

32-37

Dec. 11

$$25.) \frac{2x}{5} = \frac{9}{15} \text{ cross multiply}$$

$$2x(15) = 5(9)$$

$$\frac{30x}{30} = \frac{45}{30}$$

$$x = 1.5$$

$$26.) \frac{5}{2} = \frac{d-2}{4}$$

$$2(d-2) = 5(4)$$

$$\frac{2d-4}{+4 \quad +4} = 20$$

$$\frac{2d}{2} = \frac{24}{2}$$

$$d = 12$$

$$27.) \frac{4}{k+3} = \frac{8}{14}$$

$$8(k+3) = 4(14)$$

$$8k + 24 = 56$$

$$\frac{-24 \quad -24}{8x} = 32$$

$$x = 4$$

$$32.) \frac{\$95}{20 \text{ students}} = \frac{x}{162} \text{ set up a proportion}$$

$$20x = 95(162)$$

$$\frac{20x}{20} = \frac{15390}{20}$$

$$x = \$769.50 \text{ for 162 students}$$

$$33) \frac{120 \text{ lbs (Earth)}}{20 \text{ lbs (moon)}} = \frac{93}{x}$$

$$120x = 20(93)$$

$$\frac{120x}{120} = \frac{1860}{120}$$

$$x = 15.5 \text{ pounds}$$

$$34) a) \frac{3 \text{ in}}{x} = \frac{1 \text{ in}}{2.54 \text{ cm}} \quad 1 \text{ in} = 2.54 \text{ cm}$$

$$x = 3(2.54)$$

$$x = 7.62 \text{ cm}$$

$$b) \frac{6 \text{ months}}{3 \text{ inches}} = \frac{x}{8 \text{ in}} \quad \text{Use a proportion}$$

$$3x = 6(8)$$

$$\frac{3x}{3} = \frac{48}{3}$$

$$x = 16 \text{ months} \rightarrow 1 \text{ yr. } 4 \text{ months}$$

Use constant C.) $m = \frac{y}{x} = \frac{3}{6} = \frac{1}{2}$

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

$$y = mx \quad x = 20 \text{ months}$$

$$y = \frac{1}{2}x$$

$$y = \frac{1}{2}(20)$$

$$y = 10 \text{ inches}$$

35) $\frac{2 \text{ people}}{6 \text{ hrs}} = \frac{5}{h}$

$2h = 6(5)$

$\frac{2h}{2} = \frac{30}{2}$

$h = 15 \text{ hr}$

no, b/c the more people you have to build a swing set, the less time it will take to complete building the set.

36) $144 \text{ people} \rightarrow \text{total}$

Let $5x = \# \text{ adult}$

$3x = \# \text{ children}$

answer
 90 adults
 54 children

$3x + 5x = 144$

$\frac{8x}{8} = \frac{144}{8}$

$x = 18$

$5(18) = 90$

$3(18) = 54$

37) $\frac{3 \text{ lbs seed}}{1800 \text{ sq. ft}} = \frac{x}{8400 \text{ sq ft}}$

$1800x = 3(8400)$

$\frac{1800x}{1800} = \frac{25200}{1800}$

$x = 14 \text{ lbs of seed}$