

# 12.4

## Multiplying and Dividing Rational Numbers

### Today's Learning Goals:

- Multiplying and dividing rational numbers.
- Solve real-life problems.

### Multiplying Integers

Multiply numbers like regular multiplication...  
however...

POSITIVE X POSITIVE = POSITIVE  
POSITIVE X NEGATIVE = NEGATIVE  
NEGATIVE X POSITIVE = NEGATIVE  
NEGATIVE X NEGATIVE = POSITIVE

a)  $8 \times -6 =$

c)  $-9 \times -7 =$

b)  $-11 \times 2 =$

d)  $-12 \times 5 =$

### Multiplying Rational Numbers

1)  $-\frac{2}{7} \bullet \frac{1}{3} =$

### Multiplying Rational Numbers

$$2) -\frac{1}{2} \bullet \frac{4}{9} =$$

### Multiplying Rational Numbers

$$2) -\frac{1}{2} \bullet \frac{4}{9} =$$

### Multiplying Rational Numbers

$$3) -2\frac{1}{3} \times 3\frac{2}{3} =$$

### Multiplying Rational Numbers

$$4) -2\frac{1}{2} \left( -3\frac{3}{5} \right) =$$

## Multiplying Rational Numbers

$$5) \frac{3}{4} \bullet \left(-2\frac{1}{6}\right) \left(1\frac{2}{3}\right) =$$

## Multiplying Rational Numbers

$$6) (-7)(0.08)(-0.4)$$

## RULES FOR DIVIDING INTEGERS

Divide numbers like regular division... however...

POSITIVE  $\div$  POSITIVE = POSITIVE  
POSITIVE  $\div$  NEGATIVE = NEGATIVE  
NEGATIVE  $\div$  POSITIVE = NEGATIVE  
NEGATIVE  $\div$  NEGATIVE = POSITIVE

$$a) 8 \div -4$$

$$c) -21 \div -7$$

$$b) -20 \div 4$$

$$d) -36 \div 3$$

## Divide and then simplify

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

Divide and then simplify

$$2) \quad -3\frac{3}{5} \div (-6)$$

Practice

$$3) \quad -7.85 \div 0.005$$

Practice

$$4) \quad (-0.5)(-4.2) \div 0.03$$