

Homework #57 - Multi-Step Equations

Solve the following. ONLY CHECK THE EVEN NUMBERED PROBLEMS. SHOW ALL WORK!

$$1) 4(g+2) + 8g = 56$$

$$4g + 8 + 8g = 56$$

$$12g + 8 = 56$$

$$\quad \underline{-8} \quad -8$$

$$12g = 48$$

$$\frac{12g}{12} = \frac{48}{12}$$

$$g = 4$$

$$2) 8v - 4(v+8) - 2 = 6$$

$$8v - 4v - 32 - 2 = 6$$

$$4v - 34 = 6$$

$$\quad \underline{+34} \quad +34$$

$$4v = 40$$

$$\frac{4v}{4} = \frac{40}{4}$$

$$v = 10$$

$$8(10) - 4(10+8) - 2$$

$$80 - 4(18) - 2$$

$$80 - 72 - 2 = 6$$

$$8 - 2 = 6$$

$$6 = 6 \checkmark$$

$$3) 2(x-7) + 3(x-1) - 4x = 3$$

$$2x - 14 + 3x - 3 - 4x = 3$$

$$1x - 17 = 3$$

$$\quad \underline{+17} \quad +17$$

$$1x = 20$$

$$x = 20$$

$$4) x - \frac{2}{3} = 17$$

$$\quad \underline{+\frac{2}{3}} \quad +\frac{2}{3}$$

$$x = 17\frac{2}{3}$$

$$x - \frac{2}{3} = 17$$

$$17\frac{2}{3} - \frac{2}{3} = 17$$

$$17 = 17 \checkmark$$

$$5) 0.25(32n + 28) = 31$$

$$8n + 7 = 31$$

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

$$8n = 24$$

$$\frac{8n}{8} = \frac{24}{8}$$

$$n = 3$$

$$6) -\frac{1}{3}x + 3 + \frac{3}{4}x = 13$$

$$\frac{5}{12}x + 3 = 13$$

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

$$\frac{5}{12}x = 10$$

$$\frac{5}{12}x = \frac{10}{\frac{5}{12}}$$

$$x = 24$$

$$-\frac{1}{3}(24) + 3 + \frac{3}{4}(24)$$

$$-8 + 3 + 18 = 13$$

$$-5 + 18 = 13$$

$$13 = 13 \checkmark$$