GMAT Prep

Data Insights 3

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Data Sufficiency

This data sufficiency problem consists of a question and two statements, labeled (1) and (2), in which certain data are given. You have to decide whether the data given in the statements are sufficient for answering the question. Using the data given in the statements, plus your knowledge of mathematics and everyday facts (such as the number of days in July or the meaning of the word counterclockwise), you must indicate whether:

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
D. EACH statement ALONE is sufficient to answer the question asked.
E. Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed.

Data Sufficiency

1. Of the 60 trucks sold by a dealer in a month, how many of the sold trucks have neither air-bags nor power-steering?

   (1) 40 trucks have air-bags, and 25 trucks have power-steering.
   (2) 12 trucks have both air-bags and power-steering.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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2. The cost of each bottle of water is same and the cost of each bottle of cola is same. What is the difference in the cost of 1 bottle of water and 1 bottle of cola?

   (1) 2 bottles of water and 5 bottles of cola cost $40.
   (2) 6 bottles of water and 15 bottles of cola cost $120.

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B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
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3. The only contents of a parcel are 25 photographs and 30 negatives. What is the total weight, in ounces, of the parcel's contents?

   (1) The weight of each photograph is 3 times the weight of each negative.
   (2) The total weight of 1 of the photographs and 2 of the negatives is 0.3 ounce.

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4. If the total price of n equally priced shares of a certain stock was $12,000, what was the price per share of the stock?

   (1) If the price per share of the stock had been $1 more, the total price of the n shares would have been $300 more.

   (2) If the price per share of the stock had been $2 less, the total price of the n shares would have been 5 percent less.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
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5. Line L passes through the points A (p, q) and B (r, s). Is the slope of line L positive?

   (1) $p < 0$ and $q < 0$
   (2) $r > 0$ and $s < 0$

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
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6. What is the slope of line M? (line M is not one of the axes)

   (1) The equation of line M is y = -3.
   (2) The line M crosses neither the I nor the II quadrant.

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B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
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7. Does the line y = mx + c have negative y-intercept?

   (1) m is negative.
   (2) The x-intercept of the line is negative.

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B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
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8. In which quadrant does the point (a, b) lie?

   (1) Point (-a, b) lies in the fourth quadrant.
   (2) Point (a + 2, b) lies in the third quadrant.

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B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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9. Is the slope of line L greater than the slope of line M?

   (1) The x-intercept of line M is smaller than the x-intercept of line L.
   (2) The y-intercept of line M is smaller than the y-intercept of line L.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
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Data Sufficiency

10. In xy-plane, a certain line L has how many intersections with $y = x^2 + 3$?

    (1) Line L does not intersect the x-axis.
    (2) The point Q(2, 1) lies on the line L.

A. Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked.
B. Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked.
C. BOTH statements (1) and (2) TOGETHER are sufficient to answer the question asked, but NEITHER statement ALONE is sufficient to answer the question asked.
D. EACH statement ALONE is sufficient to answer the question asked.
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GRAPHIC INTERPRETATION

