TACHS Review

This is a sample of the math sections.

PART 1

Directions: Select the best answer out of the four choices.
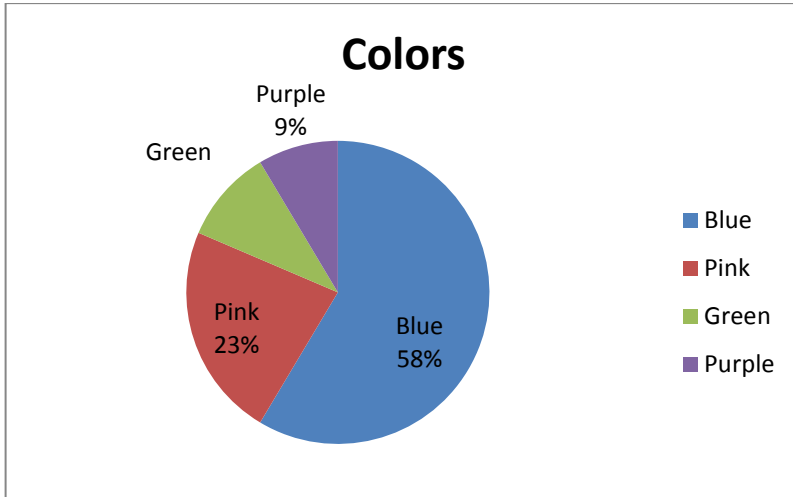**30 minutes is allotted for this section**

1. Which of the following is NOT a factor of 36?
   A. 2
   B. 3
   C. 8
   D. 9

2. Simplify $4(- 2)^2 - 2(3 + 9)$
   A. 76
   B. 78
   C. 376
   D. 378

3. Find the quotient of 1620 and 36.
   A. 30
   B. 38
   C. 45
   D. 56

4. Which of these numbers is equivalent to 8^4?
   A. 32
   B. 64
   C. 4096
   D. 65536

5. What is the difference of 12.6 and 9.2?
   A. 3.2
   B. 3.3
   C. 3.4
   D. 3.5

6. Which of NOT a prime number?
   A. 5
   B. 11
   C. 21
   D. 23

7. Find the product of $\frac{1}{2}$ and $\frac{3}{15}$. Reduce to lowest terms.
   A. $\frac{1}{10}$
   B. $\frac{4}{17}$
   C. $\frac{3}{30}$
   D. $\frac{4}{15}$

8. Change $\frac{6}{7}$ to a decimal and round to the nearest thousandth.
   A. 0.855
   B. 0.856
   C. 0.857
   D. 0.858

9. Which of the following is a multiple of 9?
   A. 21
   B. 24
   C. 26
   D. 27

10. What is the value of x if $20 \div x = 5$ is a true statement?
    A. 10
    B. 4
    C. 2
    D. 1

11. Chris is on a diet. His starting weight was 220 pounds. During his first month of dieting, Chris lost $\frac{1}{10}$ of his starting weight. During his second month of dieting, Chris lost $\frac{1}{18}$ of his weight at the start of the second month. What is his current weight?
    A. 185
    B. 187
    C. 190
    D. 196

12. If $500 is to be distributed equally among 25 people, how much money should each person receive?
    A. $10
    B. $15
    C. $20
    D. $25

13. Barbara receives a base salary of $400 per week plus 8% commission on all sales over $800. If she sold $1200 for the week, what was her total salary for the week?
    A. $500
    B. $450
    C. $446
    D. $432

14. Jillian is 19 years old. Her brother Tom is 5 years younger than she is. Her sister Erica is 7 years older than she is. What is the sum of the ages of the three siblings?
    A. 59
    B. 45
    C. 42
    D. 39

15. Robert leaves for a road trip at 10:00 am. He arrives at his destination at 8:00 pm. If Robert drove a total of 620 miles, what was his average rate of speed?
    A. 60 mph
    B. 62 mph
    C. 65 mph
    D. 70 mph
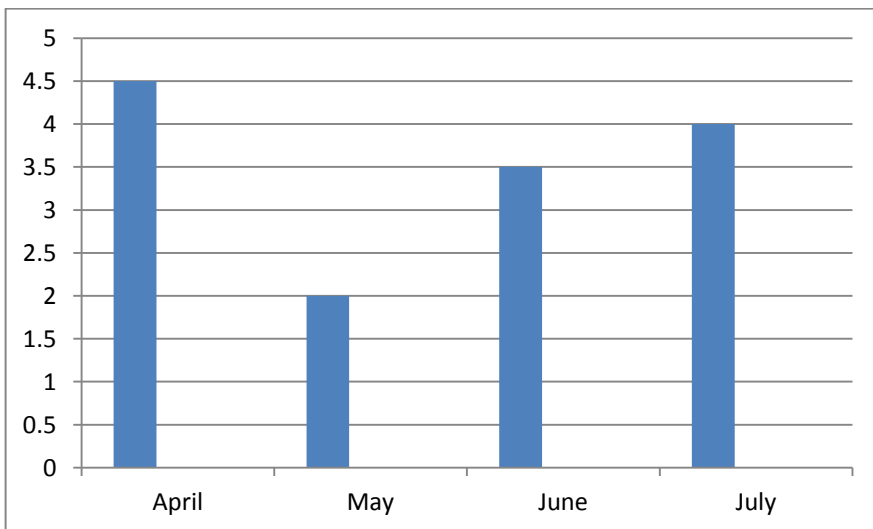
16. The temperature is 80° Fahrenheit at 5:00 pm. If the temperature decreases 20% by 8:00 am the next morning and then increases 10% by 4:00 pm, what is the temperature at 4:00 pm? Round to the nearest degree.
    A. 70°
    B. 71°
    C. 72°
    D. 73°

