

## Chapter Review



### Fractions and Decimals

Convert a fraction to a decimal

- Divide numerator by denominator

Example,  $\frac{1}{4} = 1 \div 4 = .25$  (use calculator)

Convert a decimal to a fraction

- Just write as fraction - Example  $.3 = \frac{3}{10}$

↑  
"Three-tenths"



### LCM/LCD

The LCM is the lowest number that two or more numbers divide into.

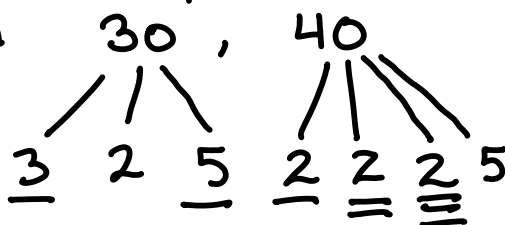
Example, the LCD of 3 and 4 is 12

Why? 12 is the lowest number 3 and 4 divide into

The LCD is the LCM of two or more denominators

Find the LCD/LCM by prime factoring

Example, LCM



$$\text{LCM} = 3 \cdot 2 \cdot 2 \cdot 2 \cdot 5$$

$$\text{LCM} = 120$$



# Multiplying and Dividing Fractions

## Multiplying Fractions

Multiply numerators  
 Multiply denominators

Example

$$\frac{2}{3} \cdot \frac{4}{6} = \frac{8}{18} = \frac{4}{9}$$

↑            ↑

always reduce

- Change any mixed-numbers into improper fractions

Example,  $3\frac{1}{2} \cdot \frac{1}{5} = \frac{7}{2} \cdot \frac{1}{5} = \frac{7}{10}$

↘  
change

## Dividing Fractions

- Need to make division problems into multiplication
- Change any mixed-numbers into improper fractions
- Flip the second fraction (divisor) - then multiply fractions

Example,  $\frac{3}{4} \div \frac{1}{5}$

↑  
Flip  
↓

$$\frac{3}{4} \cdot \frac{5}{1} = \frac{15}{4} \text{ answer}$$



## Adding and Subtracting Fractions

- Need to have common denominators; this requires finding the LCM of the denominators
- Once the denominators are common - add or subtract the numerators
- Change any mixed-numbers into improper fractions

Example

$$3\frac{1}{4} + \frac{3}{5}$$

↓

$$\frac{13}{4} + \frac{3}{5}$$

Find LCD,

LCM of 4, 5 is 20

LCD = 20

Adjust  
Numerators  
to reflect  
the LCD

$$\frac{5}{5} \cdot \frac{13}{4} + \frac{3}{5} \cdot \frac{4}{4}$$

$$\frac{65}{20} + \frac{12}{20}$$

← denominators  
are now common  
add/subtract  
numerators

$$\frac{65 + 12}{20}$$

$$\frac{77}{20}$$

Answer