

Multi-Step Equations

* Fractions

Date _____ Period _____

Solve each equation.

SADMEP

* Distribution

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

$11a = -11$

$a = -1$

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

$-8n = 16$

$n = -2$

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

$4x + 9 = 17$

$4x = 8$

$x = 2$

4) $0 = -5n - 2n$

$0 = -7n$

$0 = n$

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

$12r - 1 = 11$

$12r = 12$

$r = 1$

6) $r + 11 + 8r = 29$

$9r + 11 = 29$

$9r = 18$

$r = 2$

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

$-10 = 0$

NO Real Solution

8) $-10p + 9p = 12$

$-p = 12$

$p = -12$

9) $42 = 8m + 13m$

$42 = 21m$

$2 = m$

10) $a - 2 + 3 = -2$

$a + 1 = -2$

$a = -3$

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

$18 = 9x - 18$

$36 = 9x$

$4 = x$

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

$30 = -30n - 30$

$60 = -30n$

$-2 = n$

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

$$37 = -3 + 5x + 30$$

$$37 = 5x + 27$$

$$10 = 5x$$

$$\boxed{2 = x}$$

$$15) 4(-x+4) = 12$$

$$-4x + 16 = 12$$

$$-4x = 4$$

$$\boxed{x = -1}$$

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

$$-6 + 30v = 54$$

$$30v = 60$$

$$\boxed{v = 2}$$

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

$$10 + 30b = -20$$

$$30b = -30$$

$$\boxed{b = -1}$$

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

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

$$37k - 32 = -32$$

$$37k = 0$$

$$\boxed{k = 0}$$

$$23) 8(1+5x) + 5 = 13 + 5x$$

$$8 + 40x + 5 = 13 + 5x$$

$$40x + 13 = 13 + 5x$$

$$35x + 13 = 13$$

$$35x = 0$$

$$\boxed{x = 0}$$

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

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

$$-13 = 5 + 18m$$

$$-18 = 18m$$

$$\boxed{-1 = m}$$

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

$$-2 = -n + 8$$

$$-10 = -n$$

$$\boxed{10 = n}$$

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

$$8 = 8v - 4v - 32$$

$$8 = 4v - 32$$

$$40 = 4v$$

$$\boxed{10 = v}$$

$$20) -5n - 8(1+7n) = -8$$

$$-5n - 8 - 56n = -8$$

$$-61n = 0$$

$$\boxed{n = 0}$$

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

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

$$70x + 48 = -22$$

$$70x = -70$$

$$\boxed{x = -1}$$

$$\begin{array}{r} 1 \\ -22 \\ -48 \\ \hline 0 \end{array}$$

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

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

$$-11 = 35a + 24$$

$$-35 = 35a$$

$$\boxed{-1 = a}$$