Question 1:

If a, b, and c are distinct positive integers where a<b<c and $\sqrt{abc} = c$, what is the value of a?

1. c=8

2. The average of a, b, and c is 143

(A) EACH statement ALONE is sufficient to answer the question asked

(B) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(D) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

(E) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

Correct Answer:

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

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Question 2:

Line M is tangent to a circle, which is centered on point (3, 4). Does Line M run through point (6, 6)?

1. Line M runs through point (-8, 6)

2. Line M is tangent to the circle at point (3, 6)

(A) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

(B) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(C) EACH statement ALONE is sufficient to answer the question asked

(D) Statement (2) ALONE is sufficient, but statement (1) alone is not 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

Correct Answer:

(D) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

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Question 3:

For nonnegative integers x and y, what is the remainder when x is divided by y?

1. $\dfrac{x}{y} = 13.8$

2. The numbers x and y have a combined total of less than 5 digits.

(A) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

(B) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(D) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(E) EACH statement ALONE is sufficient to answer the question asked

Correct Answer:

(B) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

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Question 4:

If x and y are positive integers, is x/y an integer?

1. Every factor of y is also a factor of x

2. Every factor of x is also a factor of y

(A) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

(B) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(C) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

(D) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(E) EACH statement ALONE is sufficient to answer the question asked

Correct Answer:

(D) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

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Question 5:

What is the average of the terms in set J?

1. The sum of any three terms in Set J is 21

2. Set J consists of 12 total terms.

(A) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(B) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

(C) EACH statement ALONE is sufficient to answer the question asked

(D) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(E) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

Correct Answer:

(D) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

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Question 6:

Is $xy > 24$?

1. $y - 2 < x$

2. $2y > x + 8$

(A) EACH statement ALONE is sufficient to answer the question asked

(B) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(D) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(E) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

Correct Answer:

(B) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

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Question 7:

If $xy \neq 0$, is $\frac{1}{x} + \frac{1}{y} = 16$?

1. x + y = 16xy

2. x = y

(A) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(B) EACH statement ALONE is sufficient to answer the question asked

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(D) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

(E) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

Correct Answer:

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

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Question 8:

What is the value of x+2y?

1. $3^x \cdot 9^y = 27^{12}$

2. x=2y

(A) EACH statement ALONE is sufficient to answer the question asked

(B) Statement (1) ALONE is sufficient, but statement (2) 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

(D) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(E) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

Correct Answer:

(B) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

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Question 9:

Is $a^2 > 3a - b^4$?

1. $3a - b^4 = -5$

2. a > 5 and b > 0

(A) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

(B) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(D) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

(E) EACH statement ALONE is sufficient to answer the question asked

Correct Answer:

(E) EACH statement ALONE is sufficient to answer the question asked

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Question 10:

If xy $\neq$ 0, is $a > \frac{y}{x}$?

1. $a = \frac{1}{x} + \frac{1}{y}$

2. x and y are positive integers

(A) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

(B) Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient to answer the question asked

(C) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient to answer the question asked

(D) EACH statement ALONE is sufficient to answer the question asked

(E) Both statements (1) and (2) TOGETHER are sufficient to answer the question asked; but NEITHER statement ALONE is sufficient

Correct Answer:

(A) Statements (1) and (2) TOGETHER are NOT sufficient to answer the question asked, and additional data specific to the problem are needed

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