

```
/* Question 5 Adjusting for covariates */
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```
PROC LOGISTIC data = nomiss;  
    CLASS momcigs (ref = '0') mommens3 parity3 momed3 income3 white / param = ref;  
    MODEL latemens (event = '1') = momcigs mommens3 parity3 momed3 income3 white / lackfit iplots expb;  
    OUTPUT out = outdataset prob = probb difchisq = difchisq;  
RUN;
```

```
/* Question 6 Influential Observations */
```

```
PROC GLM data = outdataset;  
    MODEL difchisq = probb;  
RUN;  
PROC PRINT data = outdataset;  
    VAR child;  
    WHERE difchisq > 10;  
RUN;
```

```
/* Question 7 Effect measure modification */
```

```
PROC LOGISTIC data = nomiss;  
    CLASS momcigs (Ref = '0') mommens3 parity3 momed3 income3 white (REF = '0') / param = ref;  
    MODEL latemens (event = '1') = momcigs mommens3 parity3 momed3 income3 white white*momcigs / expb;  
RUN;
```

```
PROC LOGISTIC data = nomiss;  
    CLASS momcigs (ref = '0') mommens3 parity3 momed3 income3 white / param = ref;  
    MODEL latemens (event = '1') = momcigs mommens3 parity3 momed3 income3 white / lackfit iplots expb;  
RUN;
```

```
/* Question 8 Dummy Variables */
```

```
PROC FREQ data = nomiss;  
    TABLES momcigs white;  
RUN;  
DATA nomiss;  
    SET nomiss;  
    IF momcigs = 0 and white = 1 then smoke0white = 1;  
    ELSE smoke0white = 0;  
    IF momcigs = 1 and white = 1 then smoke1white = 1;  
    ELSE smoke1white = 0;  
    IF momcigs = 2 and white = 1 then smoke2white = 1;  
    ELSE smoke2white = 0;  
    IF momcigs = 3 and white = 1 then smoke3white = 1;  
    ELSE smoke3white = 0;  
    IF momcigs = 0 and white = 0 then smoke0other = 1;  
    ELSE smoke0other = 0;  
    IF momcigs = 1 and white = 0 then smoke1other = 1;  
    ELSE smoke1other = 0;  
    IF momcigs = 2 and white = 0 then smoke2other = 1;  
    ELSE smoke2other = 0;  
    IF momcigs = 3 and white = 0 then smoke3other = 1;  
    ELSE smoke3other = 0;
```

```
RUN;  
PROC LOGISTIC data = nomiss;  
    CLASS mommens3 parity3 momed3 income3 / param = ref;  
    MODEL latemens (event = '1') = mommens3 parity3 momed3 income3 smoke1white smoke2white smoke3white  
    smoke0other smoke1other smoke2other smoke3other / expb;  
RUN;
```

```
/* Question 9 Adjusted relative odds of late menarche */
```

```
PROC LOGISTIC data = nomiss;  
    CLASS mommens3 parity3 momed3 income3 / param = ref;  
    MODEL latemens (event = '1') = mommens3 parity3 momed3 income3 smoke0white smoke1white smoke2white  
    smoke3white smoke1other smoke2other smoke3other / expb;
```

```
RUN;
```