23158 +      END;
8433 23159 +      IF _BRANCH_ LT 0 THEN DO;

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```

8434 23160 +      IF MISSING( Age  ) THEN _BRANCH_ = 2;
8435 23161 +  END;
8436 23162 +  IF _BRANCH_ GT 0 THEN DO;
8437 23163 +
8438 23164 +      _BRANCH_ = -1;
8439 23165 +      IF NOT MISSING(TotalPurchases ) AND
8440 23166 +      TotalPurchases <
                                9.5 THEN D
      O;
8441 23167 +      _BRANCH_ =      1;
8442 23168 +  END;
8443 23169 +  IF _BRANCH_ LT 0 THEN DO;
8444 23170 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_
      = 1;
8445 23171 +  END;
8446 23172 +  IF _BRANCH_ GT 0 THEN DO;
8447 23173 +      _ARB_F_ + 0.00134714;
8448 23174 +  END;
8449 23175 +  END;
8450 23176 +  END;
8451 23177 +
8452 23178 +***** LEAF      68  NODE      457 *****;
8453 23179 +IF _ARB_BADF_ EQ 0 THEN DO;
8454 23180 +
8455 23181 +  _BRANCH_ = -1;
8456 23182 +      IF NOT MISSING(Age ) AND
8457 23183 +      19.5 <= Age  THEN DO;
8458 23184 +      _BRANCH_ =      2;
8459 23185 +  END;
8460 23186 +  IF _BRANCH_ LT 0 THEN DO;
8461 23187 +      IF MISSING( Age  ) THEN _BRANCH_ = 2;
8462 23188 +  END;
8463 23189 +  IF _BRANCH_ GT 0 THEN DO;
8464 23190 +
8465 23191 +      _BRANCH_ = -1;
8466 23192 +      IF NOT MISSING(TotalPurchases ) AND
8467 23193 +      9.5 <= TotalPurchases  THEN

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DO;
8468 23194 +      _BRANCH_ =      2;
8469 23195 +      END;
8470 23196 +
8471 23197 +      IF _BRANCH_ GT 0 THEN DO;
8472 23198 +      _ARB_F_ + -0.004905984;
8473 23199 +      END;
8474 23200 +      END;
8475 23201 +      END;
8476 23202 +
8477 23203 +***** LEAF      69  NODE      461 *****;
8478 23204 +IF _ARB_BADF_ EQ 0 THEN DO;
8479 23205 +
8480 23206 +      _BRANCH_ = -1;
8481 23207 +      IF NOT MISSING( TotalPurchases ) AND
8482 23208 +      TotalPurchases <                      18.5 THEN DO;
8483 23209 +      _BRANCH_ =      1;
8484 23210 +      END;
8485 23211 +      IF _BRANCH_ LT 0 THEN DO;
8486 23212 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8487 23213 +      END;
8488 23214 +      IF _BRANCH_ GT 0 THEN DO;
8489 23215 +
8490 23216 +      _BRANCH_ = -1;
8491 23217 +      IF NOT MISSING( IMP_TotalSpent ) AND
8492 23218 +      IMP_TotalSpent <                      3010.5 THEN D
      O;
8493 23219 +      _BRANCH_ =      1;
8494 23220 +      END;
8495 23221 +
8496 23222 +      IF _BRANCH_ GT 0 THEN DO;
8497 23223 +      _ARB_F_ + -0.003719785;
8498 23224 +      END;
8499 23225 +      END;
8500 23226 +      END;

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8501 23227 +
8502 23228 +***** LEAF      70  NODE      462 *****;
8503 23229 +IF _ARB_BADF_ EQ 0 THEN DO;
8504 23230 +
8505 23231 +   _BRANCH_ = -1;
8506 23232 +   IF NOT MISSING(TotalPurchases ) AND
8507 23233 +   TotalPurchases <                18.5 THEN DO;
8508 23234 +   _BRANCH_ =    1;
8509 23235 +   END;
8510 23236 + IF _BRANCH_ LT 0 THEN DO;
8511 23237 +   IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
      1;
8512 23238 + END;
8513 23239 + IF _BRANCH_ GT 0 THEN DO;
8514 23240 +
8515 23241 +   _BRANCH_ = -1;
8516 23242 +   IF NOT MISSING(IMP_TotalSpent ) AND
8517 23243 +   3010.5 <= IMP_TotalSpent THEN
      DO;
8518 23244 +   _BRANCH_ =    2;
8519 23245 +   END;
8520 23246 + IF _BRANCH_ LT 0 THEN DO;
8521 23247 +   IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
      = 2;
8522 23248 +   END;
8523 23249 + IF _BRANCH_ GT 0 THEN DO;
8524 23250 +   _ARB_F_ + 0.0012695799;
8525 23251 +   END;
8526 23252 +   END;
8527 23253 + END;
8528 23254 +
8529 23255 +***** LEAF      71  NODE      463 *****;
8530 23256 +IF _ARB_BADF_ EQ 0 THEN DO;
8531 23257 +
8532 23258 +   _BRANCH_ = -1;
8533 23259 +   IF NOT MISSING(TotalPurchases ) AND

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8534 23260 +                18.5 <= TotalPurchases  THEN DO
      ;
8535 23261 +      _BRANCH_ =      2;
8536 23262 +      END;
8537 23263 +
8538 23264 +  IF _BRANCH_ GT 0 THEN DO;
8539 23265 +
8540 23266 +      _BRANCH_ = -1;
8541 23267 +      IF NOT MISSING(IMP_TotalSpent ) AND
8542 23268 +      IMP_TotalSpent <                24000 THEN D
      O;
8543 23269 +      _BRANCH_ =      1;
8544 23270 +      END;
8545 23271 +  IF _BRANCH_ LT 0 THEN DO;
8546 23272 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
      = 1;
8547 23273 +      END;
8548 23274 +  IF _BRANCH_ GT 0 THEN DO;
8549 23275 +      _ARB_F_ + 0.0311350158;
8550 23276 +      END;
8551 23277 +      END;
8552 23278 +  END;
8553 23279 +
8554 23280 +***** LEAF      72  NODE      464 *****;
8555 23281 +IF _ARB_BADF_ EQ 0 THEN DO;
8556 23282 +
8557 23283 +  _BRANCH_ = -1;
8558 23284 +      IF NOT MISSING(TotalPurchases ) AND
8559 23285 +                18.5 <= TotalPurchases  THEN DO
      ;
8560 23286 +      _BRANCH_ =      2;
8561 23287 +      END;
8562 23288 +
8563 23289 +  IF _BRANCH_ GT 0 THEN DO;
8564 23290 +
8565 23291 +      _BRANCH_ = -1;

```

```

8566 23292 +      IF NOT MISSING(IMP_TotalSpent ) AND
8567 23293 +      24000 <= IMP_TotalSpent THEN
      DO;
8568 23294 +      _BRANCH_ = 2;
8569 23295 +      END;
8570 23296 +
8571 23297 +      IF _BRANCH_ GT 0 THEN DO;
8572 23298 +      _ARB_F_ + -0.006093231;
8573 23299 +      END;
8574 23300 +      END;
8575 23301 +      END;
8576 23302 +
8577 23303 +***** LEAF 73 NODE 468 *****;
8578 23304 +IF _ARB_BADF_ EQ 0 THEN DO;
8579 23305 +
8580 23306 + _BRANCH_ = -1;
8581 23307 +      IF NOT MISSING(TotalPurchases ) AND
8582 23308 +      TotalPurchases < 16.5 THEN DO;
8583 23309 +      _BRANCH_ = 1;
8584 23310 +      END;
8585 23311 +      IF _BRANCH_ LT 0 THEN DO;
8586 23312 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8587 23313 +      END;
8588 23314 +      IF _BRANCH_ GT 0 THEN DO;
8589 23315 +
8590 23316 +      _BRANCH_ = -1;
8591 23317 +      IF NOT MISSING(Age ) AND
8592 23318 +      Age < 29.5 THEN DO;
8593 23319 +      _BRANCH_ = 1;
8594 23320 +      END;
8595 23321 +
8596 23322 +      IF _BRANCH_ GT 0 THEN DO;
8597 23323 +      _ARB_F_ + 0.0045485243;
8598 23324 +      END;
8599 23325 +      END;

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8600 23326 + END;
8601 23327 +
8602 23328 +***** LEAF      74  NODE      469 *****;
8603 23329 +IF _ARB_BADF_ EQ 0 THEN DO;
8604 23330 +
8605 23331 +   _BRANCH_ = -1;
8606 23332 +   IF NOT MISSING(TotalPurchases ) AND
8607 23333 +   TotalPurchases <                               16.5 THEN DO;
8608 23334 +   _BRANCH_ = 1;
8609 23335 +   END;
8610 23336 + IF _BRANCH_ LT 0 THEN DO;
8611 23337 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8612 23338 + END;
8613 23339 + IF _BRANCH_ GT 0 THEN DO;
8614 23340 +
8615 23341 +   _BRANCH_ = -1;
8616 23342 +   IF NOT MISSING(Age ) AND
8617 23343 +   29.5 <= Age THEN DO;
8618 23344 +   _BRANCH_ = 2;
8619 23345 +   END;
8620 23346 + IF _BRANCH_ LT 0 THEN DO;
8621 23347 +   IF MISSING( Age ) THEN _BRANCH_ = 2;
8622 23348 +   END;
8623 23349 + IF _BRANCH_ GT 0 THEN DO;
8624 23350 +   _ARB_F_ + -0.001807958;
8625 23351 +   END;
8626 23352 +   END;
8627 23353 + END;
8628 23354 +
8629 23355 +***** LEAF      75  NODE      470 *****;
8630 23356 +IF _ARB_BADF_ EQ 0 THEN DO;
8631 23357 +
8632 23358 +   _BRANCH_ = -1;
8633 23359 +   IF NOT MISSING(TotalPurchases ) AND
8634 23360 +   16.5 <= TotalPurchases THEN DO

