Name:_____ Date:_____

8.EE.7a

_____1. What is the solution to the equation below? (2013)

$2(x - 3) = 2x + 5$

A. x = $2\frac{3}{4}$

B. x = $-2\frac{3}{4}$

C. There is no solution.

D. There are infinitely many solutions

_____2. What value for the constant, *h*, in the equation shown below will result in an infinite number of solutions? (2017)

$6x + 18 = h(3x + 9)$

A. - 2 B. - 3 C. 2 D. 3

_____3. Which statement about the solution to the equation shown below is true? (2021)

$$3 = -\frac{1}{3}x$$

A. There is no solution.

B. There is only one solution, x = -1.

C. There is only one solution, x = -9.

D. There are an infinite number of solutions.

_____4. What is the solution, if any, to the equation $3(x - 2) + 4 = 3x + 6$? (2022)

A. x = 0

B. x = 8

C. There is no solution.

D. There are an infinite number of solutions.

_____5. What value for the constant, n , will result in no solution for the equation shown below? (2022)

$$n\,(5x + 7) = 10x + 12$$

A. 5 B. 2 C. −2 D. −5

6. Determine the number of solutions that exist to the equation below. (2015)

$$8(j - 4) = 2(4j - 16)$$

Show your work.

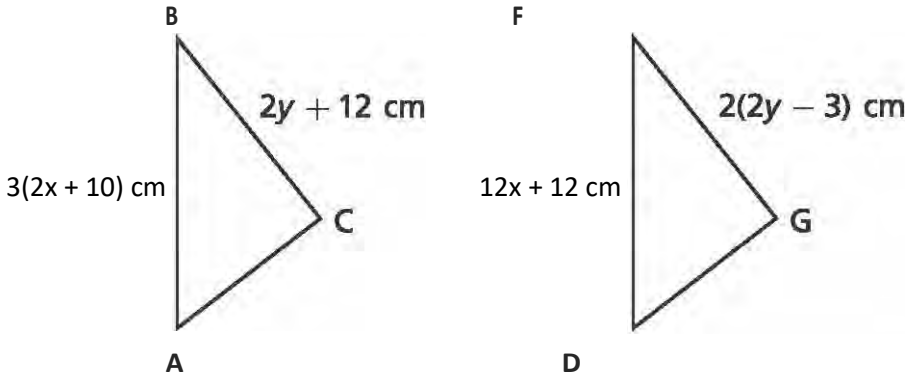
Answer _____

7. What, if any, are the solutions to the equation $3(0.5x - 4) = \frac{3}{2}x - 1.2$? (2015)

Show your work.

Answer _____

8. Triangle ABC is translated to create triangle DFG, as shown below. (2016)



In these triangles, side AB is congruent to side DF, and side BC is congruent to side FG.
Determine the values of x and y.

Answer x = _____ y = _____

9. An equation is shown below. (2018)

$$3(x - 2) + 7x = \frac{1}{2}(6x - 2)$$

How many solutions, if any does the equation have?

Show your work.

Answer Number of solution(s) _____