

Key

Algebra 1  
Chapter 2 Practice Test

1.) (5 pts each) Solving One Step Equations (2-1) Solve each equation.

$$\begin{aligned} \text{a) } b + 8 &= 21 \\ -8 \quad -8 & \\ b &= 13 \end{aligned}$$

$$\begin{aligned} \text{b) } a - 11 &= 54 \\ +11 \quad +11 & \\ a &= 65 \end{aligned}$$

$$\begin{aligned} \text{c) } \frac{6a}{6} &= \frac{72}{6} \\ a &= 12 \end{aligned}$$

$$\begin{aligned} \text{d) } \frac{y}{8} &= 5 \\ 8\left(\frac{y}{8}\right) &= (8)(5) \\ y &= 40 \end{aligned}$$

$$\begin{aligned} \text{e) } \frac{-15t}{-15} &= \frac{45}{-15} \\ t &= -3 \end{aligned}$$

2.) (5 pts each) Solving Two-Step Equations (2-2) Solve each equation.

$$\begin{array}{r} \text{a) } 3x + 8 = 44 \\ -8 \quad -8 \end{array}$$

$$\frac{3x}{3} = \frac{36}{3} \quad x = 12$$

$$\begin{array}{r} \text{b) } \frac{b}{5} - 4 = -2 \\ +4 \quad +4 \end{array}$$

$$\begin{array}{r} 5\left(\frac{b}{5}\right) = (-2)5 \\ b = 10 \end{array}$$

$$\begin{array}{r} \text{c) } 15 = 6x - 9 \\ +9 \quad +9 \end{array}$$

$$\frac{24}{6} = \frac{6x}{6}$$

$$x = 4$$

$$\begin{array}{r} \text{d) } 8 = \frac{a}{7} + 12 \\ -12 \quad -12 \end{array}$$

$$(-7)(-4) = \left(\frac{a}{7}\right)(-7)$$

$$a = 28$$

3.) (5 pts each) Solving Multi-Step Equations (2-3) Solve each equation.

$$\text{a) } 8c + 7(2c - 3) = 23$$

$$8c + 14c - 21 = 23$$

$$\begin{array}{r} 22c - 21 = 23 \\ +21 \quad +21 \end{array}$$

$$\frac{22c}{22} = \frac{44}{22}$$

$$\boxed{c = 2}$$

$$b) 3(4 + x) - (2x + 3) = 14$$

$$12 + 3x - 2x - 3 = 14$$

$$12 + (-3) = 9$$

$$x + 9 = 14$$

$$x = 5$$

$$c) 9y - 2(3y - 5) = 8$$

$$9y - 6y + 10 = 8$$

$$3y + 10 = 8$$

$$\frac{3y}{3} = \frac{-2}{3}$$

$$y = \frac{-2}{3}$$

$$d) \frac{c+5}{2} = 11$$

$$2\left(\frac{c+5}{2}\right) = (11)2$$

$$c = 17$$

$$c + 5 = 22$$

4.) (5 pts each) Equations with Variables on Both Sides (2-4) Solve each equation.

$$a) 6x - 25 = 7 - 2x$$

$$+25 +25$$

$$6x = 32 - 2x$$

$$+2x +2x$$

$$\frac{8x}{8} = \frac{32}{8}$$

$$x = 4$$

$$b) 4(a - 2) = 7a - 35$$

$$4a - 8 = 7a - 35$$

$$-4a -4a$$

$$-8 = 3a - 35$$

$$+35 +35$$

$$\frac{27}{3} = \frac{3a}{3}$$

$$a = 9$$

$$c) 9b + 15 = 11b + 27$$

$$-9b -9b$$

$$15 = 2b + 27$$

$$-27 -27$$

$$\frac{-12}{2} = \frac{2b}{2}$$

$$b = -6$$