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;
8635 23361 +      _BRANCH_ =      2;
8636 23362 +      END;
8637 23363 +
8638 23364 +      IF _BRANCH_ GT 0 THEN DO;
8639 23365 +
8640 23366 +      _BRANCH_ = -1;
8641 23367 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
8642 23368 +      %DMNORMIP( _ARBFMT_8);
8643 23369 +      IF _ARBFMT_8 IN ('SILVER' ) THEN DO;
8644 23370 +      _BRANCH_ =      1;
8645 23371 +      END;
8646 23372 +
8647 23373 +      IF _BRANCH_ GT 0 THEN DO;
8648 23374 +      _ARB_F_ + -0.007672138;
8649 23375 +      END;
8650 23376 +      END;
8651 23377 +      END;
8652 23378 +
8653 23379 +***** LEAF      76  NODE      471 *****;
8654 23380 +IF _ARB_BADF_ EQ 0 THEN DO;
8655 23381 +
8656 23382 +      _BRANCH_ = -1;
8657 23383 +      IF NOT MISSING(TotalPurchases ) AND
8658 23384 +      16.5 <= TotalPurchases THEN DO
;
8659 23385 +      _BRANCH_ =      2;
8660 23386 +      END;
8661 23387 +
8662 23388 +      IF _BRANCH_ GT 0 THEN DO;
8663 23389 +
8664 23390 +      _BRANCH_ = -1;
8665 23391 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
8666 23392 +      %DMNORMIP( _ARBFMT_8);
8667 23393 +      IF _ARBFMT_8 IN ('GOLD' , 'PLATINUM' , 'BRONZE'
) THEN DO;

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8668 23394 +      _BRANCH_ =      2;
8669 23395 +      END;
8670 23396 +      IF _BRANCH_ LT 0 THEN DO;
8671 23397 +          IF MISSING( MembershipLevel ) THEN _BRANCH_
            = 2;
8672 23398 +          ELSE IF _ARBFMT_8 NOTIN (
8673 23399 +              'SILVER' , 'GOLD' , 'PLATINUM' , 'BRONZE'
8674 23400 +              ) THEN _BRANCH_ = 2;
8675 23401 +      END;
8676 23402 +      IF _BRANCH_ GT 0 THEN DO;
8677 23403 +          _ARB_F_ + 0.0273067307;
8678 23404 +      END;
8679 23405 +      END;
8680 23406 +      END;
8681 23407 +
8682 23408 +***** LEAF      77  NODE      475 *****;
8683 23409 +IF _ARB_BADF_ EQ 0 THEN DO;
8684 23410 +
8685 23411 +      _BRANCH_ = -1;
8686 23412 +      IF NOT MISSING(IMP_TotalSpent ) AND
8687 23413 +      IMP_TotalSpent <                28061.5 THEN DO;
8688 23414 +          _BRANCH_ =      1;
8689 23415 +      END;
8690 23416 +      IF _BRANCH_ LT 0 THEN DO;
8691 23417 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
            1;
8692 23418 +      END;
8693 23419 +      IF _BRANCH_ GT 0 THEN DO;
8694 23420 +
8695 23421 +          _BRANCH_ = -1;
8696 23422 +          IF NOT MISSING(IMP_TotalSpent ) AND
8697 23423 +          IMP_TotalSpent <                486.5 THEN D
            O;
8698 23424 +          _BRANCH_ =      1;
8699 23425 +      END;
8700 23426 +

```

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8701 23427 +      IF _BRANCH_ GT 0 THEN DO;
8702 23428 +          _ARB_F_ + -0.017981726;
8703 23429 +      END;
8704 23430 +      END;
8705 23431 +  END;
8706 23432 +
8707 23433 +***** LEAF      78  NODE      476 *****;
8708 23434 +IF _ARB_BADF_ EQ 0 THEN DO;
8709 23435 +
8710 23436 +  _BRANCH_ = -1;
8711 23437 +      IF NOT MISSING(IMP_TotalSpent ) AND
8712 23438 +          IMP_TotalSpent <          28061.5 THEN DO;
8713 23439 +          _BRANCH_ =      1;
8714 23440 +      END;
8715 23441 +  IF _BRANCH_ LT 0 THEN DO;
8716 23442 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
8717 23443 +  END;
8718 23444 +  IF _BRANCH_ GT 0 THEN DO;
8719 23445 +
8720 23446 +      _BRANCH_ = -1;
8721 23447 +          IF NOT MISSING(IMP_TotalSpent ) AND
8722 23448 +              486.5 <= IMP_TotalSpent  THEN
      DO;
8723 23449 +          _BRANCH_ =      2;
8724 23450 +      END;
8725 23451 +      IF _BRANCH_ LT 0 THEN DO;
8726 23452 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
      = 2;
8727 23453 +      END;
8728 23454 +      IF _BRANCH_ GT 0 THEN DO;
8729 23455 +          _ARB_F_ + 0.0002939541;
8730 23456 +      END;
8731 23457 +      END;
8732 23458 +  END;
8733 23459 +

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8734 23460 +***** LEAF      79  NODE      474 *****;
8735 23461 +IF _ARB_BADF_ EQ 0 THEN DO;
8736 23462 +
8737 23463 +   _BRANCH_ = -1;
8738 23464 +       IF NOT MISSING(IMP_TotalSpent ) AND
8739 23465 +           28061.5 <= IMP_TotalSpent THEN DO
;
8740 23466 +       _BRANCH_ =      2;
8741 23467 +   END;
8742 23468 +
8743 23469 +   IF _BRANCH_ GT 0 THEN DO;
8744 23470 +       _ARB_F_ + 0.0465749879;
8745 23471 +   END;
8746 23472 + END;
8747 23473 +
8748 23474 +***** LEAF      80  NODE      480 *****;
8749 23475 +IF _ARB_BADF_ EQ 0 THEN DO;
8750 23476 +
8751 23477 +   _BRANCH_ = -1;
8752 23478 +       IF NOT MISSING(IMP_TotalSpent ) AND
8753 23479 +       IMP_TotalSpent <           13435.5 THEN DO;
8754 23480 +       _BRANCH_ =      1;
8755 23481 +   END;
8756 23482 +   IF _BRANCH_ LT 0 THEN DO;
8757 23483 +       IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
8758 23484 +   END;
8759 23485 +   IF _BRANCH_ GT 0 THEN DO;
8760 23486 +
8761 23487 +       _BRANCH_ = -1;
8762 23488 +       IF NOT MISSING(IMP_TotalSpent ) AND
8763 23489 +       IMP_TotalSpent <           491 THEN D
O;
8764 23490 +       _BRANCH_ =      1;
8765 23491 +   END;
8766 23492 +

