

Multi-step Equations Review

Name: _____

key

1) $6a + 5a = -11$

$11a = -11$

$a = -1$

2) $-6n - 2n = 16$

$-8n = 16$

$n = -2$

3) $4x + 6 + 3 = 17$

$4x + 9 = 17$

$4x = 8$

$x = 2$

5) $6r - 1 + 6r = 11$

$12r - 1 = 11$

$r = 1$

7) $-10 = -14v + 14v$

$-10 = 0$

no solution

9) $21 = 29m + 13m$

$m = \frac{1}{2}$

1. $\frac{-1}{-2}$

3. $\frac{2}{0}$

5. $\frac{1}{8/3}$

7. no sol.

9. $\frac{1/2}{-3}$

11) $18 = 3(3x - 6)$

$18 = 9x - 18$

$36 = 9x$

$x = 4$

13) $37 = -3 + 5(x + 6)$

$37 = -3 + 5x + 30$

$10 = 5x$

$x = 2$

15) $4(-x + 4) = -6$

$-4x + 16 = -6$

$-4x = -22$

$x = \frac{11}{2}$

17) $-6(1 - 5v) = 54$

$-6 + 30v = 54$

$v = 2$

19) $10(1 + 3b) = -20$

$10 + 30b = -20$

$30b = -30$

$b = -1$

12) $-5(6n + 6) = 30$

$30 = -30n - 30$

$60 = -30n$

$n = -2$

14) $-13 = 5(1 + 4m) - 2m$

$-13 = 5 + 20m - 2m$

$-18 = 18m$

$m = -1$

16) $-2 = -(n - 8)$

$-2 = -n + 8$

$n = 10$

18) $8 = 8v - 4(v + 8)$

$8 = 8v - 4v - 32$

$v = 10$

20) $-4n - 8(1 + 7n) = 8$

$-4n - 8 - 56n = 8$

$-60n = 16$

$n = \frac{-4}{15}$

11. $\frac{4}{-2}$

13. $\frac{2}{1}$

15. $\frac{11}{2}$

17. $\frac{2}{10}$

19. $\frac{-1}{-4/15}$

$$21) 8(4k - 4) = -5k - 32$$

$$22) -8(-8x - 6) = -6x - 22$$

$$21. \underline{0}$$

$$32k - 32 = -5k - 32$$

$$64x + 48 = -6x - 22$$

$$22. \underline{-1}$$

$$37k = 0$$

$$70x = -70$$

$$k = 0$$

$$x = -1$$

$$23. \underline{1/5}$$

$$23) 8(1 + 5x) + 5 = 20 + 5x$$

$$24) -11 - 5a = 6(5a + 4)$$

$$24. \underline{-1}$$

$$8 + 40x + 5 = 20 + 5x$$

$$-11 - 5a = 30a + 24$$

$$35x = 7$$

$$-35 = 35a$$

$$x = \frac{1}{5}$$

$$a = -1$$

$$25) -5(4x - 2) = -2(3 + 6x)$$

$$26) 5(2x + 6) = -4(-5 - 2x) + 3x$$

$$25. \underline{2}$$

$$-20x + 10 = -6 - 12x$$

$$10x + 30 = 20 + 8x + 3x$$

$$26. \underline{10}$$

$$16 = 8x$$

$$x = 10$$

$$78$$

$$27) 12 = \frac{x}{6} + 1$$

$$28) -| -3| + 2x - 8 = 5x + 2$$

$$27. \underline{78}$$

$$13 = \frac{x}{6}$$

$$-3 + 2x - 8 = 5x + 2$$

$$-13 = 3x$$

$$x = -78$$

$$x = \frac{-13}{3}$$

$$29) 4 - (v + 8) = 9v$$

$$30) -5 = -\frac{2}{3}x + 10$$

$$29. \underline{-2/5}$$

$$4 - v - 8 = 9v$$

$$\left(-\frac{3}{2}\right)5 = \frac{-2}{3}x$$

$$30. \underline{-15/2}$$

$$-4 = 10v$$

$$v = \frac{-2}{5}$$

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