

W-A1 Algebra 1 Week 19 1/31

Ratios \rightarrow Rational \rightarrow Number able to be put into a fraction.

$$\text{Fraction} = \frac{\text{part}}{\text{whole}}$$

$$\text{Fraction} = \frac{11}{14}$$

Ratio: part : part

Ratio in-person : online
11 : 3

Dogs: 24 Cats: 16

$$\frac{24}{8} : \frac{16}{8} \rightarrow 3 : 2$$

Super Bowl

chiefs +105 wages \$100 \rightarrow \$105

49ers -125 wages \$125 \rightarrow \$100

$$\begin{array}{l} \text{chiefs bet } \frac{\$100}{\$105} \\ \text{get } \frac{\$200}{X} \end{array}$$

$$\frac{\$100X}{\$100} = \frac{\$2100}{\$100}$$

$$X = \$210$$

bet \$25,000

Chiefs +105

49ers -125

$$\begin{array}{l} \text{bet } \$100 \\ \text{get } \$105 \end{array} = \frac{\$25,000}{X}$$

$$\frac{(25,000)(105)}{100} = \frac{100X}{100}$$

$$X = \frac{(25,000)(105)}{100}$$

$$X = 26,250$$

Kelce Proposal +800

$$\begin{array}{l} \text{bet } \$100 \\ \text{get } \$800 \end{array} = \frac{\$1500}{X}$$

$$\frac{\$100X}{100} = \frac{(800)(1500)}{100}$$

$$X = \frac{(800)(1500)}{100} = \$12,000$$

MVP

Mahomes +125

Purdy +220

McCaffrey +475

Kelce +1200

Bet \$180 on Purdy

Bet	\$100	=	\$180
Get	\$220	=	X

$$\frac{\$100}{\$100} X = \frac{(\$220)(\$180)}{\$100}$$

$$X = \frac{(\$220)(\$180)}{\$100} = \boxed{\$396}$$

$$\frac{16}{24} \neq \frac{X}{5}$$

$$24X = (16)(5)$$

$$\frac{24X}{24} = \frac{80}{24}$$

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

$$\frac{7}{(X-8)} \neq \frac{4}{8}$$

$$4(X-8) = (7)(8)$$

$$4X - 32 = 56$$

$$+32 \quad +32$$

$$\frac{4X}{4} = \frac{88}{4}$$

$$\boxed{X = 22}$$

$$1.) \quad \frac{12}{20} = \frac{X}{50}$$

$$(12)(50) = 20X$$

$$\frac{600}{20} = \frac{20X}{20}$$

$$\boxed{30 = X}$$

$$2.) \quad \frac{5}{4} = \frac{n-4}{3}$$

$$(5)(3) = 4(n-4)$$

$$15 = 4n - 16$$
$$+16 \qquad +16$$

$$31 = 4n$$
$$\frac{31}{4} = \frac{4n}{4}$$

$$\boxed{n = \frac{31}{4}}$$

$$\frac{7}{x+6} = \frac{5}{x+8}$$

$$5(x+6) = 7(x+8)$$

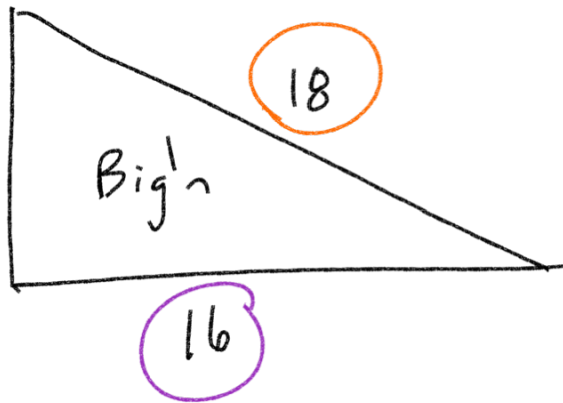
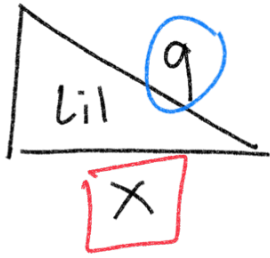
$$5x + 30 = 7x + 56$$
$$-7x \qquad -7x$$

$$-2x + 30 = 56$$
$$-30 \quad -30$$

$$-2x = 26$$
$$\frac{-2x}{-2} = \frac{26}{-2}$$

$$\boxed{X = -13}$$

similar



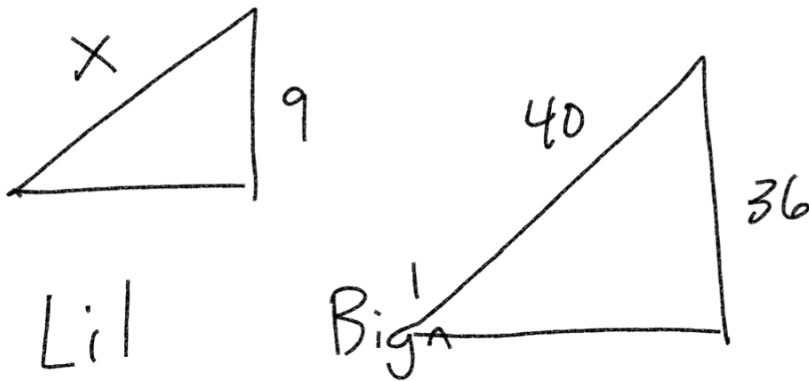
$$\frac{\text{Base Lil}}{\text{Hyp Lil}} = \frac{\text{Base Big'n}}{\text{Hyp Big'n}}$$

$$\frac{x}{9} = \frac{16}{18}$$

$$18x = (9)(16)$$

$$\frac{18x}{18} = \frac{144}{18}$$

$$x = 8$$



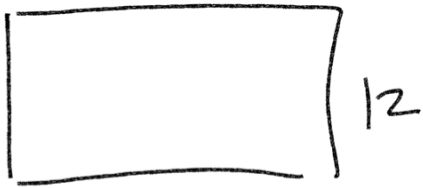
$$\frac{\text{Hyp Lil}}{\text{Height Lil}} = \frac{\text{Hyp Big'n}}{\text{Height Big'n}} \left[\frac{x}{9} = \frac{40}{36} \right]$$

$$(9)(40) = 36x$$

$$\frac{360}{36} = \frac{36x}{36}$$

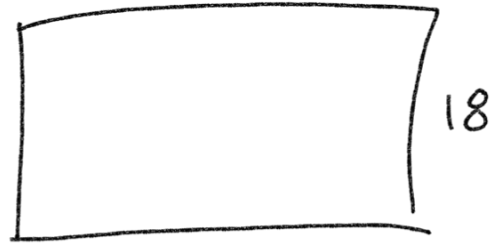
$$10 = x$$

Similar



$$X+3$$

Lil Big



$$2X+1$$

Height

$$\frac{12}{X+3} = \frac{18}{2X+1}$$

Base

$$12(2X+1) = 18(X+3)$$

$$24X + 12 = 18X + 54$$

$$\textcircled{-12} \quad -12$$

$$24X = 18X + 42$$

$$-18X \quad -18X$$

$$\frac{6X}{6} = \frac{42}{6}$$

$$\boxed{X = 7}$$