# Answer on Question #56376 – Math – Algebra

**9.** If you were to solve the following system of equations by using a matrix, which of the following would be your coefficient matrix?

5x – y = 18

3x + 8y =15

A: [5 18]

[3 15]

B: [5 -1 18]

[3 8 15]

C: [5 -1]

[3 8]

D: [5 3]

[-1 8]

**Solution**

**C: [5 -1]**

**[3 8]**

**10.** It is possible for a system of linear equations to have an infinite number of solutions

A: True

B: False

**Solution**

It is possible for a system of linear equations to have an infinite number of solutions Example of a system that has infinite solutions:

$$\begin{cases} y = 2x + 1, \\ 2(2x+1) = 4x + 2; \end{cases} \qquad \begin{cases} y = 2x + 1 \\ 2y = 4x + 2 \end{cases} \qquad \begin{cases} y = 2x + 1, \\ 2(2x+1) = 4x + 2; \end{cases}$$

$$2(2x+1) = 4x + 2;$$
$$4x + 2 = 4x + 2;$$
$$4x - 4x = 2 - 2;$$
$$0 = 0, \text{ for any values of } x$$

**Answer: A: True**

**11.** Let y = 3t + 6 be a linear function representing the distance from home for an ant t minutes after starting out from a location near its home. What does the number 3 represent in this function.?

A: The ant is 3 feet from its home after t minutes.

B: The ant started out 3 feet from its home.

C: The ant is crawling at 3 feet per minute.

D: The ant is moving 3 feet every 6 minutes.

**Answer: C: The ant is crawling at 3 feet per minute.**