

Chapter 4 sec 2, 3
Multiplying, Dividing Fractions

Fractions: Value of one:

Numerator and denominator have the same value

$$\frac{5}{5} \quad \frac{\pi e}{\pi e}$$

What is the value of a fraction when it is multiplied by 1?

Division of fractions:

$$\frac{a}{b} \div \frac{c}{d}$$

$$\frac{a}{b} \cdot \frac{d}{c}$$

Change the division to multiply and take the reciprocal of the second fraction.

$$\frac{1}{2} \div \frac{3}{5}$$

$$3 \div \frac{2}{3}$$

$$-\frac{6}{35} \div \left(\frac{33}{55} \right)$$

$$\frac{-6}{x} \div \left(\frac{-12}{x^2} \right)$$

Now that the problems becomes a multiplication problem.

$$\frac{a}{b} \cdot \frac{c}{d}$$

$$\frac{a \cdot c}{b \cdot d} \quad \text{multiply the tops and bottoms.}$$

multiply and reduce

$$\frac{3}{4} \cdot \frac{8}{9}$$

multiply and cancel

$$\frac{18}{30} \cdot \frac{35}{6}$$

$$\frac{18 \cdot 35}{30 \cdot 6}$$

$$\frac{2 \cdot 3 \cdot 3 \cdot 5 \cdot 7}{2 \cdot 2 \cdot 3 \cdot 3 \cdot 5}$$

Practice:

$$\frac{6}{35} \cdot \frac{70}{36}$$

$$\frac{6a}{15x} \cdot \left(-\frac{35x^2}{10a^2} \right)$$

$$\frac{3x}{-2} \cdot \frac{6}{21x^3}$$

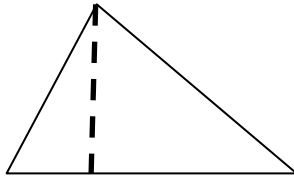
Parallelogram - Area



base and height

$$A = bh$$

triangle - Area



$$A = \frac{1}{2}bh$$

practice

Parallelogram
base 8 cm, height 9 cm

triangle
base 8 cm, height 6 cm