```

```

8767 23493 +      IF _BRANCH_ GT 0 THEN DO;
8768 23494 +          _ARB_F_ + -0.016884287;
8769 23495 +      END;
8770 23496 +      END;
8771 23497 +  END;
8772 23498 +
8773 23499 +***** LEAF      81  NODE      481 *****;
8774 23500 +IF _ARB_BADF_ EQ 0 THEN DO;
8775 23501 +
8776 23502 +  _BRANCH_ = -1;
8777 23503 +      IF NOT MISSING(IMP_TotalSpent ) AND
8778 23504 +      IMP_TotalSpent <          13435.5 THEN DO;
8779 23505 +      _BRANCH_ =      1;
8780 23506 +      END;
8781 23507 +  IF _BRANCH_ LT 0 THEN DO;
8782 23508 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
      1;
8783 23509 +  END;
8784 23510 +  IF _BRANCH_ GT 0 THEN DO;
8785 23511 +
8786 23512 +      _BRANCH_ = -1;
8787 23513 +      IF NOT MISSING(IMP_TotalSpent ) AND
8788 23514 +          491 <= IMP_TotalSpent  THEN
      DO;
8789 23515 +          _BRANCH_ =      2;
8790 23516 +      END;
8791 23517 +      IF _BRANCH_ LT 0 THEN DO;
8792 23518 +          IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
      = 2;
8793 23519 +      END;
8794 23520 +      IF _BRANCH_ GT 0 THEN DO;
8795 23521 +          _ARB_F_ + -0.000159681;
8796 23522 +      END;
8797 23523 +      END;
8798 23524 +  END;
8799 23525 +

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8800 23526 +***** LEAF      82  NODE      482 *****;
8801 23527 +IF _ARB_BADF_ EQ 0 THEN DO;
8802 23528 +
8803 23529 +   _BRANCH_ = -1;
8804 23530 +       IF NOT MISSING(IMP_TotalSpent ) AND
8805 23531 +           13435.5 <= IMP_TotalSpent THEN DO
;
8806 23532 +       _BRANCH_ = 2;
8807 23533 +   END;
8808 23534 +
8809 23535 +   IF _BRANCH_ GT 0 THEN DO;
8810 23536 +
8811 23537 +       _BRANCH_ = -1;
8812 23538 +       IF NOT MISSING(Age ) AND
8813 23539 +       Age < 39.5 THEN DO;
8814 23540 +       _BRANCH_ = 1;
8815 23541 +   END;
8816 23542 +
8817 23543 +   IF _BRANCH_ GT 0 THEN DO;
8818 23544 +       _ARB_F_ + -0.021557338;
8819 23545 +   END;
8820 23546 +   END;
8821 23547 + END;
8822 23548 +
8823 23549 +***** LEAF      83  NODE      483 *****;
8824 23550 +IF _ARB_BADF_ EQ 0 THEN DO;
8825 23551 +
8826 23552 +   _BRANCH_ = -1;
8827 23553 +       IF NOT MISSING(IMP_TotalSpent ) AND
8828 23554 +           13435.5 <= IMP_TotalSpent THEN DO
;
8829 23555 +       _BRANCH_ = 2;
8830 23556 +   END;
8831 23557 +
8832 23558 +   IF _BRANCH_ GT 0 THEN DO;
8833 23559 +

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```

8834 23560 +      _BRANCH_ = -1;
8835 23561 +      IF NOT MISSING(Age ) AND
8836 23562 +                39.5 <= Age THEN DO;
8837 23563 +      _BRANCH_ =      2;
8838 23564 +      END;
8839 23565 +      IF _BRANCH_ LT 0 THEN DO;
8840 23566 +      IF MISSING( Age ) THEN _BRANCH_ = 2;
8841 23567 +      END;
8842 23568 +      IF _BRANCH_ GT 0 THEN DO;
8843 23569 +      _ARB_F_ + 0.0185084939;
8844 23570 +      END;
8845 23571 +      END;
8846 23572 +      END;
8847 23573 +
8848 23574 +***** LEAF      84  NODE      487 *****;
8849 23575 +IF _ARB_BADF_ EQ 0 THEN DO;
8850 23576 +
8851 23577 +      _BRANCH_ = -1;
8852 23578 +      IF NOT MISSING(TotalPurchases ) AND
8853 23579 +      TotalPurchases <                16.5 THEN DO;
8854 23580 +      _BRANCH_ =      1;
8855 23581 +      END;
8856 23582 +      IF _BRANCH_ LT 0 THEN DO;
8857 23583 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8858 23584 +      END;
8859 23585 +      IF _BRANCH_ GT 0 THEN DO;
8860 23586 +
8861 23587 +      _BRANCH_ = -1;
8862 23588 +      IF NOT MISSING(Age ) AND
8863 23589 +      Age <                19.5 THEN DO;
8864 23590 +      _BRANCH_ =      1;
8865 23591 +      END;
8866 23592 +
8867 23593 +      IF _BRANCH_ GT 0 THEN DO;
8868 23594 +      _ARB_F_ + -0.013781471;

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8869 23595 +      END;
8870 23596 +      END;
8871 23597 +    END;
8872 23598 +
8873 23599 +***** LEAF      85  NODE      488 *****;
8874 23600 +IF _ARB_BADF_ EQ 0 THEN DO;
8875 23601 +
8876 23602 +   _BRANCH_ = -1;
8877 23603 +   IF NOT MISSING( TotalPurchases ) AND
8878 23604 +   TotalPurchases <                      16.5 THEN DO;
8879 23605 +   _BRANCH_ = 1;
8880 23606 +   END;
8881 23607 + IF _BRANCH_ LT 0 THEN DO;
8882 23608 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
      1;
8883 23609 + END;
8884 23610 + IF _BRANCH_ GT 0 THEN DO;
8885 23611 +
8886 23612 +   _BRANCH_ = -1;
8887 23613 +   IF NOT MISSING( Age ) AND
8888 23614 +   19.5 <= Age THEN DO;
8889 23615 +   _BRANCH_ = 2;
8890 23616 +   END;
8891 23617 + IF _BRANCH_ LT 0 THEN DO;
8892 23618 +   IF MISSING( Age ) THEN _BRANCH_ = 2;
8893 23619 +   END;
8894 23620 + IF _BRANCH_ GT 0 THEN DO;
8895 23621 +   _ARB_F_ + -0.000233373;
8896 23622 +   END;
8897 23623 +   END;
8898 23624 + END;
8899 23625 +
8900 23626 +***** LEAF      86  NODE      489 *****;
8901 23627 +IF _ARB_BADF_ EQ 0 THEN DO;
8902 23628 +
8903 23629 +   _BRANCH_ = -1;

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8904 23630 +      IF NOT MISSING(TotalPurchases ) AND
8905 23631 +                  16.5 <= TotalPurchases THEN DO
      ;
8906 23632 +      _BRANCH_ =      2;
8907 23633 +      END;
8908 23634 +
8909 23635 +      IF _BRANCH_ GT 0 THEN DO;
8910 23636 +
8911 23637 +      _BRANCH_ = -1;
8912 23638 +      IF NOT MISSING(Age ) AND
8913 23639 +      Age <                  60.5 THEN DO;
8914 23640 +      _BRANCH_ =      1;
8915 23641 +      END;
8916 23642 +      IF _BRANCH_ LT 0 THEN DO;
8917 23643 +      IF MISSING( Age ) THEN _BRANCH_ = 1;
8918 23644 +      END;
8919 23645 +      IF _BRANCH_ GT 0 THEN DO;
8920 23646 +      _ARB_F_ + 0.0372191251;
8921 23647 +      END;
8922 23648 +      END;
8923 23649 +      END;
8924 23650 +
8925 23651 +***** LEAF      87  NODE      490 *****;
8926 23652 +IF _ARB_BADF_ EQ 0 THEN DO;
8927 23653 +
8928 23654 +      _BRANCH_ = -1;
8929 23655 +      IF NOT MISSING(TotalPurchases ) AND
8930 23656 +                  16.5 <= TotalPurchases THEN DO
      ;
8931 23657 +      _BRANCH_ =      2;
8932 23658 +      END;
8933 23659 +
8934 23660 +      IF _BRANCH_ GT 0 THEN DO;
8935 23661 +
8936 23662 +      _BRANCH_ = -1;
8937 23663 +      IF NOT MISSING(Age ) AND

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8938 23664 +                60.5 <= Age THEN DO;
8939 23665 +                _BRANCH_ = 2;
8940 23666 +                END;
8941 23667 +
8942 23668 +                IF _BRANCH_ GT 0 THEN DO;
8943 23669 +                _ARB_F_ + 0.0009935821;
8944 23670 +                END;
8945 23671 +                END;
8946 23672 +            END;
8947 23673 +
8948 23674 +***** LEAF      88  NODE      494 *****;
8949 23675 +IF _ARB_BADF_ EQ 0 THEN DO;
8950 23676 +
8951 23677 +    _BRANCH_ = -1;
8952 23678 +    IF NOT MISSING(Age ) AND
8953 23679 +    Age <                19.5 THEN DO;
8954 23680 +    _BRANCH_ = 1;
8955 23681 +    END;
8956 23682 +
8957 23683 +    IF _BRANCH_ GT 0 THEN DO;
8958 23684 +
8959 23685 +    _BRANCH_ = -1;
8960 23686 +    _ARBFMT_8 = PUT( MembershipLevel , $8.);
8961 23687 +    %DMNORMIP( _ARBFMT_8);
8962 23688 +    IF _ARBFMT_8 IN ('SILVER' , 'PLATINUM' ) THEN
DO;
8963 23689 +    _BRANCH_ = 1;
8964 23690 +    END;
8965 23691 +    IF _BRANCH_ LT 0 THEN DO;
8966 23692 +    IF MISSING( MembershipLevel ) THEN _BRANCH_
= 1;
8967 23693 +    ELSE IF _ARBFMT_8 NOTIN (
8968 23694 +    'SILVER' , 'PLATINUM' , 'GOLD' , 'BRONZE'
8969 23695 +    ) THEN _BRANCH_ = 1;
8970 23696 +    END;
8971 23697 +    IF _BRANCH_ GT 0 THEN DO;

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8972 23698 +      _ARB_F_ + -0.010859518;
8973 23699 +      END;
8974 23700 +      END;
8975 23701 +      END;
8976 23702 +
8977 23703 +***** LEAF      89  NODE      495 *****;
8978 23704 +IF _ARB_BADF_ EQ 0 THEN DO;
8979 23705 +
8980 23706 +      _BRANCH_ = -1;
8981 23707 +      IF NOT MISSING(Age ) AND
8982 23708 +      Age <                      19.5 THEN DO;
8983 23709 +      _BRANCH_ =      1;
8984 23710 +      END;
8985 23711 +
8986 23712 +      IF _BRANCH_ GT 0 THEN DO;
8987 23713 +
8988 23714 +      _BRANCH_ = -1;
8989 23715 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
8990 23716 +      %DMNORMIP( _ARBFMT_8);
8991 23717 +      IF _ARBFMT_8 IN ('GOLD' , 'BRONZE' ) THEN DO;
8992 23718 +      _BRANCH_ =      2;
8993 23719 +      END;
8994 23720 +
8995 23721 +      IF _BRANCH_ GT 0 THEN DO;
8996 23722 +      _ARB_F_ + -0.029100888;
8997 23723 +      END;
8998 23724 +      END;
8999 23725 +      END;
9000 23726 +
9001 23727 +***** LEAF      90  NODE      496 *****;
9002 23728 +IF _ARB_BADF_ EQ 0 THEN DO;
9003 23729 +
9004 23730 +      _BRANCH_ = -1;
9005 23731 +      IF NOT MISSING(Age ) AND
9006 23732 +      19.5 <= Age THEN DO;
9007 23733 +      _BRANCH_ =      2;

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9008 23734 +      END;
9009 23735 +      IF _BRANCH_ LT 0 THEN DO;
9010 23736 +          IF MISSING( Age ) THEN _BRANCH_ = 2;
9011 23737 +      END;
9012 23738 +      IF _BRANCH_ GT 0 THEN DO;
9013 23739 +
9014 23740 +          _BRANCH_ = -1;
9015 23741 +          IF NOT MISSING( TotalPurchases ) AND
9016 23742 +              TotalPurchases < 5.5 THEN D
O;
9017 23743 +          _BRANCH_ = 1;
9018 23744 +      END;
9019 23745 +      IF _BRANCH_ LT 0 THEN DO;
9020 23746 +          IF MISSING( TotalPurchases ) THEN _BRANCH_
= 1;
9021 23747 +      END;
9022 23748 +      IF _BRANCH_ GT 0 THEN DO;
9023 23749 +          _ARB_F_ + -0.001757945;
9024 23750 +      END;
9025 23751 +      END;
9026 23752 +      END;
9027 23753 +
9028 23754 +***** LEAF      91  NODE      497 *****;
9029 23755 +IF _ARB_BADF_ EQ 0 THEN DO;
9030 23756 +
9031 23757 +      _BRANCH_ = -1;
9032 23758 +          IF NOT MISSING( Age ) AND
9033 23759 +              19.5 <= Age THEN DO;
9034 23760 +              _BRANCH_ = 2;
9035 23761 +          END;
9036 23762 +      IF _BRANCH_ LT 0 THEN DO;
9037 23763 +          IF MISSING( Age ) THEN _BRANCH_ = 2;
9038 23764 +      END;
9039 23765 +      IF _BRANCH_ GT 0 THEN DO;
9040 23766 +
9041 23767 +          _BRANCH_ = -1;

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9042 23768 +      IF NOT MISSING(TotalPurchases ) AND
9043 23769 +      5.5 <= TotalPurchases THEN
      DO;
9044 23770 +      _BRANCH_ = 2;
9045 23771 +      END;
9046 23772 +
9047 23773 +      IF _BRANCH_ GT 0 THEN DO;
9048 23774 +      _ARB_F_ + 0.0047131229;
9049 23775 +      END;
9050 23776 +      END;
9051 23777 +      END;
9052 23778 +
9053 23779 +***** LEAF 92 NODE 501 *****;
9054 23780 +IF _ARB_BADF_ EQ 0 THEN DO;
9055 23781 +
9056 23782 + _BRANCH_ = -1;
9057 23783 +      IF NOT MISSING(Age ) AND
9058 23784 +      Age < 19.5 THEN DO;
9059 23785 +      _BRANCH_ = 1;
9060 23786 +      END;
9061 23787 +
9062 23788 +      IF _BRANCH_ GT 0 THEN DO;
9063 23789 +
9064 23790 +      _BRANCH_ = -1;
9065 23791 +      IF NOT MISSING(IMP_TotalSpent ) AND
9066 23792 +      IMP_TotalSpent < 4529.5 THEN D
      O;
9067 23793 +      _BRANCH_ = 1;
9068 23794 +      END;
9069 23795 +      IF _BRANCH_ LT 0 THEN DO;
9070 23796 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 1;
9071 23797 +      END;
9072 23798 +      IF _BRANCH_ GT 0 THEN DO;
9073 23799 +      _ARB_F_ + -0.001573395;
9074 23800 +      END;

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9075 23801 +      END;
9076 23802 +      END;
9077 23803 +
9078 23804 +***** LEAF      93  NODE      502 *****;
9079 23805 +IF _ARB_BADF_ EQ 0 THEN DO;
9080 23806 +
9081 23807 +      _BRANCH_ = -1;
9082 23808 +      IF NOT MISSING(Age ) AND
9083 23809 +      Age <                      19.5 THEN DO;
9084 23810 +      _BRANCH_ =      1;
9085 23811 +      END;
9086 23812 +
9087 23813 +      IF _BRANCH_ GT 0 THEN DO;
9088 23814 +
9089 23815 +      _BRANCH_ = -1;
9090 23816 +      IF NOT MISSING(IMP_TotalSpent ) AND
9091 23817 +      4529.5 <= IMP_TotalSpent THEN
DO;
9092 23818 +      _BRANCH_ =      2;
9093 23819 +      END;
9094 23820 +
9095 23821 +      IF _BRANCH_ GT 0 THEN DO;
9096 23822 +      _ARB_F_ + -0.027770116;
9097 23823 +      END;
9098 23824 +      END;
9099 23825 +      END;
9100 23826 +
9101 23827 +***** LEAF      94  NODE      503 *****;
9102 23828 +IF _ARB_BADF_ EQ 0 THEN DO;
9103 23829 +
9104 23830 +      _BRANCH_ = -1;
9105 23831 +      IF NOT MISSING(Age ) AND
9106 23832 +      19.5 <= Age THEN DO;
9107 23833 +      _BRANCH_ =      2;
9108 23834 +      END;
9109 23835 +      IF _BRANCH_ LT 0 THEN DO;

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```

9110 23836 +      IF MISSING( Age  ) THEN _BRANCH_ = 2;
9111 23837 +      END;
9112 23838 +      IF _BRANCH_ GT 0 THEN DO;
9113 23839 +
9114 23840 +          _BRANCH_ = -1;
9115 23841 +          IF NOT MISSING(Age ) AND
9116 23842 +              Age < 29.5 THEN DO;
9117 23843 +              _BRANCH_ = 1;
9118 23844 +          END;
9119 23845 +
9120 23846 +      IF _BRANCH_ GT 0 THEN DO;
9121 23847 +          _ARB_F_ + 0.0057029716;
9122 23848 +      END;
9123 23849 +      END;
9124 23850 +      END;
9125 23851 +
9126 23852 +***** LEAF      95  NODE      504 *****;
9127 23853 +IF _ARB_BADF_ EQ 0 THEN DO;
9128 23854 +
9129 23855 +      _BRANCH_ = -1;
9130 23856 +      IF NOT MISSING(Age ) AND
9131 23857 +          19.5 <= Age THEN DO;
9132 23858 +          _BRANCH_ = 2;
9133 23859 +      END;
9134 23860 +      IF _BRANCH_ LT 0 THEN DO;
9135 23861 +          IF MISSING( Age  ) THEN _BRANCH_ = 2;
9136 23862 +      END;
9137 23863 +      IF _BRANCH_ GT 0 THEN DO;
9138 23864 +
9139 23865 +          _BRANCH_ = -1;
9140 23866 +          IF NOT MISSING(Age ) AND
9141 23867 +              29.5 <= Age THEN DO;
9142 23868 +              _BRANCH_ = 2;
9143 23869 +          END;
9144 23870 +      IF _BRANCH_ LT 0 THEN DO;
9145 23871 +          IF MISSING( Age  ) THEN _BRANCH_ = 2;

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```

9146 23872 +      END;
9147 23873 +      IF _BRANCH_ GT 0 THEN DO;
9148 23874 +          _ARB_F_ + -0.000837549;
9149 23875 +      END;
9150 23876 +      END;
9151 23877 +  END;
9152 23878 +
9153 23879 +***** LEAF      96  NODE      508 *****;
9154 23880 +IF _ARB_BADF_ EQ 0 THEN DO;
9155 23881 +
9156 23882 +  _BRANCH_ = -1;
9157 23883 +      IF NOT MISSING(Age ) AND
9158 23884 +      Age <                      65.5 THEN DO;
9159 23885 +          _BRANCH_ =      1;
9160 23886 +      END;
9161 23887 +  IF _BRANCH_ LT 0 THEN DO;
9162 23888 +      IF MISSING( Age ) THEN _BRANCH_ = 1;
9163 23889 +  END;
9164 23890 +  IF _BRANCH_ GT 0 THEN DO;
9165 23891 +
9166 23892 +      _BRANCH_ = -1;
9167 23893 +      IF NOT MISSING(IMP_TotalSpent ) AND
9168 23894 +      IMP_TotalSpent <                      24474 THEN D
          O;
9169 23895 +          _BRANCH_ =      1;
9170 23896 +      END;
9171 23897 +      IF _BRANCH_ LT 0 THEN DO;
9172 23898 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 1;
9173 23899 +      END;
9174 23900 +      IF _BRANCH_ GT 0 THEN DO;
9175 23901 +          _ARB_F_ + -0.000895791;
9176 23902 +      END;
9177 23903 +      END;
9178 23904 +  END;
9179 23905 +

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9180 23906 +***** LEAF      97  NODE      509 *****;
9181 23907 +IF _ARB_BADF_ EQ 0 THEN DO;
9182 23908 +
9183 23909 +   _BRANCH_ = -1;
9184 23910 +   IF NOT MISSING(Age ) AND
9185 23911 +   Age <                               65.5 THEN DO;
9186 23912 +   _BRANCH_ =      1;
9187 23913 +   END;
9188 23914 + IF _BRANCH_ LT 0 THEN DO;
9189 23915 +   IF MISSING( Age ) THEN _BRANCH_ = 1;
9190 23916 + END;
9191 23917 + IF _BRANCH_ GT 0 THEN DO;
9192 23918 +
9193 23919 +   _BRANCH_ = -1;
9194 23920 +   IF NOT MISSING(IMP_TotalSpent ) AND
9195 23921 +   24474 <= IMP_TotalSpent THEN
DO;
9196 23922 +   _BRANCH_ =      2;
9197 23923 +   END;
9198 23924 +
9199 23925 +   IF _BRANCH_ GT 0 THEN DO;
9200 23926 +   _ARB_F_ + -0.035501352;
9201 23927 +   END;
9202 23928 +   END;
9203 23929 + END;
9204 23930 +
9205 23931 +***** LEAF      98  NODE      510 *****;
9206 23932 +IF _ARB_BADF_ EQ 0 THEN DO;
9207 23933 +
9208 23934 +   _BRANCH_ = -1;
9209 23935 +   IF NOT MISSING(Age ) AND
9210 23936 +   65.5 <= Age THEN DO;
9211 23937 +   _BRANCH_ =      2;
9212 23938 +   END;
9213 23939 +
9214 23940 + IF _BRANCH_ GT 0 THEN DO;

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```

9215 23941 +
9216 23942 +     _BRANCH_ = -1;
9217 23943 +     IF NOT MISSING(IMP_TotalSpent ) AND
9218 23944 +     IMP_TotalSpent < 3163 THEN D
      O;
9219 23945 +     _BRANCH_ = 1;
9220 23946 +     END;
9221 23947 +
9222 23948 +     IF _BRANCH_ GT 0 THEN DO;
9223 23949 +         _ARB_F_ + -0.005992489;
9224 23950 +     END;
9225 23951 +     END;
9226 23952 + END;
9227 23953 +
9228 23954 +***** LEAF 99 NODE 511 *****;
9229 23955 +IF _ARB_BADF_ EQ 0 THEN DO;
9230 23956 +
9231 23957 +     _BRANCH_ = -1;
9232 23958 +     IF NOT MISSING(Age ) AND
9233 23959 +         65.5 <= Age THEN DO;
9234 23960 +         _BRANCH_ = 2;
9235 23961 +     END;
9236 23962 +
9237 23963 + IF _BRANCH_ GT 0 THEN DO;
9238 23964 +
9239 23965 +     _BRANCH_ = -1;
9240 23966 +     IF NOT MISSING(IMP_TotalSpent ) AND
9241 23967 +         3163 <= IMP_TotalSpent THEN
      DO;
9242 23968 +         _BRANCH_ = 2;
9243 23969 +     END;
9244 23970 +     IF _BRANCH_ LT 0 THEN DO;
9245 23971 +         IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
9246 23972 +     END;
9247 23973 +     IF _BRANCH_ GT 0 THEN DO;