17. Jennifer receives a salary of $1200 per week. Sue gets 10% less than Jennifer. What is the difference between their salaries?
    A. $100
    B. $120
    C. $140
    D. $200

18. The height of a statue on a blueprint is 3 inches. If the actual height of the statue is 20 feet, what is the ratio of the blueprint to the actual height of the statue?
    A. 1:90
    B. 1:80
    C. 3:20
    D. not given

19. Jackie plays the piano. Over the next three days she practices 2.5 hours, 3 hours and 4 hours respectively. What is the average number of hours a day Jackie practiced over the past three days?
    A. 3.16 hours
    B. 3.17 hours
    C. 3.19 hours
    D. 4 hours

20. Justin wants to by a guitar. The guitar costs $250. He currently has $180 saved. If he receives a $10 a week allowance, how many weeks will it take for Justin to save enough money to buy the guitar?
    A. 4
    B. 5
    C. 6
    D. 7

Use the chart below to answer questions 21 and 22.

Colors

21. The circle graph shows the percentage of people that favor a certain color. If 420 people were polled, how many people favor the color green?
    A. 40
    B. 41
    C. 42
    D. 44

22. What is the ratio of people who prefer green to people who prefer purple?
    A. 5:4
    B. 3:2
    C. 5:2
    D. 10:9

Use the chart below to answer questions 23 and 24.

23. The chart above shows the gas prices for the months April to July. What was the average cost of gas during these months?
    A. $2.50
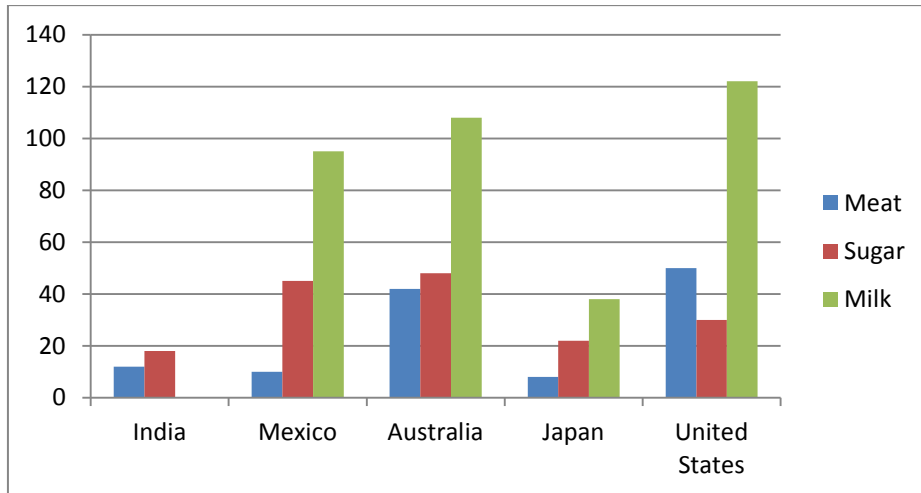   B. $3.00
    C. $3.50
    D. cannot be determined

24. How much did the price of gas drop from April to May?
   A. $2.00
   B. $2.50
   C. $3.00
   D. cannot be determined

Use the chart below to answer questions 25 and 26.

Major Network Television Shows					
	2006	2007	2008	2009	Summary
Reality	2	3	12	14	31
Comedy	7	9	8	7	31
Law	3	6	7	5	21
Detective	7	7	6	10	30
Cartoons	10	12	12	16	50
News	20	24	15	15	74
Summary	49	61	60	67	237

25. In 2008, what percent of all television shows were detective stories?
   A. 25%
   B. 18%
   C. 30%
   D. 10%

26. How many more news programs were there in 2006 than in 2009?
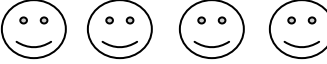   A. 6
   B. 7
   C. 5
   D. 4

Use the chart below to answer questions 27 and 28.

The chart above depicts the annual use of meat, sugar and milk in kilograms per person per year.

