

T-A1 Algebra 1 Week 20

$$|x+3| > -2$$

\Downarrow
 positive > -2
 always be true
 all solutions

$$|x+3| < -2$$

\Downarrow
 positive < -2
 never be true
 No solution

$$|x+3| = -2$$

No solution

4-1 Ratio and Proportions

~~$$\frac{x}{5} = \frac{2}{10}$$~~

$$\frac{1}{5} = \frac{2}{10}$$

$$\frac{x}{5} = \frac{2}{10}$$

$\xrightarrow{2 \div}$
 $\xrightarrow{5 \div}$

$$10x = (5)(2)$$

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

$$x = 1$$

~~$$\frac{18 \text{ donuts}}{2 \text{ days}} = \frac{x}{110 \text{ days}}$$~~

$$2x = (18)(110)$$

$$\frac{2x}{2} = \frac{1980}{2}$$

$$x = 990 \text{ donuts}$$

~~$$\frac{3 \text{ pages}}{15 \text{ minutes}} = \frac{360 \text{ pages}}{x}$$~~

$$\frac{3x}{3} = \frac{(15)(360)}{3}$$

$$x = \frac{(15)(360)}{3} = 1800 \text{ min} \approx 30 \text{ hrs}$$

$$\textcircled{1.} \quad \frac{9}{180} = \frac{n}{60}$$

$$\frac{180n}{180} = \frac{(60)(9)}{180}$$

$$n = \frac{540}{180} = \boxed{3}$$

$$\textcircled{2.} \quad \frac{2}{6} = \frac{4}{x}$$

$$2x = (6)(4)$$

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

$$\boxed{x = 12}$$

$$\textcircled{3.} \quad \frac{30}{125} = \frac{n}{100}$$

$$125n = (30)(100)$$

$$\frac{125n}{125} = \frac{3000}{125}$$

$$\boxed{n = 24}$$

$$\textcircled{4.} \quad \frac{3}{18} = \frac{t}{6}$$

$$18t = (3)(6)$$

$$\frac{18t}{18} = \frac{18}{18}$$

$$\boxed{t = 1}$$

$$\frac{2x-2}{14} = \frac{2x-4}{6}$$

$$6(2x-2) = 14(2x-4)$$

$$12x - 12 = 28x - 56$$

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

$$-12 = 16x - 56$$

$$\frac{44}{16} = \frac{16x}{16}$$

$$x = \frac{44}{16} \div 4 = \frac{11}{4}$$

$$\boxed{2.75}$$

$$\textcircled{1} \quad \frac{X+2}{6} = \frac{X-1}{12}$$

$$6(X-1) = 12(X+2)$$

$$6X - 6 = 12X + 24$$

$$-6X \quad -6X$$

$$-6 = 6X + 24$$

$$-24 \quad -24$$

$$\frac{-30}{6} = \frac{6X}{6}$$

$$\boxed{-5 = X}$$

$$\textcircled{2} \quad -\frac{X+8}{10} = -\frac{X-3}{2}$$

$$\frac{X+8}{-10} = \frac{X-3}{-2}$$

$$-10(X-3) = -2(X+8)$$

$$-10X + 30 = -2X - 16$$

$$+10X \quad +10X$$

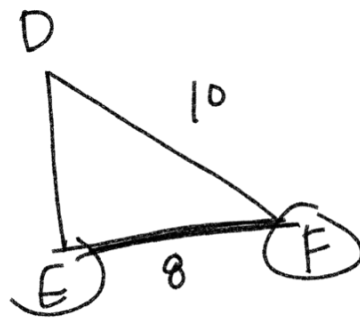
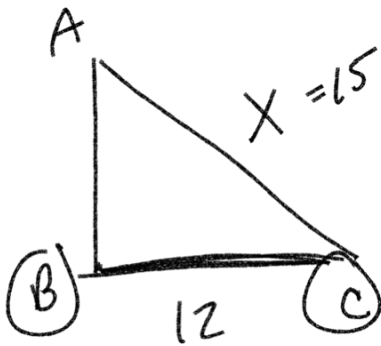
$$30 = 8X - 16$$

$$+16 \quad +16$$

$$\frac{46}{8} = \frac{8X}{8}$$

$$X = \frac{46}{8} \div 2 = \boxed{\frac{23}{4}}$$

4-2 Similar Triangles



$$\Delta ABC \sim \Delta DEF$$

→ hypotenuse

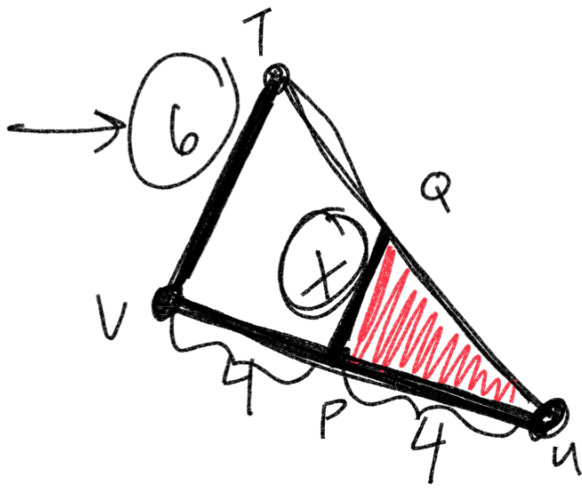
→ base

$$\text{Big} \quad \frac{X}{12} = \frac{10}{8}$$

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

$$\frac{8X}{8} = \frac{120}{8}$$

$$\boxed{X = 15}$$



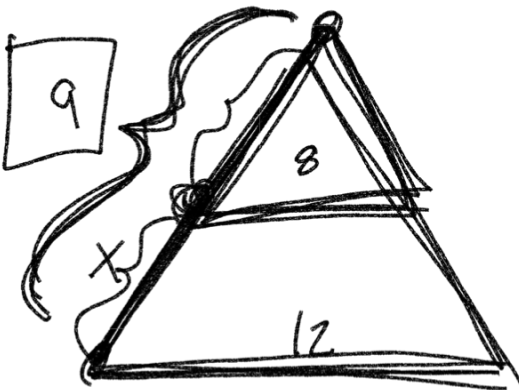
$$\frac{\text{Height}}{\text{Base}} = \frac{\text{Big}}{\text{Lil'}}$$

$$\frac{6}{4+4} = \frac{x}{4}$$

~~$$\frac{6}{8} = \frac{x}{4}$$~~

$$\frac{8x}{8} = \frac{24}{8}$$

$$x = 3$$



$$\frac{\text{slant height}}{\text{base}}$$

~~$$\frac{9}{12} = \frac{9-x}{8}$$~~

$$12(9-x) = (9)(8)$$

HW
 ch 4.1 evens
 4.2 evens
 Supplemental WS
 Online HW 20 }
 Quiz 20 } March 2nd
 HW/quiz Feb 18th
 Test due Feb 23rd