```

```

9248 23974 +      _ARB_F_ + 0.0121463803;
9249 23975 +      END;
9250 23976 +      END;
9251 23977 +      END;
9252 23978 +
9253 23979 +***** LEAF    100  NODE    515 *****;
9254 23980 +IF _ARB_BADF_ EQ 0 THEN DO;
9255 23981 +
9256 23982 +      _BRANCH_ = -1;
9257 23983 +      IF NOT MISSING(TotalPurchases ) AND
9258 23984 +      TotalPurchases  <                26.5 THEN DO;
9259 23985 +      _BRANCH_ =      1;
9260 23986 +      END;
9261 23987 +      IF _BRANCH_ LT 0 THEN DO;
9262 23988 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          1;
9263 23989 +      END;
9264 23990 +      IF _BRANCH_ GT 0 THEN DO;
9265 23991 +
9266 23992 +      _BRANCH_ = -1;
9267 23993 +      IF NOT MISSING(TotalPurchases ) AND
9268 23994 +      TotalPurchases  <                23.5 THEN D
          O;
9269 23995 +      _BRANCH_ =      1;
9270 23996 +      END;
9271 23997 +      IF _BRANCH_ LT 0 THEN DO;
9272 23998 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_
          = 1;
9273 23999 +      END;
9274 24000 +      IF _BRANCH_ GT 0 THEN DO;
9275 24001 +      _ARB_F_ + 0.000071794;
9276 24002 +      END;
9277 24003 +      END;
9278 24004 +      END;
9279 24005 +
9280 24006 +***** LEAF    101  NODE    516 *****;