27. Which two countries had about the same level of sugar usage per person?
    A. India and Japan
    B. India and the United States
    C. Japan and the United States
    D. Mexico and Australia

28. Which country had the least amount of milk usage per person?
    A. India
    B. Mexico
    C. Australia
    D. Japan

Use the chart below to answer questions 29 and 30.

	Residents in 2008
New Dorp	☺ ☺ ☺
Tottenville	☺
Port Richmond	☺ ☺ ☺ ☺
Oakwood Heights	☺ ☺ ☺ ☺ ☺
Bulls Head	☺ ☺ ☺ ☺

☺ = 10,000 people

29. How many people lived in Bulls Head in 2008?
    A. 50,000
    B. 40,000
    C. 10,000
    D. 30,000

30. How many more people lived in Port Richmond than in Tottenville in 2008?
    A. 10,000
    B. 20,000
    C. 30,000
    D. 40,000

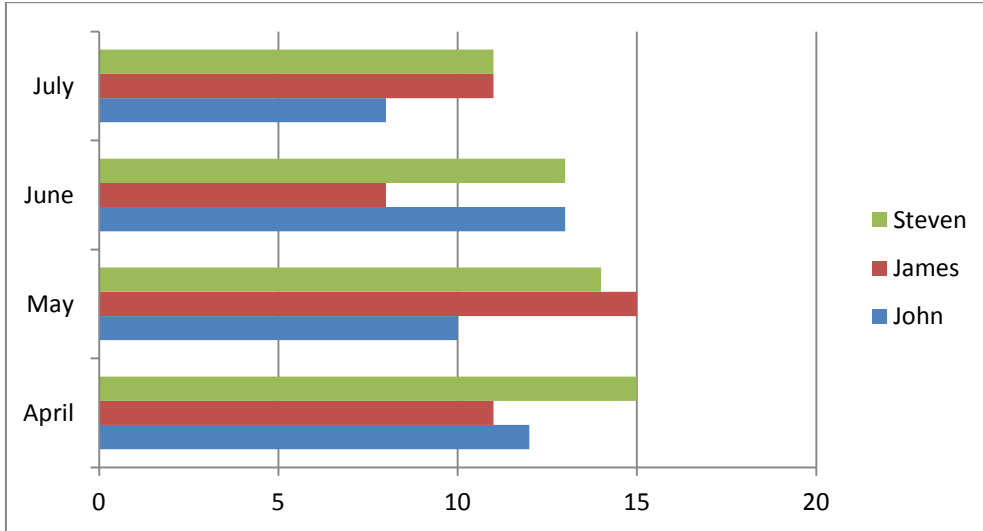## PART 2

Directions: Estimate the answer in your head. No writing is permitted. An exact answer is not expected.
10 minutes is allotted for this section.

31. The closest estimate of $7298 - 4160$ is what?
    A. 1000
    B. 2000
    C. 3000
    D. 4000

32. Select the closest estimate of $3(4.6 + 5.2) - 2(9.8 - 3.1)$.
    A. 14
    B. 16
    C. 18
    D. 20

33. Select the closest estimate of $(6.125)^2$.
    A. 32
    B. 34
    C. 38
    D. 40

34. April can type approximately 48 words per minute. At this rate, how many minutes would it take to type 500 words?
    A. 5
    B. 10
    C. 15
    D. 20

35. What is the closest sum of $3\frac{3}{4}, 18\frac{2}{3}$, and $35\frac{1}{2}$?
    A. 50
    B. 54
    C. 58
    D. 65

36. The closest estimate of $427 \div$ is what?
    A. 50
    B. 60
    C. 70
    D. 80

37. In a recent study it was determined that 5% of every EverBrite light bulb is defective. If 9372 light bulbs are manufactured, approximately how many would you expect to be defective?
    A. 200
    B. 450
    C. 700
    D. 850

38. Jason deposited $288 into a bank account paying 2.5% simple annual interest. At this simple interest rate, about how much would be the interest after 5 years?
   A. $10
   B. $25
   C. $30
   D. $45

Use the chart below to answer questions 39 and 40.

The chart above depicts the amount of minutes it took Steven, James, and John to run a one mile jog from April through July.

39. Estimate how many minutes in took Steven to jog one mile in June.
   A. 10
   B. 11
   C. 13
   D. 15

40. About how many minutes faster did James jog one mile in June than it took for John to jog one mile in April?
   A. 2
   B. 4
   C. 8
   D. 10

Answers

1. C
2. A
3. C
4. C
5. C
6. C
7. A
8. C
9. D
10. B
11. B
12. C
13. D
14. A
15. B
16. A
17. B
18. B
19. B
20. D
21. C
22. A
23. C
24. B
25. D
26. C
27. D
28. A
29. B
30. C
31. C
32. B
33. C
34. B
35. C
36. B
37. B
38. D