

1.) Find the unit rate.

a) 84 donuts eaten  
over 6 days

$$\text{unit rate} = \frac{\text{quantity}}{\text{time}} = \frac{84 \text{ donuts}}{6 \text{ days}}$$

$$\boxed{14 \text{ donuts} / \text{day}}$$

$$\begin{array}{r} 14 \\ 6 \overline{)84} \\ \underline{-6} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

b.) Wyatt slept 82 hours  
over the course of 5 days.

$$\frac{82 \text{ hours}}{5 \text{ days}} = \boxed{16.4 \text{ hrs/day}}$$

2.)  $\frac{n}{10} = \frac{4}{8}$

$$8n = (10)(4)$$

$$\frac{8n}{8} = \frac{40}{8}$$

$$\boxed{n=5}$$

3.)  $\left( \frac{2}{6} \times \frac{9}{X} \right) \times 3$

$$2x = (6)(9)$$

$$\frac{2x}{2} = \frac{54}{2}$$

$$\boxed{x=27}$$

4.)  $\frac{r}{10} = \frac{8}{5}$

$$5r = (10)(8)$$

$$\frac{5r}{5} = \frac{80}{5}$$

$$\boxed{r=16}$$

5.)  $\frac{n}{8} = \frac{2}{6}$

$$6n = (8)(2)$$

$$\frac{6n}{6} = \frac{16}{6}$$

$$\boxed{n = \frac{16}{6} = \frac{8}{3} = 2.\overline{6}}$$



$$(5)(21) = 6h$$

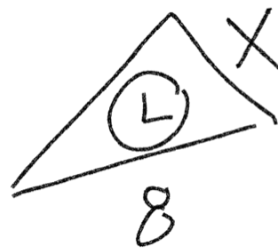
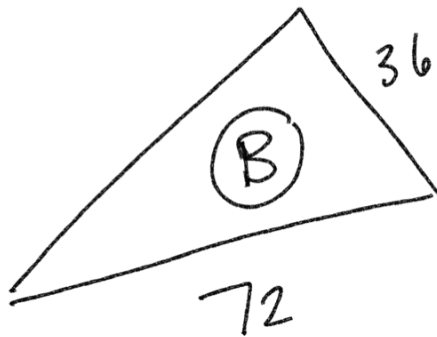
$$\frac{\text{Height}}{\text{shadow}} = \frac{5\text{ft}}{6\text{ft}} = \frac{h}{21\text{ft}}$$

person                      tree

$$\frac{105}{6} = \frac{6h}{6}$$

$$\boxed{17.5\text{ft} = h}$$

Similar Figures



$$(36)(8) = 72x$$

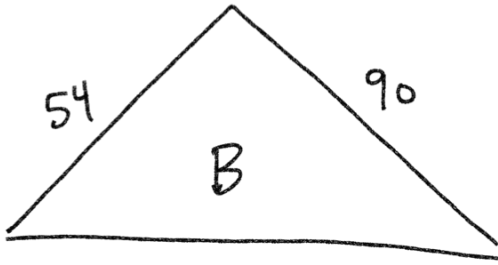
$$\frac{\text{Base}}{\text{slant height}} = \frac{72}{36} = \frac{8}{x}$$

Big                      Lil

$$\frac{288}{72} = \frac{72x}{72}$$

$$\boxed{4 = x}$$

(not drawn to scale)



$$\frac{\text{Left}}{\text{Right}} = \frac{54}{90} = \frac{X}{10}$$

$$90X = (54)(10)$$

$$\frac{90X}{90} = \frac{540}{90} \quad \boxed{X = 6}$$

Probability

# of desired outcomes

total # of outcomes

Skittles 12

York 8

Hershey 16

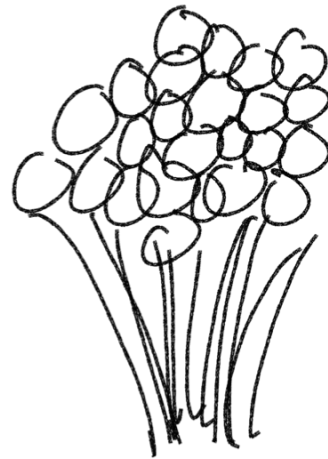
Snickers 24

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total 60

$$P(\text{Snickers}) = \frac{24}{60} \div 12 = \frac{2}{5}$$

$$P(\text{Hersheys}) = \frac{16}{60} \div 4 = \frac{4}{15}$$



P(York or Skittles)

$$\frac{8+12}{60} = \frac{20}{60} \div 20 = \frac{1}{3}$$

$$P(\text{not York}) = \frac{52}{60} \div 4 = \frac{13}{15}$$

P(twizzlers) 0

Favorite food

Pizza 36

Ravioli 8

Pancakes 12

Mac n'cheese 24

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total 80

$$P(\text{pancakes}) \frac{12 \div 4}{80 \div 4} = \boxed{\frac{3}{20}}$$

$$P(\text{not pizza}) \frac{44 \div 4}{80 \div 4} = \boxed{\frac{11}{20}}$$

$$P(\text{Mac n'cheese or ravioli})$$
$$\frac{24 + 8}{80} = \frac{32 \div 16}{80 \div 16} = \boxed{\frac{2}{5}}$$

$$P(\text{mac n'cheese})$$
$$\frac{24 \div 8}{80 \div 8} = \boxed{\frac{3}{10}}$$