```

```

9281 24007 +IF _ARB_BADF_ EQ 0 THEN DO;
9282 24008 +
9283 24009 +   _BRANCH_ = -1;
9284 24010 +   IF NOT MISSING(TotalPurchases ) AND
9285 24011 +   TotalPurchases < 26.5 THEN DO;
9286 24012 +   _BRANCH_ = 1;
9287 24013 +   END;
9288 24014 + IF _BRANCH_ LT 0 THEN DO;
9289 24015 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
9290 24016 + END;
9291 24017 + IF _BRANCH_ GT 0 THEN DO;
9292 24018 +
9293 24019 +   _BRANCH_ = -1;
9294 24020 +   IF NOT MISSING(TotalPurchases ) AND
9295 24021 +   23.5 <= TotalPurchases THEN
DO;
9296 24022 +   _BRANCH_ = 2;
9297 24023 +   END;
9298 24024 +
9299 24025 +   IF _BRANCH_ GT 0 THEN DO;
9300 24026 +   _ARB_F_ + -0.034760532;
9301 24027 +   END;
9302 24028 +   END;
9303 24029 + END;
9304 24030 +
9305 24031 +***** LEAF 102 NODE 514 *****;
9306 24032 +IF _ARB_BADF_ EQ 0 THEN DO;
9307 24033 +
9308 24034 +   _BRANCH_ = -1;
9309 24035 +   IF NOT MISSING(TotalPurchases ) AND
9310 24036 +   26.5 <= TotalPurchases THEN DO
;
9311 24037 +   _BRANCH_ = 2;
9312 24038 +   END;
9313 24039 +

```

```

9314 24040 + IF _BRANCH_ GT 0 THEN DO;
9315 24041 +     _ARB_F_ + 0.0349287727;
9316 24042 +     END;
9317 24043 + END;
9318 24044 +
9319 24045 +***** LEAF    103  NODE    520 *****;
9320 24046 +IF _ARB_BADF_ EQ 0 THEN DO;
9321 24047 +
9322 24048 +     _BRANCH_ = -1;
9323 24049 +     IF NOT MISSING(TotalPurchases ) AND
9324 24050 +     TotalPurchases <                18.5 THEN DO;
9325 24051 +     _BRANCH_ =    1;
9326 24052 +     END;
9327 24053 + IF _BRANCH_ LT 0 THEN DO;
9328 24054 +     IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
1;
9329 24055 + END;
9330 24056 + IF _BRANCH_ GT 0 THEN DO;
9331 24057 +
9332 24058 +     _BRANCH_ = -1;
9333 24059 +     IF NOT MISSING(IMP_TotalSpent ) AND
9334 24060 +     IMP_TotalSpent <                18722.5 THEN D
O;
9335 24061 +     _BRANCH_ =    1;
9336 24062 +     END;
9337 24063 + IF _BRANCH_ LT 0 THEN DO;
9338 24064 +     IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
= 1;
9339 24065 +     END;
9340 24066 + IF _BRANCH_ GT 0 THEN DO;
9341 24067 +     _ARB_F_ + -0.000214929;
9342 24068 +     END;
9343 24069 +     END;
9344 24070 + END;
9345 24071 +
9346 24072 +***** LEAF    104  NODE    521 *****;

```

```

9347 24073 +IF _ARB_BADF_ EQ 0 THEN DO;
9348 24074 +
9349 24075 +   _BRANCH_ = -1;
9350 24076 +   IF NOT MISSING(TotalPurchases ) AND
9351 24077 +   TotalPurchases < 18.5 THEN DO;
9352 24078 +   _BRANCH_ = 1;
9353 24079 +   END;
9354 24080 + IF _BRANCH_ LT 0 THEN DO;
9355 24081 +   IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
9356 24082 + END;
9357 24083 + IF _BRANCH_ GT 0 THEN DO;
9358 24084 +
9359 24085 +   _BRANCH_ = -1;
9360 24086 +   IF NOT MISSING(IMP_TotalSpent ) AND
9361 24087 +   18722.5 <= IMP_TotalSpent THEN
DO;
9362 24088 +   _BRANCH_ = 2;
9363 24089 +   END;
9364 24090 +
9365 24091 +   IF _BRANCH_ GT 0 THEN DO;
9366 24092 +   _ARB_F_ + -0.035771391;
9367 24093 +   END;
9368 24094 +   END;
9369 24095 + END;
9370 24096 +
9371 24097 +***** LEAF 105 NODE 522 *****;
9372 24098 +IF _ARB_BADF_ EQ 0 THEN DO;
9373 24099 +
9374 24100 +   _BRANCH_ = -1;
9375 24101 +   IF NOT MISSING(TotalPurchases ) AND
9376 24102 +   18.5 <= TotalPurchases THEN DO
;
9377 24103 +   _BRANCH_ = 2;
9378 24104 +   END;
9379 24105 +

```

```

9380 24106 + IF _BRANCH_ GT 0 THEN DO;
9381 24107 +
9382 24108 +     _BRANCH_ = -1;
9383 24109 +     IF NOT MISSING(Age ) AND
9384 24110 +     Age < 63.5 THEN DO;
9385 24111 +     _BRANCH_ = 1;
9386 24112 +     END;
9387 24113 + IF _BRANCH_ LT 0 THEN DO;
9388 24114 +     IF MISSING( Age ) THEN _BRANCH_ = 1;
9389 24115 +     END;
9390 24116 + IF _BRANCH_ GT 0 THEN DO;
9391 24117 +     _ARB_F_ + 0.0314097579;
9392 24118 +     END;
9393 24119 +     END;
9394 24120 + END;
9395 24121 +
9396 24122 +***** LEAF 106 NODE 523 *****;
9397 24123 +IF _ARB_BADF_ EQ 0 THEN DO;
9398 24124 +
9399 24125 + _BRANCH_ = -1;
9400 24126 + IF NOT MISSING(TotalPurchases ) AND
9401 24127 + 18.5 <= TotalPurchases THEN DO
;
9402 24128 + _BRANCH_ = 2;
9403 24129 + END;
9404 24130 +
9405 24131 + IF _BRANCH_ GT 0 THEN DO;
9406 24132 +
9407 24133 + _BRANCH_ = -1;
9408 24134 + IF NOT MISSING(Age ) AND
9409 24135 + 63.5 <= Age THEN DO;
9410 24136 + _BRANCH_ = 2;
9411 24137 + END;
9412 24138 +
9413 24139 + IF _BRANCH_ GT 0 THEN DO;
9414 24140 + _ARB_F_ + -0.00315442;