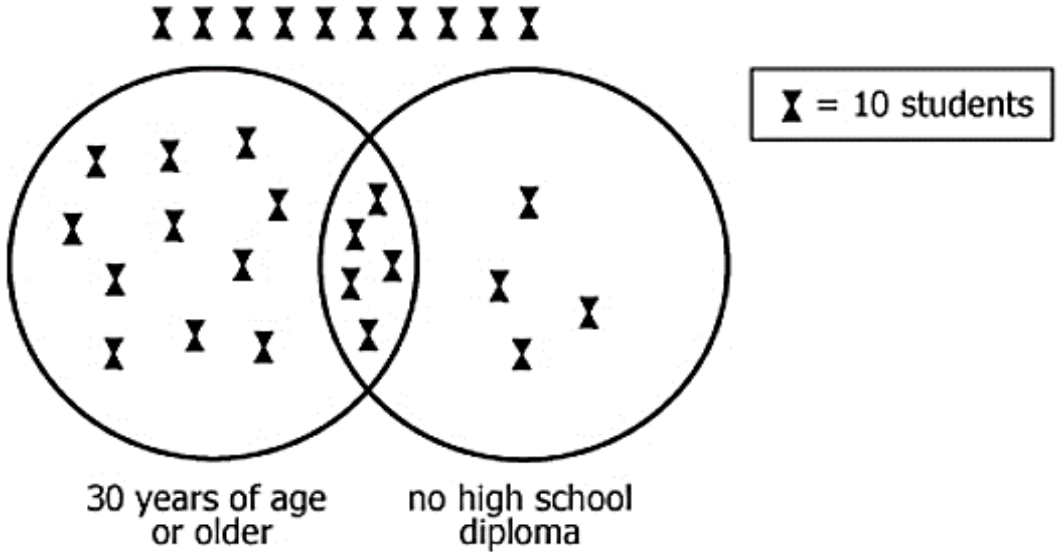
Graphic Interpretation

Measures your ability to interpret the information presented in a graph or other graphical image (scatter plot, x/y graph, bar chart, pie chart, or statistical curve distribution) to discern relationships, and make inferences.

- Find the information in the graphic. Notice any marked values on the axes. Also, notice any differences between units in the graphic and units the text discusses. Don't assume the graphic is drawn to scale.
- Text near the graphic may clarify what the graphic means. The text may also give information that's not in the graphic but is needed to answer the question.
- Study the statements with drop-down menus. Studying these statements helps you understand what the question is asking you to do.
- Graphics interpretation questions may ask you to interpret and connect data, to find how different pieces of data are related, or to draw conclusions from a data set. You may have to do some math, for example, to find or compare rates of change.
- Read all the choices in each drop-down menu. The menu choices may have clues about how to answer the question.
- Pick the choice that best completes the statement. More than one choice in the drop-down menu may seem plausible. Pick the one that makes the statement most accurate or logical. If the drop-down menu comes after a phrase like nearest to or closest to, pick the choice closest to your calculated answer. Reading the statement again with your answer choice in place may help.

GRAPHIC INTERPRETATION

11.



Refer to the pictograph of a survey of students at Central College. Each symbol represents 10 students in a sample of 300.

Complete each statement according to the information presented in the diagram.

If one student is selected at random, the chance that the student will be under 30 or a high school graduate or both is _____.

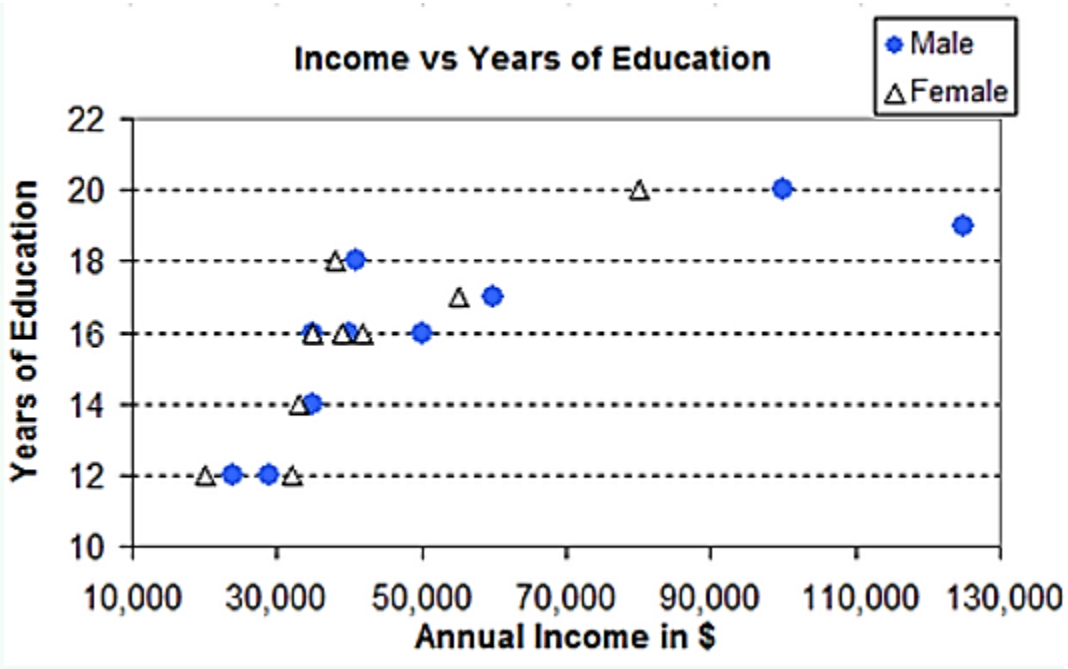
A. 1 out of 6
B. 1 out of 3
C. 2 out of 3
D. 5 out of 6

