Adding + Subtracting Unlike Fractions

Mrs. Ghoss
3-6 pg. 155

To add or subtract fractions you must have common denominators.

Example #1

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

- find the least common multiple (LCM)

5 10 (15) 20 | 3 6 9 12 (15) 18

the least common multiple is 15

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

- multiply both the numerators and denominators by the number that will give you the LCM

$$\frac{9}{15} + \frac{5}{15} = \frac{14}{15}$$

- add the numerators
- bring the denominator over! (don't add)

Your turn:

$$\frac{1}{6}\cdot\frac{2}{2} + \frac{3}{4}\cdot\frac{3}{3}$$

6 (12) 18 | 4 8 (12) 16

$$\frac{2}{12} + \frac{\quad}{12} = \frac{\quad}{12}$$

$$\frac{2}{7}\cdot\frac{2}{2} + \frac{3}{14}\cdot\frac{1}{1}$$

7 (14) 21 | (14) 28

$$\frac{\quad}{14} + \frac{\quad}{14} = \frac{\quad}{\quad}$$

this can be reduced

Using mixed numbers & integers

pg. 156

$-\frac{3}{10} + {}^{-}5\frac{3}{4}$

10 (20) 30 40 $(\cdot\frac{2}{2})$ 4 8 12 16 (20) $(\cdot\frac{5}{5})$

$-\frac{21}{20} = -1\frac{1}{20}$

$-\frac{6}{20} + {}^{-}5\frac{15}{20} = {}^{-}5\frac{21}{20} = {}^{-}6\frac{1}{20}$

Your turn:

$3\frac{3}{4} + \frac{5}{14}$

4 8 12 16 20 24 (28) $(\cdot\frac{7}{7})$ 14 (28) $(\cdot\frac{2}{2})$

$3\frac{21}{28} + \frac{}{28} = 3\frac{}{28} = 4\frac{}{28}$

... remember the rule for adding a negative and a positive

$3\frac{3}{5} + {}^{-}4\frac{5}{6}$

5 10 15 20 25 (30) $(\cdot\frac{6}{6})$ 6 12 18 24 (30) $(\cdot\frac{5}{5})$

This is the larger absolute!

$3\frac{18}{30} + {}^{-}4\frac{}{30} = -1\frac{}{30}$