Fractions and Decimals

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.

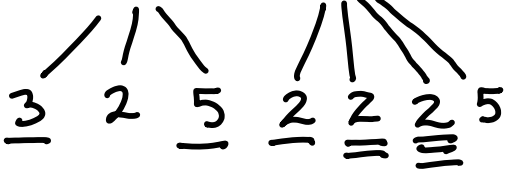
Example, the LCD of 3 and 4 is 12

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 30, 40



$LCM = 3 \cdot 2 \cdot 2 \cdot 2 \cdot 5$

$LCM = 120$

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

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

$\downarrow$

$\frac{13}{4} + \frac{3}{5}$ ← 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

$\frac{65 + 12}{20}$ ← add/subtract numerators

$\frac{77}{20}$ Answer