```



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9415 24141 +      END;
9416 24142 +      END;
9417 24143 +  END;
9418 24144 +
9419 24145 +***** LEAF    107  NODE    527 *****;
9420 24146 +IF _ARB_BADF_ EQ 0 THEN DO;
9421 24147 +
9422 24148 +  _BRANCH_ = -1;
9423 24149 +      IF NOT MISSING(IMP_TotalSpent ) AND
9424 24150 +      IMP_TotalSpent <                5184.5 THEN DO;
9425 24151 +      _BRANCH_ =    1;
9426 24152 +      END;
9427 24153 +  IF _BRANCH_ LT 0 THEN DO;
9428 24154 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
          1;
9429 24155 +  END;
9430 24156 +  IF _BRANCH_ GT 0 THEN DO;
9431 24157 +
9432 24158 +      _BRANCH_ = -1;
9433 24159 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
9434 24160 +      %DMNORMIP( _ARBFMT_8);
9435 24161 +      IF _ARBFMT_8 IN ('SILVER' , 'GOLD' , 'BRONZE' )
          THEN DO;
9436 24162 +      _BRANCH_ =    1;
9437 24163 +      END;
9438 24164 +      IF _BRANCH_ LT 0 THEN DO;
9439 24165 +      IF MISSING( MembershipLevel  ) THEN _BRANCH_
          = 1;
9440 24166 +      ELSE IF _ARBFMT_8 NOTIN (
9441 24167 +          'SILVER' , 'GOLD' , 'BRONZE' , 'PLATINUM'
9442 24168 +          ) THEN _BRANCH_ = 1;
9443 24169 +      END;
9444 24170 +      IF _BRANCH_ GT 0 THEN DO;
9445 24171 +      _ARB_F_ + -0.003462002;
9446 24172 +      END;
9447 24173 +      END;

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```

9448 24174 + END;
9449 24175 +
9450 24176 +***** LEAF 108 NODE 528 *****;
9451 24177 +IF _ARB_BADF_ EQ 0 THEN DO;
9452 24178 +
9453 24179 + _BRANCH_ = -1;
9454 24180 + IF NOT MISSING(IMP_TotalSpent ) AND
9455 24181 + IMP_TotalSpent < 5184.5 THEN DO;
9456 24182 + _BRANCH_ = 1;
9457 24183 + END;
9458 24184 + IF _BRANCH_ LT 0 THEN DO;
9459 24185 + IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
9460 24186 + END;
9461 24187 + IF _BRANCH_ GT 0 THEN DO;
9462 24188 +
9463 24189 + _BRANCH_ = -1;
9464 24190 + _ARBFMT_8 = PUT( MembershipLevel , $8.);
9465 24191 + %DMNORMIP( _ARBFMT_8);
9466 24192 + IF _ARBFMT_8 IN ('PLATINUM' ) THEN DO;
9467 24193 + _BRANCH_ = 2;
9468 24194 + END;
9469 24195 +
9470 24196 + IF _BRANCH_ GT 0 THEN DO;
9471 24197 + _ARB_F_ + 0.0032365196;
9472 24198 + END;
9473 24199 + END;
9474 24200 + END;
9475 24201 +
9476 24202 +***** LEAF 109 NODE 529 *****;
9477 24203 +IF _ARB_BADF_ EQ 0 THEN DO;
9478 24204 +
9479 24205 + _BRANCH_ = -1;
9480 24206 + IF NOT MISSING(IMP_TotalSpent ) AND
9481 24207 + 5184.5 <= IMP_TotalSpent THEN DO
;

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```

9482 24208 +      _BRANCH_ =      2;
9483 24209 +      END;
9484 24210 +
9485 24211 +  IF _BRANCH_ GT 0 THEN DO;
9486 24212 +
9487 24213 +      _BRANCH_ = -1;
9488 24214 +      IF NOT MISSING(Age ) AND
9489 24215 +      Age <                               61.5 THEN DO;
9490 24216 +      _BRANCH_ =      1;
9491 24217 +      END;
9492 24218 +  IF _BRANCH_ LT 0 THEN DO;
9493 24219 +      IF MISSING( Age ) THEN _BRANCH_ = 1;
9494 24220 +  END;
9495 24221 +  IF _BRANCH_ GT 0 THEN DO;
9496 24222 +      _ARB_F_ + -0.000408516;
9497 24223 +      END;
9498 24224 +  END;
9499 24225 +  END;
9500 24226 +
9501 24227 +***** LEAF      110  NODE      530 *****;
9502 24228 +IF _ARB_BADF_ EQ 0 THEN DO;
9503 24229 +
9504 24230 +  _BRANCH_ = -1;
9505 24231 +      IF NOT MISSING(IMP_TotalSpent ) AND
9506 24232 +      5184.5 <= IMP_TotalSpent THEN DO
          ;
9507 24233 +      _BRANCH_ =      2;
9508 24234 +      END;
9509 24235 +
9510 24236 +  IF _BRANCH_ GT 0 THEN DO;
9511 24237 +
9512 24238 +      _BRANCH_ = -1;
9513 24239 +      IF NOT MISSING(Age ) AND
9514 24240 +      61.5 <= Age THEN DO;
9515 24241 +      _BRANCH_ =      2;
9516 24242 +      END;

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```

9517 24243 +
9518 24244 +     IF _BRANCH_ GT 0 THEN DO;
9519 24245 +         _ARB_F_ + 0.0137557483;
9520 24246 +     END;
9521 24247 +     END;
9522 24248 + END;
9523 24249 +
9524 24250 +***** LEAF    111    NODE    534 *****;
9525 24251 +IF _ARB_BADF_ EQ 0 THEN DO;
9526 24252 +
9527 24253 +     _BRANCH_ = -1;
9528 24254 +     IF NOT MISSING( TotalPurchases ) AND
9529 24255 +     TotalPurchases <                               3.5 THEN DO;
9530 24256 +         _BRANCH_ =     1;
9531 24257 +     END;
9532 24258 +
9533 24259 + IF _BRANCH_ GT 0 THEN DO;
9534 24260 +
9535 24261 +     _BRANCH_ = -1;
9536 24262 +     _ARBFMT_8 = PUT( MembershipLevel , $8.);
9537 24263 +     %DMNORMIP( _ARBFMT_8);
9538 24264 +     IF _ARBFMT_8 IN ( 'SILVER' , 'GOLD' , 'BRONZE' )
        THEN DO;
9539 24265 +         _BRANCH_ =     1;
9540 24266 +     END;
9541 24267 + IF _BRANCH_ LT 0 THEN DO;
9542 24268 +     IF MISSING( MembershipLevel ) THEN _BRANCH_
        = 1;
9543 24269 +     ELSE IF _ARBFMT_8 NOTIN (
9544 24270 +         'SILVER' , 'GOLD' , 'BRONZE' , 'PLATINUM'
9545 24271 +         ) THEN _BRANCH_ = 1;
9546 24272 + END;
9547 24273 + IF _BRANCH_ GT 0 THEN DO;
9548 24274 +     _ARB_F_ + -0.007145748;
9549 24275 +     END;
9550 24276 + END;

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9551 24277 + END;
9552 24278 +
9553 24279 +***** LEAF 112 NODE 535 *****;
9554 24280 +IF _ARB_BADF_ EQ 0 THEN DO;
9555 24281 +
9556 24282 + _BRANCH_ = -1;
9557 24283 + IF NOT MISSING(TotalPurchases ) AND
9558 24284 + TotalPurchases < 3.5 THEN DO;
9559 24285 + _BRANCH_ = 1;
9560 24286 + END;
9561 24287 +
9562 24288 + IF _BRANCH_ GT 0 THEN DO;
9563 24289 +
9564 24290 + _BRANCH_ = -1;
9565 24291 + _ARBFMT_8 = PUT( MembershipLevel , $8.);
9566 24292 + %DMNORMIP( _ARBFMT_8);
9567 24293 + IF _ARBFMT_8 IN ('PLATINUM' ) THEN DO;
9568 24294 + _BRANCH_ = 2;
9569 24295 + END;
9570 24296 +
9571 24297 + IF _BRANCH_ GT 0 THEN DO;
9572 24298 + _ARB_F_ + 0.0022376844;
9573 24299 + END;
9574 24300 + END;
9575 24301 + END;
9576 24302 +
9577 24303 +***** LEAF 113 NODE 536 *****;
9578 24304 +IF _ARB_BADF_ EQ 0 THEN DO;
9579 24305 +
9580 24306 + _BRANCH_ = -1;
9581 24307 + IF NOT MISSING(TotalPurchases ) AND
9582 24308 + 3.5 <= TotalPurchases THEN DO
;
9583 24309 + _BRANCH_ = 2;
9584 24310 + END;
9585 24311 + IF _BRANCH_ LT 0 THEN DO;

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9586 24312 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          2;
9587 24313 +      END;
9588 24314 +      IF _BRANCH_ GT 0 THEN DO;
9589 24315 +
9590 24316 +      _BRANCH_ = -1;
9591 24317 +      IF NOT MISSING(Age ) AND
9592 24318 +      Age < 67.5 THEN DO;
9593 24319 +      _BRANCH_ = 1;
9594 24320 +      END;
9595 24321 +      IF _BRANCH_ LT 0 THEN DO;
9596 24322 +      IF MISSING( Age ) THEN _BRANCH_ = 1;
9597 24323 +      END;
9598 24324 +      IF _BRANCH_ GT 0 THEN DO;
9599 24325 +      _ARB_F_ + 0.0037218338;
9600 24326 +      END;
9601 24327 +      END;
9602 24328 +      END;
9603 24329 +
9604 24330 +***** LEAF 114 NODE 537 *****;
9605 24331 +IF _ARB_BADF_ EQ 0 THEN DO;
9606 24332 +
9607 24333 + _BRANCH_ = -1;
9608 24334 +      IF NOT MISSING(TotalPurchases ) AND
9609 24335 +      3.5 <= TotalPurchases THEN DO
          ;
9610 24336 +      _BRANCH_ = 2;
9611 24337 +      END;
9612 24338 +      IF _BRANCH_ LT 0 THEN DO;
9613 24339 +      IF MISSING( TotalPurchases  ) THEN _BRANCH_ =
          2;
9614 24340 +      END;
9615 24341 +      IF _BRANCH_ GT 0 THEN DO;
9616 24342 +
9617 24343 +      _BRANCH_ = -1;
9618 24344 +      IF NOT MISSING(Age ) AND