If one student is selected at random, the chance that the student will be under 30 and a high school graduate is _____.

A. 1 out of 6
B. 1 out of 3
C. 2 out of 3
D. 5 out of 6.

GRAPHIC INTERPRETATION

12.



During an internal study at General Depot, income and education were recorded for 19 employees - divided among male and female. The chart shows income, in dollars ($), education, in number of years, for each of the employees.

Based on the given information, complete the statements most accurately.

The correlation between income and education for employees in the study is _____.

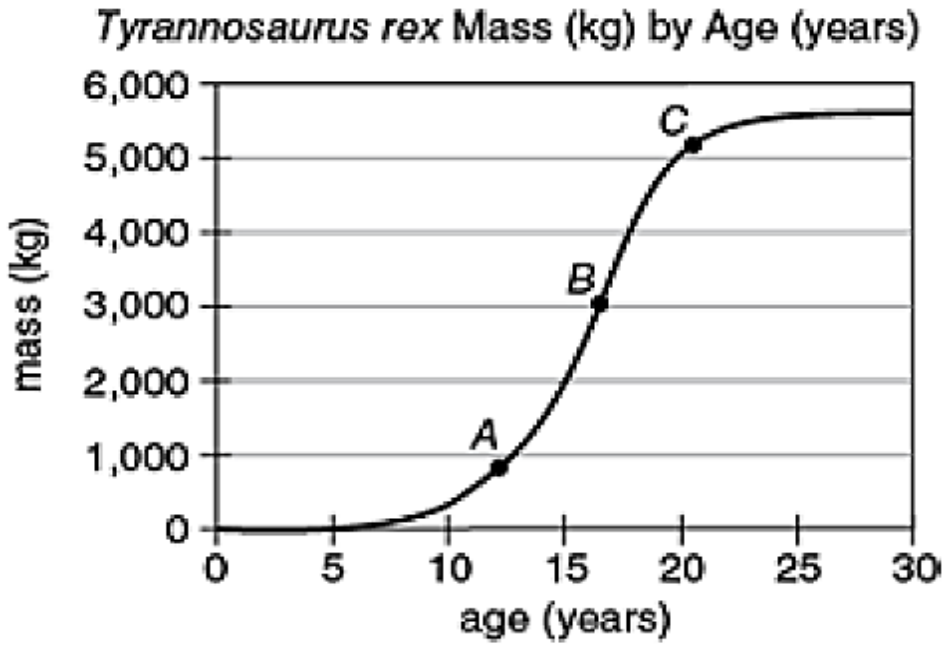
A. positive
B. negative
C. negligible

If an employee with 16 years of education or less were selected at random, the probability that the employee would be Female is _____.

A. 0.33
B. 0.4
C. 0.5
D. 0.75

GRAPHIC INTERPRETATION

13.



The graph models the hypothetical mass, in kilograms, of a Tyrannosaurus rex up to 30 years of age. Points A, B, and C represent the masses for a Tyrannosaurus rex at ages 12, 16, and 20 respectively.

Select the option that creates the most accurate statement based on the information provided.

For integer values of the age from 12 to 30, the average (arithmetic mean) mass falls approximately between _____ kilograms.

