

Name: Key Date: _____ Class: _____

Solve each equation. If the equation has one solution, put a star beside it. If the equation has infinite solutions, put a smiley face beside it. If it has no solution, put an x beside it. You may choose to show your work on the back of this paper or on a separate sheet of paper. Record only answers here.

$13 - (2x + 2) = 2(x + 2) + 3x$ ★	$11 + 3x - 7 = 6x + 5 - 3x$ X
$6x + 5 - 2x = 4 + 4x + 1$ ☺	$6x - 8 = 2(2x + 1)$ ★
$3x + 7 = 5x + 2(3 - x) + 1$ ☺	$2x - 7 + 3x = 4x + 2$ ★
$3(x - 1) + x = 4(x + 2)$ X	$5(2x - 1) + x + 17 = 5x + 6(x + 2)$ ☺
What is the solution for $72x + 7 = 223$? a. $X = 6$ b. $X = 4$ c. $X = 3$ d. $X = 2$	Which best describes the solution for $\frac{f}{2} - 6 = 4$? a. $f = 20$ b. $f = 5$ c. no solution d. infinitely many solutions
What value of u makes the equation true? $u - 9 = -7u + 7$ a. $u = 2$ b. $u = 2\frac{2}{3}$ c. $u = 16$ d. $u = 32$	What value of x makes this equation true? $\frac{3}{4}x + 9 = 3$ a. $x = -8$ b. $x = -\frac{1}{2}$ c. $x = 1$ d. $x = 16$
What value of y makes this equation true? $6y - 8 = 2(2y + 1)$ a. $y = -3$ b. $y = 1$ c. $y = 2$ d. $y = 5$	Which best describes the solution for the equation below? $0.5(2x + 8) = x - 4$ a. $x = -4$ b. $x = 0$ c. no solution d. infinitely many solutions

Name _____

Solve the following equations, and indicate if it is one solution, infinite solutions, or no solution.

$$1. \frac{3}{8}x = \frac{81}{3}$$

$$x = \frac{81}{1} \cdot \frac{8}{3}$$

$$x = \frac{648}{3}$$

$$x = 216$$

$$2. \frac{a}{3} = 12$$

$$\cancel{3} \cdot \frac{a}{\cancel{3}} = 12 \cdot 3$$

$$a = 36$$

$$3. \frac{2}{10}c = 20$$

$$\frac{2}{10} \cdot \frac{a}{10}$$

$$c = \frac{20 \cdot 10}{1 \cdot 2}$$

$$c = \frac{200}{2}$$

$$c = 100$$

$$4. \frac{m}{4} = 50$$

$$\cancel{4} \cdot \frac{m}{\cancel{4}} = 50 \cdot 4$$

$$m = 200$$

$$5. 11a + 4 = -3a - 24$$

$$\underline{-4} \quad \underline{-4}$$

$$11a = -3a - 28$$

$$\underline{+3a} \quad \underline{+3a}$$

$$14a = -28$$

$$\frac{14a}{14} = \frac{-28}{14}$$

$$a = -2$$

$$6. \frac{1}{3}(a - 6) = 28$$

$$\frac{1}{3}a - 2 = 28$$

$$\underline{+2} \quad \underline{+2}$$

$$\frac{1}{3}a = 30$$

$$\frac{1}{3} \quad \frac{1}{3}$$

$$a = \frac{30 \cdot 3}{1 \cdot 1}$$

$$a = 90$$

$$7. 3(y + 5) = 3(3y - 1)$$

$$3y + 15 = 9y - 3$$

$$\underline{-3y} \quad \underline{-3y}$$

$$15 = 6y - 3$$

$$\underline{+3} \quad \underline{+3}$$

$$18 = 6y$$

$$\frac{18}{6} = \frac{6y}{6}$$

$$3 = y$$

$$8. 6x - 10 = 3x + 5 + 3(x - 5)$$

$$6x - 10 = 3x + 5 + 3x - 15$$

$$6x - 10 = 6x - 10$$

$$\underline{+10} \quad \underline{+10}$$

$$\frac{6x}{6} = \frac{6x}{6}$$

$$x = x$$

infinitely
many
solutions

$$9. 2(2d + 3) = 6(d + 12)$$

$$4d + 6 = 6d + 72$$

$$\underline{-6} \quad \underline{-6}$$

$$4d = 6d + 66$$

$$\underline{-6d} \quad \underline{-6d}$$

$$-2d = 66$$

$$\underline{-2} \quad \underline{-2}$$

$$d = -33$$

$$10. 4x + 6 + 3x = 5x + 7 + 2x$$

$$4x + 6 + 3x = 5x + 7 + 2x$$

$$7x + 6 = 7x + 7$$

$$\underline{-6} \quad \underline{-6}$$

$$7x = 7x + 1$$

$$\underline{-7x} \quad \underline{-7x}$$

$$0 \neq 1$$

no
solutions