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9619 24345 +                67.5 <= Age  THEN DO;
9620 24346 +          _BRANCH_ =      2;
9621 24347 +          END;
9622 24348 +
9623 24349 +      IF _BRANCH_ GT 0 THEN DO;
9624 24350 +          _ARB_F_ + -0.011078356;
9625 24351 +          END;
9626 24352 +      END;
9627 24353 +  END;
9628 24354 +
9629 24355 +***** LEAF    115  NODE    541 *****;
9630 24356 +IF _ARB_BADF_ EQ 0 THEN DO;
9631 24357 +
9632 24358 +  _BRANCH_ = -1;
9633 24359 +      IF NOT MISSING( TotalPurchases ) AND
9634 24360 +      TotalPurchases <                26.5 THEN DO;
9635 24361 +          _BRANCH_ =      1;
9636 24362 +      END;
9637 24363 +  IF _BRANCH_ LT 0 THEN DO;
9638 24364 +      IF MISSING( TotalPurchases ) THEN _BRANCH_ =
          1;
9639 24365 +  END;
9640 24366 +  IF _BRANCH_ GT 0 THEN DO;
9641 24367 +
9642 24368 +      _BRANCH_ = -1;
9643 24369 +      IF NOT MISSING( Age ) AND
9644 24370 +      Age <                19.5 THEN DO;
9645 24371 +          _BRANCH_ =      1;
9646 24372 +      END;
9647 24373 +
9648 24374 +      IF _BRANCH_ GT 0 THEN DO;
9649 24375 +          _ARB_F_ + -0.015812192;
9650 24376 +      END;
9651 24377 +      END;
9652 24378 +  END;
9653 24379 +

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9654 24380 +***** LEAF 116 NODE 542 *****;
9655 24381 +IF _ARB_BADF_ EQ 0 THEN DO;
9656 24382 +
9657 24383 + _BRANCH_ = -1;
9658 24384 + IF NOT MISSING(TotalPurchases ) AND
9659 24385 + TotalPurchases < 26.5 THEN DO;
9660 24386 + _BRANCH_ = 1;
9661 24387 + END;
9662 24388 + IF _BRANCH_ LT 0 THEN DO;
9663 24389 + IF MISSING( TotalPurchases ) THEN _BRANCH_ =
1;
9664 24390 + END;
9665 24391 + IF _BRANCH_ GT 0 THEN DO;
9666 24392 +
9667 24393 + _BRANCH_ = -1;
9668 24394 + IF NOT MISSING(Age ) AND
9669 24395 + 19.5 <= Age THEN DO;
9670 24396 + _BRANCH_ = 2;
9671 24397 + END;
9672 24398 + IF _BRANCH_ LT 0 THEN DO;
9673 24399 + IF MISSING( Age ) THEN _BRANCH_ = 2;
9674 24400 + END;
9675 24401 + IF _BRANCH_ GT 0 THEN DO;
9676 24402 + _ARB_F_ + 0.0002780839;
9677 24403 + END;
9678 24404 + END;
9679 24405 + END;
9680 24406 +
9681 24407 +***** LEAF 117 NODE 540 *****;
9682 24408 +IF _ARB_BADF_ EQ 0 THEN DO;
9683 24409 +
9684 24410 + _BRANCH_ = -1;
9685 24411 + IF NOT MISSING(TotalPurchases ) AND
9686 24412 + 26.5 <= TotalPurchases THEN DO
;
9687 24413 + _BRANCH_ = 2;

```



```

9688 24414 +      END;
9689 24415 +
9690 24416 +      IF _BRANCH_ GT 0 THEN DO;
9691 24417 +          _ARB_F_ + 0.0454917738;
9692 24418 +      END;
9693 24419 +      END;
9694 24420 +
9695 24421 +***** LEAF    118    NODE    546 *****;
9696 24422 +IF _ARB_BADF_ EQ 0 THEN DO;
9697 24423 +
9698 24424 +      _BRANCH_ = -1;
9699 24425 +      _ARBFMT_8 = PUT( MembershipLevel , $8.);
9700 24426 +      %DMNORMIP( _ARBFMT_8);
9701 24427 +      IF _ARBFMT_8 IN ( 'SILVER' , 'PLATINUM' , 'BRONZE'
          ) THEN DO;
9702 24428 +          _BRANCH_ =      1;
9703 24429 +      END;
9704 24430 +      IF _BRANCH_ LT 0 THEN DO;
9705 24431 +          IF MISSING( MembershipLevel ) THEN _BRANCH_ =
          1;
9706 24432 +          ELSE IF _ARBFMT_8 NOTIN (
9707 24433 +              'SILVER' , 'PLATINUM' , 'BRONZE' , 'GOLD'
9708 24434 +              ) THEN _BRANCH_ = 1;
9709 24435 +      END;
9710 24436 +      IF _BRANCH_ GT 0 THEN DO;
9711 24437 +
9712 24438 +          _BRANCH_ = -1;
9713 24439 +          IF NOT MISSING(IMP_TotalSpent ) AND
9714 24440 +          IMP_TotalSpent <          9816.5 THEN D
          O;
9715 24441 +          _BRANCH_ =      1;
9716 24442 +      END;
9717 24443 +      IF _BRANCH_ LT 0 THEN DO;
9718 24444 +          IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
          = 1;
9719 24445 +      END;

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9720 24446 +      IF _BRANCH_ GT 0 THEN DO;
9721 24447 +          _ARB_F_ + 0.0005851958;
9722 24448 +      END;
9723 24449 +      END;
9724 24450 +  END;
9725 24451 +
9726 24452 +***** LEAF    119    NODE    547 *****;
9727 24453 +IF _ARB_BADF_ EQ 0 THEN DO;
9728 24454 +
9729 24455 +  _BRANCH_ = -1;
9730 24456 +  _ARBFMT_8 = PUT( MembershipLevel , $8.);
9731 24457 +  %DMNORMIP( _ARBFMT_8);
9732 24458 +      IF _ARBFMT_8 IN ( 'SILVER' , 'PLATINUM' , 'BRONZE'
          ) THEN DO;
9733 24459 +          _BRANCH_ =      1;
9734 24460 +      END;
9735 24461 +  IF _BRANCH_ LT 0 THEN DO;
9736 24462 +      IF MISSING( MembershipLevel ) THEN _BRANCH_ =
          1;
9737 24463 +      ELSE IF _ARBFMT_8 NOTIN (
9738 24464 +          'SILVER' , 'PLATINUM' , 'BRONZE' , 'GOLD'
9739 24465 +          ) THEN _BRANCH_ = 1;
9740 24466 +  END;
9741 24467 +  IF _BRANCH_ GT 0 THEN DO;
9742 24468 +
9743 24469 +      _BRANCH_ = -1;
9744 24470 +      IF NOT MISSING(IMP_TotalSpent ) AND
9745 24471 +          9816.5 <= IMP_TotalSpent THEN
          DO;
9746 24472 +          _BRANCH_ =      2;
9747 24473 +      END;
9748 24474 +
9749 24475 +  IF _BRANCH_ GT 0 THEN DO;
9750 24476 +          _ARB_F_ + 0.0108738221;
9751 24477 +      END;
9752 24478 +  END;

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9753 24479 + END;
9754 24480 +
9755 24481 +***** LEAF 120 NODE 548 *****;
9756 24482 +IF _ARB_BADF_ EQ 0 THEN DO;
9757 24483 +
9758 24484 + _BRANCH_ = -1;
9759 24485 + _ARBFMT_8 = PUT( MembershipLevel , $8.);
9760 24486 + %DMNORMIP( _ARBFMT_8);
9761 24487 + IF _ARBFMT_8 IN ('GOLD' ) THEN DO;
9762 24488 + _BRANCH_ = 2;
9763 24489 + END;
9764 24490 +
9765 24491 + IF _BRANCH_ GT 0 THEN DO;
9766 24492 +
9767 24493 + _BRANCH_ = -1;
9768 24494 + IF NOT MISSING(IMP_TotalSpent ) AND
9769 24495 + IMP_TotalSpent < 1537.5 THEN D
O;
9770 24496 + _BRANCH_ = 1;
9771 24497 + END;
9772 24498 +
9773 24499 + IF _BRANCH_ GT 0 THEN DO;
9774 24500 + _ARB_F_ + 0.0036821909;
9775 24501 + END;
9776 24502 + END;
9777 24503 + END;
9778 24504 +
9779 24505 +***** LEAF 121 NODE 549 *****;
9780 24506 +IF _ARB_BADF_ EQ 0 THEN DO;
9781 24507 +
9782 24508 + _BRANCH_ = -1;
9783 24509 + _ARBFMT_8 = PUT( MembershipLevel , $8.);
9784 24510 + %DMNORMIP( _ARBFMT_8);
9785 24511 + IF _ARBFMT_8 IN ('GOLD' ) THEN DO;
9786 24512 + _BRANCH_ = 2;
9787 24513 + END;

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9788 24514 +
9789 24515 + IF _BRANCH_ GT 0 THEN DO;
9790 24516 +
9791 24517 +     _BRANCH_ = -1;
9792 24518 +     IF NOT MISSING(IMP_TotalSpent ) AND
9793 24519 +         1537.5 <= IMP_TotalSpent THEN
DO;
9794 24520 +         _BRANCH_ = 2;
9795 24521 +     END;
9796 24522 + IF _BRANCH_ LT 0 THEN DO;
9797 24523 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
9798 24524 +     END;
9799 24525 + IF _BRANCH_ GT 0 THEN DO;
9800 24526 +     _ARB_F_ + -0.005509475;
9801 24527 +     END;
9802 24528 +     END;
9803 24529 + END;
9804 24530 +
9805 24531 +***** LEAF 122 NODE 553 *****;
9806 24532 +IF _ARB_BADF_ EQ 0 THEN DO;
9807 24533 +
9808 24534 +     _BRANCH_ = -1;
9809 24535 +     IF NOT MISSING(IMP_TotalSpent ) AND
9810 24536 +     IMP_TotalSpent < 9104.5 THEN DO;
9811 24537 +     _BRANCH_ = 1;
9812 24538 +     END;
9813 24539 + IF _BRANCH_ LT 0 THEN DO;
9814 24540 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
1;
9815 24541 +     END;
9816 24542 + IF _BRANCH_ GT 0 THEN DO;
9817 24543 +
9818 24544 +     _BRANCH_ = -1;
9819 24545 +     IF NOT MISSING(IMP_TotalSpent ) AND
9820 24546 +     IMP_TotalSpent < 4321.5 THEN D

