7.1 One-Step Equations (review)

Math 9   **Review of One-Step Equations**

Solve each equation. Show how you are isolating the variable.

$x + 4 = 13$
$\quad -4 \quad -4$
$\quad x = 9$

$x - 8 = 2$
$\quad +8 \quad +8$
$\quad x = 10$

$-4 + x = -1$
$\quad +4 \qquad +4$
$\quad x = 3$

$3y = 18$
$\div 3 \quad \div 3$
$\quad y = 6$

$3 \cdot \dfrac{n}{3} = -4 \cdot 3$
$n = -12$

$-v = 9$
$\div(-1) \quad \div(-1)$
$v = -9$

$m + 5.1 = -2.3$
$\quad -5.1 \quad -5.1$
$\quad m = -7.4$

$2.6a = 8.58$
$\div 2.6 \quad \div 2.6$
$\quad a = 3.3$

Solve each equation. Show how you are isolating the variable. Then check your answer.

$4 \cdot 2x = \dfrac{3}{4} \cdot 4$
$8x = 3$
$\div 8 \quad \div 8$
$x = \dfrac{3}{8}$
$2 \cdot \dfrac{3}{8} = \dfrac{6}{8} = \dfrac{3}{4}$ ✓

$3 \cdot 3x = -\dfrac{2}{3} \cdot 3$
$9x = -2$
$\div 9 \quad \div 9$
$x = -\dfrac{2}{9}$

$5 \cdot \dfrac{m}{3} = -\dfrac{2}{5} \cdot 3$
$5m = -6$
$\div 5 \quad \div 5$
$m = -\dfrac{6}{5}$
$\dfrac{5}{3} \cdot \dfrac{m}{3} = -\dfrac{2}{5} \cdot \dfrac{3}{3}$ $5m = -6$
$\dfrac{-6/5}{3} = \dfrac{-6}{15} = \dfrac{-2}{5}$ ✓

$6 \cdot \dfrac{x}{2} = \dfrac{5}{6} \cdot 6$
$\dfrac{6x}{2} = \dfrac{30}{6}$
$3x = 5$
$\div 3 \quad \div 3$
$x = \dfrac{5}{3}$

$-2\dfrac{1}{2}k = -3\dfrac{1}{2}$
$2 \cdot -\dfrac{5}{2}k = -\dfrac{7}{2} \cdot 2$
$-5k = -7$
$\div -5 \quad \div -5$
$k = \dfrac{-7}{-5} = \dfrac{7}{5}$

$-1\dfrac{1}{4}y = 1\dfrac{3}{4}$
$4 \cdot -\dfrac{5}{4}y = \dfrac{7}{4} \cdot 4$
$\dfrac{-20}{4}y = \dfrac{28}{4}$
$-5y = 7$
$\div -5 \quad \div -5$
$y = -\dfrac{7}{5}$

$0.28 \cdot \dfrac{r}{0.28} = -4.5 \cdot 0.28$
$r = -1.26$

$1.3 \cdot \dfrac{u}{1.3} = 0.8 \cdot 1.3$
$u = 1.04$

For each scenario, write an equation and then solve it.

Student Council raised $492 in a bake sale. If each item cost $3, how many were sold?

$n =$ number of items sold
$3n = 492$
$\div 3 \quad \div 3$
$n = 164$

164 items were sold

Winter Warehouse is selling mitts at 30% off the regular price. If the sale price is $34.99, what is the regular price of the mitts?

→ you are paying 70% of the regular price
$0.7p = 34.99$
$\div 0.7 \quad \div 0.7$
$p = 49.99$

The regular price is $49.99.

Assignment: p.301 #6 – 9, 12, 18, 19, 23