1.

List K consists of the four numbers w, x, y, and z. List M consists of the four numbers w+5,x+5 ,y+5 , and z+5.

Quantity A: The standard deviation of the numbers in list K

Quantity B: The standard deviation of the numbers in list M

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

2.

A car traveled at a constant speed of 48 kilometers per hour for 3 kilometers.

Quantity A: The time, in minutes , it took for the car to travel the 3 kilometers

Quantity B: 3.75 minutes

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

3.

n is a positive integer.

Quantity A	Quantity B
$\frac{1}{3^n}$	$3\left(\frac{1}{7^n}\right)$

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

4.

$x = \frac{1}{2}$

Quantity A:5x^{-3}-9x^{-2}

Quantity B:4

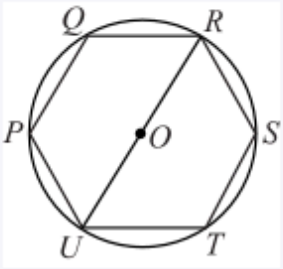
A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

5.



In the figure shown, hexagon PQRSTU is equilateral and is inscribed in the circle with center O.

Quantity A: The length of diameter UOR

Quantity B: The length of arc RST

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

6.

Quantity A: $(r + s)^2$

Quantity B: $r^2 + s^2$

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

7.

$x>2$ and $y<0$

Quantity A: $|xy|-x$

Quantity B: xy

A Quantity A is greater.

B Quantity B is greater.

C The two quantities are equal.

D The relationship cannot be determined from the information given.

8.

Ben has 30 pencils in a box. Each of the pencils is one of 5 different colors, and there are 6 pencils of each color. If Ben selects pencils one at a time from the box without being able to see the pencils, what is the minimum number of pencils that he must select in order to ensure that he selects at least 2 pencils of each color?

A 24

B 25

C 26

D 27

E 28

9.

The price of a package of notebooks is $\frac{1}{3}$ more at Store A than at Store B. If the difference in these prices is $0.35, what is the price at Store A?

A $0.70

B $1.05

C $1.40

D $1.75

E $2.45

10.

The circumference of circle C is equal to the perimeter of square S. If the area of the circle is z, which of the following represents the area of the square, in terms of z?

A $\frac{\pi}{4z}$

B $\frac{4}{z\pi}$

C $\frac{z\pi}{4}$

D $\frac{4\pi}{z}$

E $\frac{4z}{\pi}$

11.

$\frac{7}{3^\circ}, \frac{7}{4^\circ}, \frac{7}{5^\circ}, \ldots$

The first term of the infinite sequence shown is $\frac{7}{3^\circ}$, and each term thereafter has a numerator of 7 and a denominator that is 1 greater than the denominator of the preceding term. Which of the following terms of the sequence is equal to the 6th term of the sequence minus the 7th term of the sequence?

A 40th

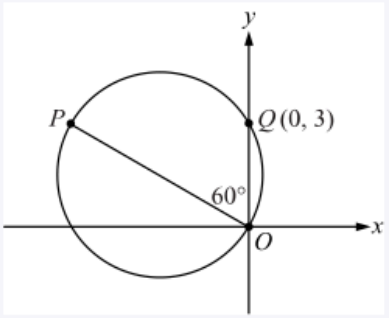
B 42nd

C 44th

D 70th

E 72nd

12.



In the figure shown, OP is a diameter of the circle. What is the x-coordinate of point P?

A -3

B -6

C $-\sqrt{3}$

D $-2\sqrt{3}$

E $-3\sqrt{3}$

13.

The odds in favor of the occurrence of event A are defined to be the ratio of the probability of A occurring to the probability of A not occurring. Past records indicate that the odds in favor of a shipment from Company Z arriving on the specified date are 3 to 7. On the basis of this record, what is the probability that a shipment from Company Z will not arrive on the specified date?

A $\frac{3}{10}$

B $\frac{4}{10}$

C $\frac{7}{10}$

D $\frac{3}{7}$

E $\frac{4}{7}$

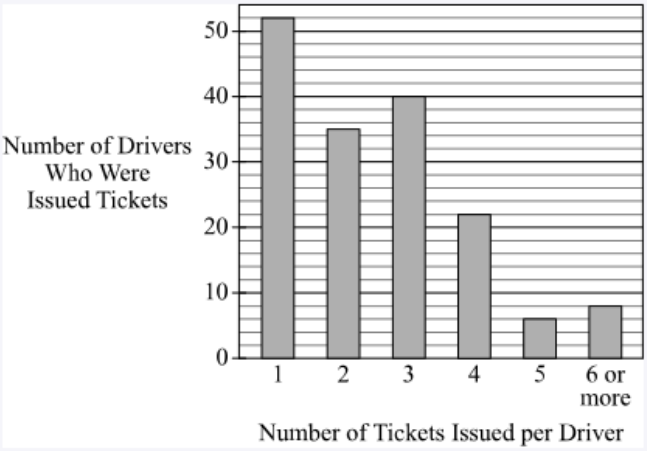
14.

Subject material:

Parking Tickets Issued to Drivers

in Town X in February 2017

(Total number of tickets issued: 420)



Question Question Question

To the nearest whole percent, the number of drivers who were issued 3 parking tickets is what percent greater than the number who were issued 4 or more tickets?

A 4%

B 9%

C 10%

D 11%

E 16%

15.

What is the average (arithmetic mean) number of parking tickets issued to the drivers who were issued 6 or more tickets?

A 7.0

B 7.5

C 8.0

D 8.5

E 9.0

16.

For the drivers who were issued parking tickets, what is the median number of tickets issued per driver?

A 2.0

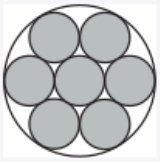
B 2.5

C 3.0

D 3.5

E 4.0

17.



In the figure shown, seven small circles of equal diameter are located inside a large circle. Each of the six outer small circles is tangent to the small circle in the center, to two other adjacent small circles, and to the large circle. If the diameter of the large circle is D, then the sum of the areas of the unshaded regions inside the large circle is equal to which of the following?

A $\frac{\pi D^2}{36}$

B $\frac{\pi D^2}{18}$

C $\frac{\pi D^2}{9}$

D $\frac{\pi D^2}{2}$

E $\frac{7\pi D^2}{4}$

18.

Of the students enrolled at University U in the fall of 2008, $\frac{3}{8}$ were sophomores and $\frac{1}{50}$ were biology majors. Which of the following could be the number of students enrolled at University U in the fall of 2008?

Indicate all such numbers.

A 7,000

B 7,040

C 7,050

D 7,100

E 7,125

F 7,200

19.

If $3x+y=2$, $3x+2y=0$, and $x-2z=1$, what is the value of z?

Give your answer as a fraction.

Z=_____

20.

When the positive integer N is divided by 16, the remainder is 3. Which of the following integers could be the remainder when N is divided by 6?

Indicate all such integers.

A 0

B 1

C 2

D 3

E 4

F 5

Answer Key: CCDCBDDCCCDECDBAB(AF)(1/6)(BDF)