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O;
9821 24547 +      _BRANCH_ =      1;
9822 24548 +      END;
9823 24549 +      IF _BRANCH_ LT 0 THEN DO;
9824 24550 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_
= 1;
9825 24551 +      END;
9826 24552 +      IF _BRANCH_ GT 0 THEN DO;
9827 24553 +      _ARB_F_ + 0.0017801314;
9828 24554 +      END;
9829 24555 +      END;
9830 24556 +      END;
9831 24557 +
9832 24558 +***** LEAF      123      NODE      554 *****;
9833 24559 +IF _ARB_BADF_ EQ 0 THEN DO;
9834 24560 +
9835 24561 +      _BRANCH_ = -1;
9836 24562 +      IF NOT MISSING(IMP_TotalSpent ) AND
9837 24563 +      IMP_TotalSpent <      9104.5 THEN DO;
9838 24564 +      _BRANCH_ =      1;
9839 24565 +      END;
9840 24566 +      IF _BRANCH_ LT 0 THEN DO;
9841 24567 +      IF MISSING( IMP_TotalSpent  ) THEN _BRANCH_ =
1;
9842 24568 +      END;
9843 24569 +      IF _BRANCH_ GT 0 THEN DO;
9844 24570 +
9845 24571 +      _BRANCH_ = -1;
9846 24572 +      IF NOT MISSING(IMP_TotalSpent ) AND
9847 24573 +      4321.5 <= IMP_TotalSpent THEN
DO;
9848 24574 +      _BRANCH_ =      2;
9849 24575 +      END;
9850 24576 +
9851 24577 +      IF _BRANCH_ GT 0 THEN DO;
9852 24578 +      _ARB_F_ + -0.00459065;

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9853 24579 +      END;
9854 24580 +      END;
9855 24581 +      END;
9856 24582 +
9857 24583 +***** LEAF    124    NODE    555 *****;
9858 24584 +IF _ARB_BADF_ EQ 0 THEN DO;
9859 24585 +
9860 24586 +      _BRANCH_ = -1;
9861 24587 +      IF NOT MISSING(IMP_TotalSpent ) AND
9862 24588 +          9104.5 <= IMP_TotalSpent THEN DO
;
9863 24589 +      _BRANCH_ =    2;
9864 24590 +      END;
9865 24591 +
9866 24592 +      IF _BRANCH_ GT 0 THEN DO;
9867 24593 +
9868 24594 +      _BRANCH_ = -1;
9869 24595 +      IF NOT MISSING(IMP_TotalSpent ) AND
9870 24596 +      IMP_TotalSpent <          9919.5 THEN D
O;
9871 24597 +      _BRANCH_ =    1;
9872 24598 +      END;
9873 24599 +
9874 24600 +      IF _BRANCH_ GT 0 THEN DO;
9875 24601 +      _ARB_F_ + 0.0182280844;
9876 24602 +      END;
9877 24603 +      END;
9878 24604 +      END;
9879 24605 +
9880 24606 +***** LEAF    125    NODE    556 *****;
9881 24607 +IF _ARB_BADF_ EQ 0 THEN DO;
9882 24608 +
9883 24609 +      _BRANCH_ = -1;
9884 24610 +      IF NOT MISSING(IMP_TotalSpent ) AND
9885 24611 +          9104.5 <= IMP_TotalSpent THEN DO
;

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9886 24612 +      _BRANCH_ =      2;
9887 24613 +      END;
9888 24614 +
9889 24615 +      IF _BRANCH_ GT 0 THEN DO;
9890 24616 +
9891 24617 +      _BRANCH_ = -1;
9892 24618 +      IF NOT MISSING(IMP_TotalSpent ) AND
9893 24619 +      9919.5 <= IMP_TotalSpent THEN
      DO;
9894 24620 +      _BRANCH_ =      2;
9895 24621 +      END;
9896 24622 +      IF _BRANCH_ LT 0 THEN DO;
9897 24623 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
      = 2;
9898 24624 +      END;
9899 24625 +      IF _BRANCH_ GT 0 THEN DO;
9900 24626 +      _ARB_F_ + 0.0016544791;
9901 24627 +      END;
9902 24628 +      END;
9903 24629 +      END;
9904 24630 +
9905 24631 +***** LEAF      126  NODE      560 *****;
9906 24632 +IF _ARB_BADF_ EQ 0 THEN DO;
9907 24633 +
9908 24634 +      _BRANCH_ = -1;
9909 24635 +      IF NOT MISSING(IMP_TotalSpent ) AND
9910 24636 +      IMP_TotalSpent <      2927 THEN DO;
9911 24637 +      _BRANCH_ =      1;
9912 24638 +      END;
9913 24639 +
9914 24640 +      IF _BRANCH_ GT 0 THEN DO;
9915 24641 +
9916 24642 +      _BRANCH_ = -1;
9917 24643 +      IF NOT MISSING(Age ) AND
9918 24644 +      Age <      48.5 THEN DO;
9919 24645 +      _BRANCH_ =      1;

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9920 24646 +      END;
9921 24647 +      IF _BRANCH_ LT 0 THEN DO;
9922 24648 +          IF MISSING( Age ) THEN _BRANCH_ = 1;
9923 24649 +      END;
9924 24650 +      IF _BRANCH_ GT 0 THEN DO;
9925 24651 +          _ARB_F_ + 0.0007672447;
9926 24652 +      END;
9927 24653 +      END;
9928 24654 +  END;
9929 24655 +
9930 24656 +***** LEAF    127  NODE    561 *****;
9931 24657 +IF _ARB_BADF_ EQ 0 THEN DO;
9932 24658 +
9933 24659 +  _BRANCH_ = -1;
9934 24660 +      IF NOT MISSING(IMP_TotalSpent ) AND
9935 24661 +      IMP_TotalSpent <                      2927 THEN DO;
9936 24662 +          _BRANCH_ =      1;
9937 24663 +      END;
9938 24664 +
9939 24665 +  IF _BRANCH_ GT 0 THEN DO;
9940 24666 +
9941 24667 +      _BRANCH_ = -1;
9942 24668 +      IF NOT MISSING(Age ) AND
9943 24669 +          48.5 <= Age THEN DO;
9944 24670 +          _BRANCH_ =      2;
9945 24671 +      END;
9946 24672 +
9947 24673 +      IF _BRANCH_ GT 0 THEN DO;
9948 24674 +          _ARB_F_ + -0.010934113;
9949 24675 +      END;
9950 24676 +      END;
9951 24677 +  END;
9952 24678 +
9953 24679 +***** LEAF    128  NODE    562 *****;
9954 24680 +IF _ARB_BADF_ EQ 0 THEN DO;
9955 24681 +

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9956 24682 +  _BRANCH_ = -1;
9957 24683 +      IF NOT MISSING(IMP_TotalSpent ) AND
9958 24684 +      2927 <= IMP_TotalSpent THEN DO
          ;
9959 24685 +      _BRANCH_ = 2;
9960 24686 +      END;
9961 24687 +      IF _BRANCH_ LT 0 THEN DO;
9962 24688 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =
          2;
9963 24689 +      END;
9964 24690 +      IF _BRANCH_ GT 0 THEN DO;
9965 24691 +
9966 24692 +      _BRANCH_ = -1;
9967 24693 +      IF NOT MISSING(IMP_TotalSpent ) AND
9968 24694 +      IMP_TotalSpent < 4105.5 THEN D
          O;
9969 24695 +      _BRANCH_ = 1;
9970 24696 +      END;
9971 24697 +
9972 24698 +      IF _BRANCH_ GT 0 THEN DO;
9973 24699 +      _ARB_F_ + 0.0112302588;
9974 24700 +      END;
9975 24701 +      END;
9976 24702 +      END;
9977 24703 +
9978 24704 +***** LEAF 129 NODE 563 *****;
9979 24705 +IF _ARB_BADF_ EQ 0 THEN DO;
9980 24706 +
9981 24707 +  _BRANCH_ = -1;
9982 24708 +      IF NOT MISSING(IMP_TotalSpent ) AND
9983 24709 +      2927 <= IMP_TotalSpent THEN DO
          ;
9984 24710 +      _BRANCH_ = 2;
9985 24711 +      END;
9986 24712 +      IF _BRANCH_ LT 0 THEN DO;
9987 24713 +      IF MISSING( IMP_TotalSpent ) THEN _BRANCH_ =

```

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2;
9988 24714 + END;
9989 24715 + IF _BRANCH_ GT 0 THEN DO;
9990 24716 +
9991 24717 +     _BRANCH_ = -1;
9992 24718 +     IF NOT MISSING(IMP_TotalSpent ) AND
9993 24719 +         4105.5 <= IMP_TotalSpent THEN
DO;
9994 24720 +     _BRANCH_ = 2;
9995 24721 + END;
9996 24722 + IF _BRANCH_ LT 0 THEN DO;
9997 24723 +     IF MISSING( IMP_TotalSpent ) THEN _BRANCH_
= 2;
9998 24724 + END;
9999 24725 + IF _BRANCH_ GT 0 THEN DO;
10000 24726 +     _ARB_F_ + -0.001067677;
10001 *****
*****
10002 NOTE: File view has been truncated.
10003 Refer to /home/u63452984/case-study-s2192852/Workspaces/EM
WS3/Boost/EMLOG.log
10004 on this server for entire file contents.
10005 *****
*****

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