

Similarity Mad Lib

$$\textcircled{1} \frac{BC}{DE} = \frac{AB}{AD} \Rightarrow \frac{12}{20} = \frac{x}{x+4}$$

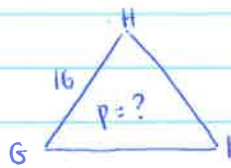
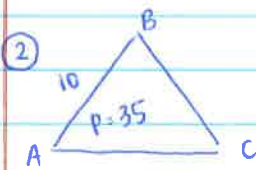
$$20x = 12(x+4)$$

$$20x = 12x + 48$$

$$8x = 48$$

$$\boxed{x=6}$$

Mr. Miller



$$\frac{\Delta ABC}{\Delta GHI} : \frac{AB}{HG} = \frac{P \text{ of } ABC}{P \text{ of } GHI}$$

$$\frac{10}{16} = \frac{35}{x}$$

$$10x = 560$$

$$x = 56$$

$$\boxed{\text{Perimeter} = 56}$$

Shocked

$$\textcircled{3} \frac{24}{15} = \frac{48}{30} = \frac{x}{25}$$

$$\frac{48}{30} = \frac{x}{25}$$

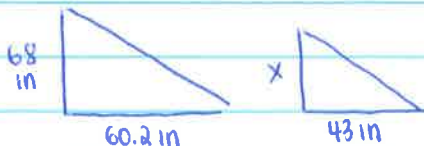
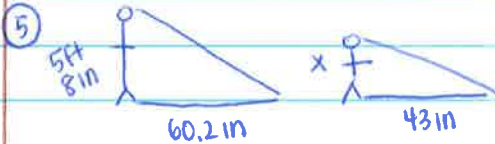
$$\Rightarrow 30x = 1200 \Rightarrow \boxed{x=40}$$

Making pancakes

$$\textcircled{4} \text{map} : \frac{1.5 \text{ in}}{20 \text{ mi}} = \frac{2.4 \text{ in}}{x} \Rightarrow 1.5x = 48 \Rightarrow x = 32$$

$\boxed{\text{The towns are 32 mi apart}}$

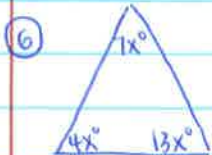
Lady Gaga



$$\Rightarrow \frac{68}{x} = \frac{60.2}{43} \Rightarrow 60.2x = 2924$$

$$\boxed{x = 48.6 \text{ inches}}$$

Halloween



$$4x + 7x + 13x = 180$$

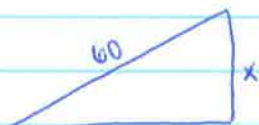
$$24x = 180$$

$$x = 7.5$$

angles: $4(7.5) = 30^\circ$

$$7(7.5) = 52.5^\circ$$

$$13(7.5) = 97.5^\circ \text{ the library}$$



$$\frac{25}{60} = \frac{12}{x} \Rightarrow 25x = 720$$

$$x = 28.8$$

a tank

⑧ $FG + GH = FH$

$$x + 3x = 12$$

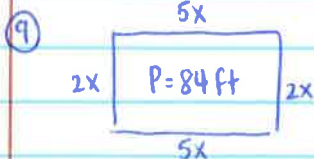
$$4x = 12$$

$$x = 3$$

$$FG = 3$$

$$GH = 3(3) = 9$$

pajamas



$$5x + 2x + 5x + 2x = 84$$

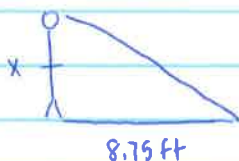
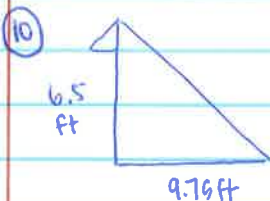
$$14x = 84$$

$$x = 6$$

$$\text{width} = 2(6) = 12 \text{ ft}$$

$$\text{length} = 5(6) = 30 \text{ ft}$$

solving equations



$$\frac{6.5}{x} = \frac{9.75}{8.75}$$

$$9.75x = 56.875$$

$$x = 5.8 \text{ ft} \Rightarrow 5 \text{ ft } 9 \text{ in}$$

$0.8 \text{ ft} \times 12 = 9 \text{ in}$ to promote world peace