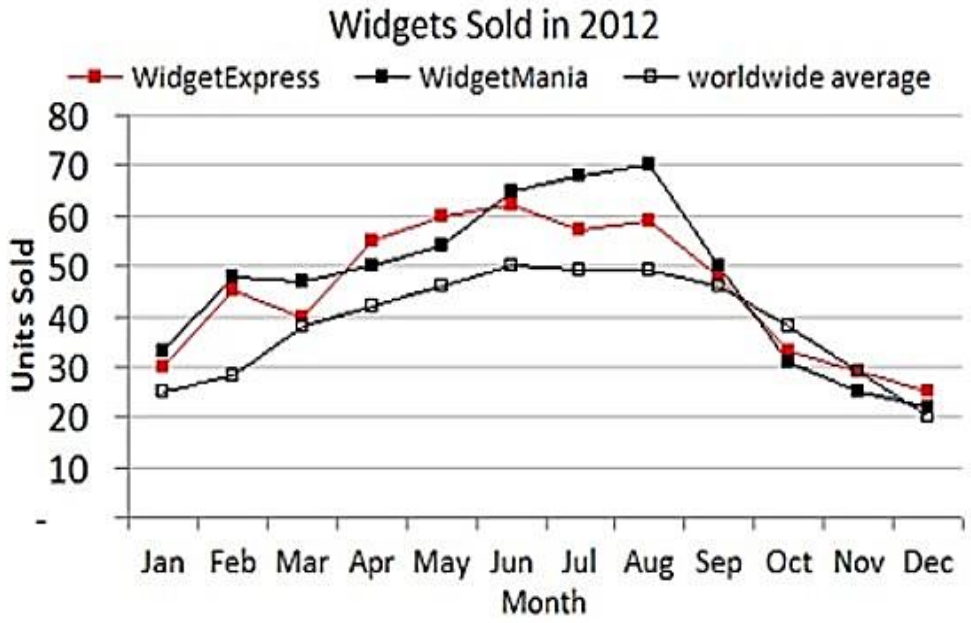
A. 2,000 and 3,000
B. 3,000 and 4,000
C. 4,000 and 5,000

The percent change in the mass from age 12 to age 16 approximately _____ the percent change in the mass from age 16 to age 20.

A. equal to
B. 2 times
C. 3 times

GRAPHIC INTERPRETATION

14.



In 2012, there were 5 internet companies selling widgets worldwide. The graphic shows the monthly sales data for 2012 for two of those merchants as well as the worldwide average for widgets for those months.

Based on the given information, complete the following statements most accurately.

WidgetMania and WidgetExpress accounted for more widgets sold than the other 3 internet companies for at least 1 month in 2012. _____

A. True
B. False
C. Cannot determine

In August 2012, the three widget merchants not specified on the graph sold a total of exactly ____ widgets.

A. 54
B. 116
C. 129
D. 147

GRAPHIC INTERPRETATION

15.

During the first week of April, the ChefZ cooking pan was out of stock at Online Retailer X. Day 1 shoppers are those shoppers who came to Online Retailer X's website seeking a ChefZ cooking pan. For each of the first 3 days of that week, the graph shows the subsequent behavior of all the Day 1 shoppers who visited Online Retailer X's website seeking ChefZ. Shoppers who came to the website and purchased a different item in lieu of ChefZ paid an average of 25% more for the item.

Select the option that creates the most accurate statement based on the information provided.

