

$$1.) \frac{12}{28} = \frac{X}{42}$$

$$28X = (12)(42)$$

$$\frac{28X}{28} = \frac{504}{28}$$

$$\boxed{X = 18}$$

$$2.) \frac{X+2}{8} = \frac{2X+10}{12}$$

$$12(X+2) = 8(2X+10)$$

$$12x + 24 = 16x + 80$$

$$-12x \quad -12x$$

$$24 = 4x + 80$$

$$-80 \quad -80$$

$$-56 = 4x$$

$$\frac{-56}{4} = \frac{4x}{4}$$

$$\boxed{X = -14}$$

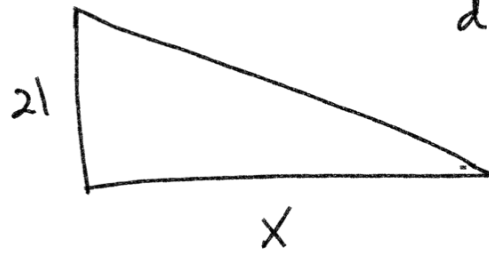
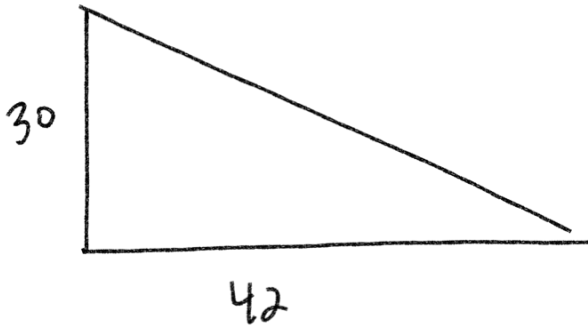
In honor of the opening of Quantomania, Nate ate 76 donuts over a 4 day period. If he maintained this exceedingly healthy and restrained diet, how long would it take for him to eat 3,000 donuts? You can support this "I love you 3,000" initiative by going to www.pleasedontdieNate.com.

$$\frac{\text{donuts}}{\text{days}} = \frac{76 \text{ donuts}}{4 \text{ days}} = \frac{3,000 \text{ donuts}}{x \text{ days}}$$

$$76x = (4)(3,000)$$

$$\frac{76x}{76} = \frac{12,000}{76}$$

$$\boxed{X = 158 \text{ days}}$$



Figures not drawn to scale

$\frac{\text{Height}}{\text{Base}}$

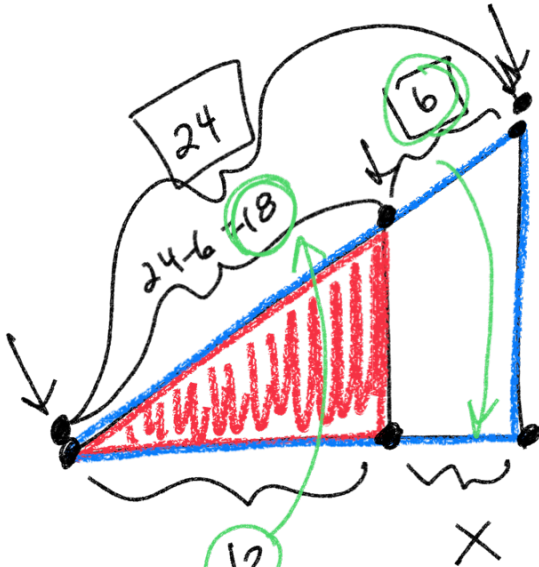
Big Lil

$$\frac{30}{42} = \frac{21}{X}$$

$$30X = (42)(21)$$

$$\frac{30X}{30} = \frac{882}{30}$$

$$X = 29.4$$



Lil (Red) Big (Blue)

$$\frac{\text{Base}}{\text{Hyp}} = \frac{\text{Base}}{\text{Hyp}}$$

$$18(12+X) = (12)(24)$$

$$\frac{12}{24-6} = \frac{12+X}{24}$$

$$\begin{array}{r} 216 + 18X = 288 \\ -216 \quad -216 \\ \hline 18X = 72 \end{array}$$

$$\frac{12}{18} = \frac{12+X}{24}$$

$$\frac{18X}{18} = \frac{72}{18} \quad \boxed{X=4}$$

What is 40% of 120?
↓ ↓ ↓ ↓ ↓
X = 0.40 * 120

$$X = 48$$

60% of what number is 84?
↓ ↓ ↓ ↓ ↓
0.60 * X = 84

$$\frac{0.60x}{0.60} = \frac{84}{0.60}$$

$$X = 140$$

28 is what percent of 80?
↓ ↓ ↓ ↓ ↓
28 = X (%) * 80

$$\frac{28}{80} = \frac{80x}{80}$$

$$x = \frac{28}{80} = 0.35 * 100\% = \underline{35\%}$$

1.) 70% of 30 is what number?
↓ ↓ ↓ ↓ ↓
0.7 * 30 = X

$$\boxed{X = 21}$$

2.) 45 is what percent of 240?
↓ ↓ ↓ ↓ ↓
45 = X * 240 $\frac{45}{240} = \frac{240X}{240}$

$$X = \frac{45}{240} = 0.1875 * 100\% = \boxed{18.75\%}$$

3.) 84% of what number is 28?
↓ ↓ ↓ ↓ ↓
0.84 * X = 28

$$\frac{0.84X}{0.84} = \frac{28}{0.84}$$

$$\boxed{X = 33.\bar{3}}$$