

STAT430
HW1
Yingqiao Gou

1(c) - The average increase for number of words/minute (DIFF) is 36.25

1(d) -

```
DATA Q1;
/* The name of my Dataset */
INPUT
SUBJ $ 1-3
/* SUBJ is a character variable */
AGE    4-5
WORDS_INIT 6-8
WORDS_FINAL 10-12
;

DIFF = WORDS_FINAL - WORDS_INIT;
/* DIFF is a new variable */
DATALINES;
02121110 150
00119090 140
00920100 115
05021160 200
;
/* Put in the data */
PROC MEANS DATA=Q1 MEAN MAXDEC=2;
/* Mean process, with 2 decimals */
    VAR DIFF;
/* Take the mean info on DIFF */
PROC PRINT;
RUN;
/* Print the table */
```

The MEANS Procedure

Analysis Variable : DIFF	
Mean	
36.25	

Obs	SUBJ	AGE	WORDS_INIT	WORDS_FINAL	DIFF
1	021	21	110	150	40
2	001	19	90	140	50
3	009	20	100	115	15
4	050	21	160	200	40

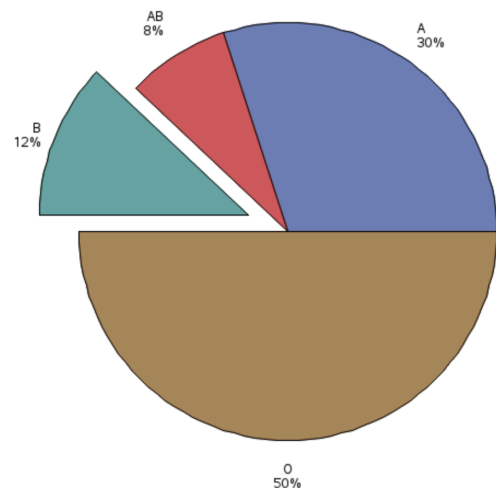
2(c) - The blood type 'AB' is the rarest with only 4%.

2(d) -

```
DATA Q2;
INFILE '/home/u50368724/my_shared_file_links/schimiak/Blood_Type.csv' delimiter = ',' dsd;
/* Use this stmt to deal with csv file */
INPUT BLOOD_TYPE $;
/* Blood Type is a character variable */
PROC FREQ;
/* Calculate the frequency */
TABLE BLOOD_TYPE / NOCUM;
/* Suppress cumulative frequencies in a simple table. */
RUN;
```

The FREQ Procedure

BLOOD_TYPE	Frequency	Percent
A	15	30.00
AB	4	8.00
B	6	12.00
O	25	50.00



```
PROC GCHART;
PIE BLOOD_TYPE / TYPE=PERCENT
/* Create a pie chart base on percentage */
EXPLODE='B';
RUN;
```

3(d) -

```
DATA Q3;
INFILE '/home/u50368724/my_shared_file_links/schimiak/ForSASBlackboard003.csv' delimiter = ',' dsd;
/* Use thie stmt to deal with csv file */
INPUT role $
      MINITAB1
      MINITAB2
      MINITAB3
      MINITAB4
      MINITAB5
      MINITAB6
      MIDTERM
      FINAL_EXAM;

AVE_MINITAB_GRADE =
(MINITAB1+MINITAB2+MINITAB3+MINITAB4+MINITAB5+MINITAB6) / 6;
FINAL_GRADE = 0.5*FINAL_EXAM + 0.3*MIDTERM + 0.2*AVE_MINITAB_GRADE;

PROC MEANS DATA=Q3 MEAN MAXDEC=1;
      VAR MINITAB6 AVE_MINITAB_GRADE MIDTERM FINAL_EXAM;

PROC MEANS DATA=Q3 STD MAXDEC=1;
      VAR MINITAB6 AVE_MINITAB_GRADE MIDTERM FINAL_EXAM;
/* Use thie stmt to calculate standard deviation */
RUN;
```

The MEANS Procedure

Variable	Mean
MINITAB6	89.5
AVE_MINITAB_GRADE	80.9
MIDTERM	79.6
FINAL_EXAM	68.8

The MEANS Procedure

Variable	Std Dev
MINITAB6	7.4
AVE_MINITAB_GRADE	13.6
MIDTERM	11.9
FINAL_EXAM	17.0

```
PROC UNIVARIATE DATA = Q3 NOPRINT;  
                                HISTOGRAM FINAL_GRADE / ENDPOINTS = 0 to 110 by 10;  
/* Use thie stmt to build histogram */  
RUN;
```

