

Linear Equations

8.EE.C.7

Name _____ Date _____

Solve each equation for the variable. Some equations have one solution, some have no solution, and some are true for all values. Show your work.

1. Solve for x :

$$3x + 4 = 19$$

2. Solve for x :

$$5x - 7 = 2x + 8$$

3. Solve for x :

$$7x + 2 = 4x + 17$$

4. Solve for n :

$$8n - 3 = 5n + 12$$

5. Solve for x :

$$2(x + 4) = 3x - 1$$

6. Solve for y :

$$4(2y - 1) = 6y + 10$$

7. Solve for x :

$$6x + 5 = 6x + 5$$

8. Solve for x :

$$4x + 9 = 4x - 3$$

9. Solve for x :

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

10. Solve for x :

$$2(3x + 1) = 6x + 2$$

11. Solve for x :

$$\frac{1}{2}x + 3 = \frac{1}{4}x + 7$$

12. How many solutions does the equation $5x - 2 = 5(x - 1) + 3$ have?

A) No solution

B) Exactly one solution

C) Exactly two solutions

D) Infinitely many solutions

13. Two phone plans cost the same per month. Plan A charges \$20 plus \$5 per gigabyte. Plan B charges \$35 plus \$2 per gigabyte. For how many gigabytes g do the plans cost the same?

14. Maya and Leo start with different amounts and save weekly. Maya has \$50 and saves \$8 per week. Leo has \$74 and saves \$5 per week. After how many weeks w will they have the same amount?