

1. $x + y = 15$

$x - y = 24$

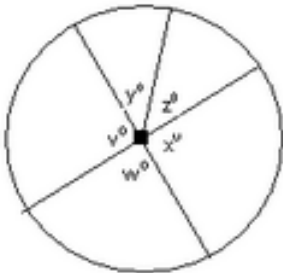
Column A - (y)

Column B - (-5)

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

2. Column A - The average (arithmetic mean) of $v, w, y, x,$ and z

Column B - 70



- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

3. The shaded are in the below figure is 65% of the are of the entire circle, what is the value of d ?

Column A - d

Column B - 126 degrees



- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

4. Column A - The area of a circle with the radius of 3

Column B - The area of a semi-circle with the radius of 4

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

5. Sarah volunteered from 9:27 A.M. until 12:45 P.M.

Jan volunteered from 9:15 A.M. until 12:32 P.M.

Column A - The amount of time Sarah volunteered.

Column B - The amount of time Jan volunteered.

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

6. If 34% of 360 equals 7.5% of h, what is h

Column A - h

Column B - 1634

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

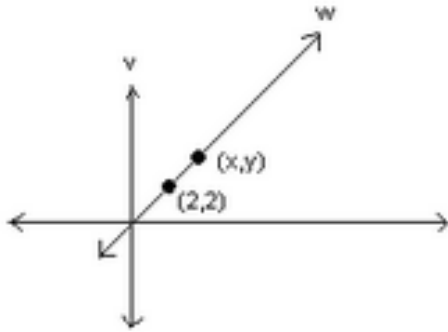
7. Column A - The fraction of 76 hours of a week

Column B - The fraction of 10 hours in a day

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

8. Column A - $(x-y)$

Column B - 0



- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

9. Column A - 500% of 6

Column B - 600% of 5

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

10. If $n > 0$,

Column A - $\frac{24}{25}$ of n

Column B - 95% of n

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal

D. if it is impossible to determine which quantity is greater

11. 5 is $\frac{2}{3}\%$ of n

Column A - n

Column B - 15

A. if the quantity in Column A is greater

B. if the quantity in Column B is greater

C. if the two quantities are equal

D. if it is impossible to determine which quantity is greater

Answers & Explanations

1. A: Solving the system of equations gives $y = -4.5$. Since -4.5 is greater than -5 , the quantity in Column A is greater.

2. A: The average may be represented as $(360^\circ)/5$, which equals 72° . Since 72° is greater than 70° , the quantity in Column A is greater.

3. C: The shaded area comprises a total angle measure that may be represented as $0.65(360^\circ)$, or 234° . Thus, the non-shaded area, which represents the value of d , is equal to the difference of 360° and 234° , or 126° . This value is the same value given for Column B.

4. A: The area of a circle with a radius of 3 is equal to 9π . The area of a semi-circle with a radius of 4 is equal to half of 16π , namely 8π . Thus, the quantity in Column A is greater.

5. A: The amount of time Sarah volunteered was 3 hours, 18 minutes. The amount of time Jan volunteered was 3 hours, 17 minutes. Thus, Sarah's quantity was greater.

6. B: The problem may be modeled as $0.34(360) = 0.075h$. Solving for h gives $h = 1632$, which is less than 1634. Thus, the quantity in Column B is greater.

7. A: The fraction of 76 hours in a week may be represented by the ratio, $76/168$, which is approximately 45%. The fraction of 10 hours in a day may be represented by the ratio, $10/24$, which is approximately 42%. Thus, the quantity in Column A is greater.

8. C: Since the values of x and y are the same, the difference will equal 0. Thus, the quantities in Columns A and B are equal.

9. C: The value for Column A may be written as $5(6)$. The value for Column B may be written as $6(5)$. Both expressions equal 30, thus the quantities for Columns A and B are equal.

10. A: The quantity, given for Column A, may be written as $0.96n$, which is greater than $0.95n$. Thus, the quantity for Column A is greater.

11. B: The problem may be modeled as $5 = 0.667n$, where $n \approx 7.5$. Since 15 is greater than 7.5, the quantity in Column B is greater.