**April 2015**

22. Noah bowled 3 games for his bowling team. In the second game, he scored 10 points more than in the first game; in the third game, he scored 10 points more than in the second game. His average score was 230 points for the 3 games. How many points did Noah score in the *third* game?

F. 210

G. 220

H. 230

J. 240

K. 250

**June 2015**

13. Carrie’s Chocolate Shop and Tamika’s Treat Shop both sell candy in boxes. The table below lists the price (the total amount the customer pays) of each box of candy sold at the shops. For each shop, there is a linear relationship between the prices of a box of candles and the number of candies in that box. These are the only numbers of candies that can be purchased at the shops.

|  |  |  |
| --- | --- | --- |
| Candies per box (n) | Price at Carrie’s Chocolate Shop (c) | Price at Tamika’s Treat Shop (t) |
| 5  10  15  20  25  30 | $1.50  $2.50  $3.50  $4.50  $5.50  $6.50 | $2.25  $2.75  $3.25  $3.75  $4.25  $4.75 |

At Tamika’s Treat Shop, what is the average price per candy in a box of 20, to the nearest $0.01?

A. $0.08

B. $0.19

C. $0.23

D. $0.30

E. $0.45

41) For 20 quiz scores in a typing class, the table below gives the frequency of the scores in each score interval. Which score intervals contains the median of the scores?

[PICTURE]

1. 96-100
2. 91-95
3. 86-90
4. 81-85
5. 76-80

**December 2015**

2. The age, in years, of each of the first 6 presidents of the United States at his first inauguration was 57, 61, 57, 57, 58, and 57, respectively. Which of the following values is closest to the mean age, in years, of the first 6 presidents at their respective first inaugurations?

1. 57
2. 57.5
3. 57.8
4. 58.7
5. 59

27. In a chemistry course, a student scored 99 on one test, 98 on another test, and 88 on each of the other tests. The student's test average for the course, where each test is weighted equally, is exactly 91. What is the *total number* of tests that the student has taken in the course?

1. 3
2. 4
3. 5
4. 7
5. 12

**June 2016**

19. A family plans to remodel their kitchen. They have a total budget of $45,000 to cover expenses in 6 categories. Not all the budget has been assigned. The budget amount that have been assigned are shown in the table below.

|  |  |
| --- | --- |
| **Expense Category** | **Budget Amount** |
| Appliances | $4,000 |
| Cabinets | $9,000 |
| Flooring | $5,000 |
| Lighting | $3,000 |
| Labor | ? |
| Other | ? |
| **Total Budget** | **$45,000** |

The amount budgeted for Appliances is the sum of the prices of 5 appliances -- 1 refrigerator, 1 dishwaster, 1 built-in cooktop, and 2 ovens (1 conventional and 1 microwave). What is the average price per appliance?

1. $800
2. $1,000
3. $1,250
4. $1,800
5. $2,250

42. Ms. SImons made a bar graph of the 20 scores on the last math test, as shown below. Which of the following statements about the mean of the 20 scores is true?

\*\*\*picture\*\*

1. The mean is less than 75.
2. The mean is 75.
3. The mean is between 75 and 85.
4. The mean is 85.
5. The mean is greater than 85.

48. For a certain location in Grand Canyon National Park, the highest temperature on record is 120°F and the lowest temperature on record is -18°F. Which of the statements below is necessarily true about the temperatures on record for this location?

1. The range of temperature is 138°F.
2. The range of temperature is 102°F.
3. The median temperature is 69°F.
4. I only
5. II only
6. III only
7. I and III only
8. II and III only

**April 2016**

16. Jamal earned scores of 70, 75, 85, and 94 points on the first 4 history projects, and he has 1 more project to complete. What is the minimum score Jamal needs to earn on the 5th project so that the mean of his scores on all 5 projects is at least 2 points more than the mean of the scores he earned on the first 4 projects?

1. 80
2. 81
3. 83
4. 91
5. 96

18. What is the median of the list of numbers below?

6, 3, 5, 7, 12, 9, 5, 5, 11

1. 5
2. 6
3. 7
4. 9
5. 12

46. The points graphed in the standard (x,y) coordinate plane below show the positions of 5

stars in a plane relative to a point represented by the origin, where each coordinate unit equals

1 light-year. A light-year ≈ 5.9 \* 10 12 miles. The distance from Star A to Star D is approximately

11.4 light-years. Star A has a mass of 3 solar masses; and Stars B, C, D, and E each have a

mass of 1 solar mass.

\*\*\*picture\*\*8

Because stars B, C, D, and E have the same mass, the position determined by the average of

the x-coordinates and the average of the y-coordinates of those stars approximates the center

of mass of those 4 stars. What are the coordinates of this position?

a. (10, 3 ⅓)

b. (10, 3 ⅖)

c. (10, 3 ¾)

d. (12, 3 ⅓)

e. (12, 3 ¾)

**December 2016**

44. Ling asked 11 people how many text messages each of them sent last week. Each of the 11 responses was in one of the intervals given in the table below. Which interval contains the median of the data?

|  |  |
| --- | --- |
| **Number of text messages sent** | **Number of responses** |
| 31-40 | 1 |
| 41-50 | 2 |
| 51-60 | 2 |
| 61-70 | 3 |
| 71-80 | 3 |

1. 31-40
2. 41-50
3. 51-60
4. 61-70
5. 71-80

**June 2017**

23. The scores given below were earned by 10 students on a recent biology test. Which is the median score?

71, 94, 86, 77, 88, 94, 88, 80, 78, 94

1. 85
2. 86
3. 87
4. 88
5. 91

41. Set A and Set B each consist of 5 distinct numbers. The 2 sets contain identical numbers with the exception of the number with the least value in each set. The number with the least value in Set B is greater than the number with the least value in Set A. The value of which of the following measures *must* be greater for Set B than for Set A?

1. Mean only
2. Median only
3. Mode only
4. Mean and median only
5. Mean, median, and mode

**April 2017**

14. The average of 5 distinct scores has the same value as the median of the 5 scores. The sum of the 5 scores is 420. What is the sum of the 4 scores that are NOT the median?

1. 315
2. 320
3. 336
4. 350
5. 360

28. The average of a list of 4 numbers is 90.0. A new list of 4 numbers has the same first 3 numbers as the original list, but the fourth number in the original list is 80, and the fourth number in the new list is 96. What is the average of this new list of numbers?

1. 90.0
2. 91.5
3. 94.0
4. 94.5
5. 94.8

51. The list of numbers 41, 35, 30, X, Y, 15 has a median of 25 The mode of the list of numbers is 15. To the nearest whole number, what is the mean of the list?

1. 20
2. 25
3. 26
4. 27
5. 30