Practice Test A – Solving Equations

Solve each of the problems and INDICATE what type of answer you have found.

1.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:
$$-5x + 4 + 8x = 43$$

2.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:
$$11 + 8q = 3q - 19$$

3.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:
$$-\frac{3}{5}m + 7 + \frac{2}{5}m = 19$$

4.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:
$$5(3 - x) + 10 = -20x + 3(4 + 5x)$$

5.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:

$$16 - 2n - 5 + 8n = 65$$

6.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:

$$15 - (3x + 9) = -3(x - 2)$$

7.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:

$$7 - 4(x + 2) = -3x - 9 - 2x$$

8.	One solution	No solution	Infinite Solution
	x =		

Justify your answer:

$$\frac{x}{-2} + 15 = -22$$

9.   Simplify each statement.

$$\frac{2x+1}{-3} = 10$$

$$\frac{2x}{-3} + 1 = 10$$

10.   Describe what you would find in solving an equation if that problem had:

A Single Solution

No Solution:

All Solutions (Infinite Solutions):

A) Insert a number into each box to create an equation with **infinite solutions.**	B) Insert a number into each box to create an equation with **no solutions.**	C) Insert a number into each box to create an equation with **one solution.**
-5x + 19 = ☐ x + ☐	-5x + 19 = ☐ x + ☐	-5x + 19= ☐ x + ☐

11.   **Spot the mistake – solving equations**

Spot the mistake(s) and make the corrections:

	Mistake	Correction
$5(2x + 1) = 55$ $2x + 1 = 11$ $2x = 12$ $x = 6$		
$\dfrac{5x - 3}{6} = 7$ $\dfrac{5x}{6} = 10$ $5x = 60$ $x = 12$		
$\dfrac{4x}{3} - 5 = 7$ $4x - 5 = 21$ $4x = 16$ $x = 4$		
$6(2x - 3) = 42$ $12x - 3 = 42$ $12x = 45$ $x = \dfrac{45}{12} = 3.75$		