_____ % of Day 1 shoppers visited the site on Day 3.

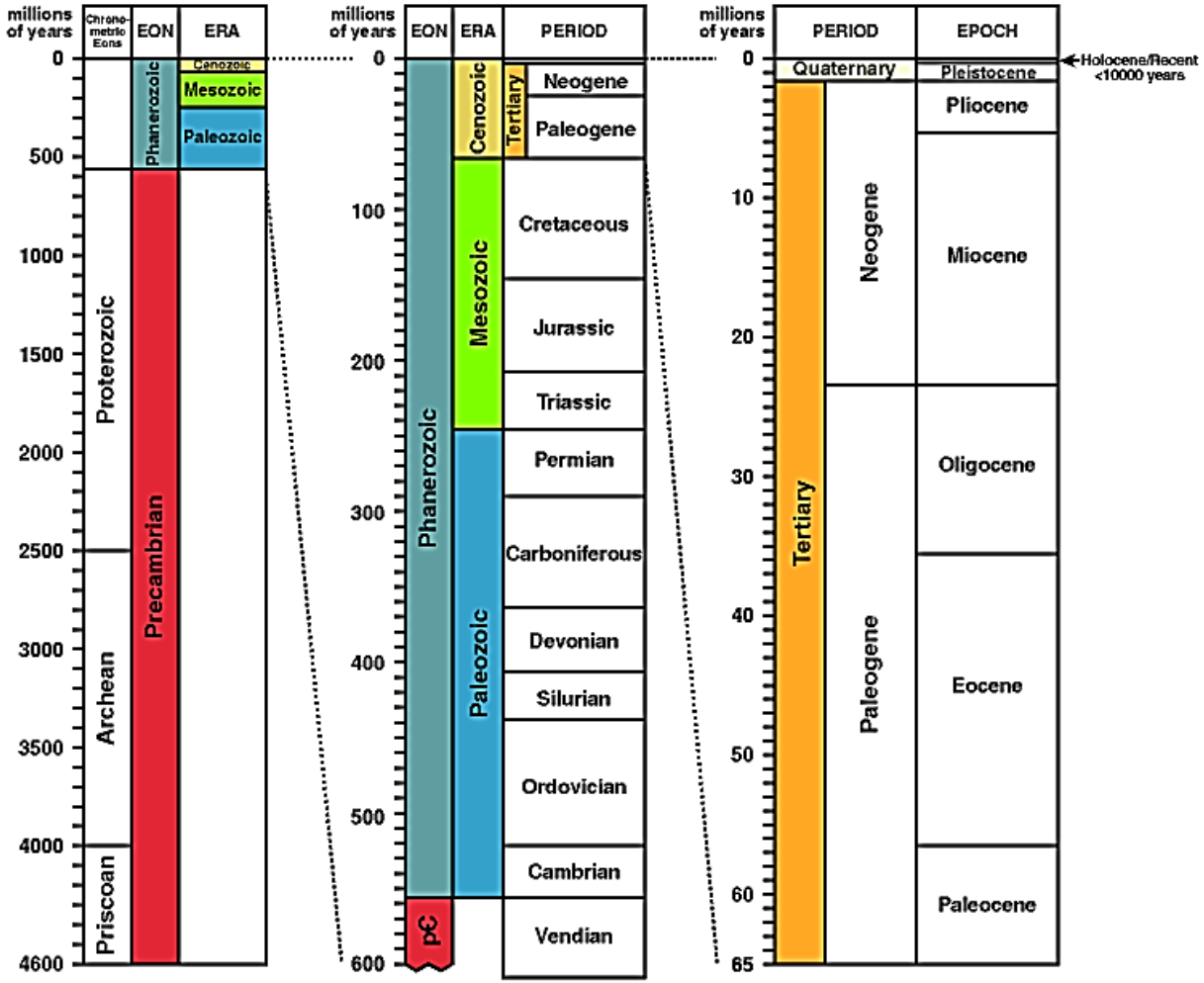
A. Less than 2
B. Between 2 and 5
C. Between 5 and 10
D. More than 10

Shoppers at Online Retailer X who purchased substitute items on Day 1 and Day 2 paid a total amount that was approximately _____ % of the total all Day 1 shoppers would have paid had each of them been able to purchase ChefZ on Day 1.

A. 6
B. 20
C. 33
D. 52
E. 60

GRAPHIC INTERPRETATION

16.



The diagram shows, in three-column groupings, various divisions of Earth's geological history since its formation approximately 4,600 million years ago. In the leftmost column grouping, the Precambrian eon is subdivided into chronometric eons shown on the far left; but otherwise, in the rest of the graphic, each subsequent column to the right shows the subdivisions of the timeframes to its left.

Each of the rightmost two-column groupings is a magnification with additional information-of a portion of the grouping directly to its left.

The Miocene epoch spans closest to _____ of the era of which it is a part.

A. 3%
B. 28%
C. 85%

According to the diagram, the beginning of the _____ marks the onset of a new eon, era, and period in geological history.

A. Cambrian period
B. Triassic period
C. Pliocene epoch
D. Precambrian eon

Thank you