

**Changing Mixed Numbers to Improper Fractions**

Ex 1:  $1\frac{1}{6}$

$$\frac{7}{6}$$

Ex 2:  $2\frac{2}{3}$

$$\frac{8}{3}$$

Ex 3:  $8\frac{1}{3}$

$$\frac{25}{3}$$

YOU TRY!

1.)  $1\frac{1}{4}$   
 $\frac{5}{4}$

2.)  $2\frac{1}{3}$   
 $\frac{7}{3}$

3.)  $7\frac{3}{5}$   
 $\frac{38}{5}$

**Rules for Fractions**

Adding/Subtracting Fractions	Multiplying Fractions	Dividing Fractions
<ul style="list-style-type: none"> <li>* find a common denominator</li> <li>* add/subtract numerator</li> <li>* keep denominator</li> </ul>	<ul style="list-style-type: none"> <li>* multiply straight across</li> <li>* simplify</li> </ul>	<ul style="list-style-type: none"> <li>* keep, change, flip</li> </ul>

**Adding/Subtracting Fractions**

Ex 1:  $-3\frac{1}{2} + \frac{1}{2}$

$$-\frac{19}{2} + \frac{1}{2} = \frac{5}{2}$$

$$-\frac{38}{10} + \frac{5}{10}$$

$$\boxed{-\frac{33}{10}}$$

YOU TRY!

1.)  $-6\frac{3}{4} - (-\frac{3}{2})$

$$-\frac{27}{4} + \frac{3}{2}$$

$$-\frac{27}{4} + \frac{6}{4}$$

$$\boxed{-\frac{21}{4}}$$

Ex 2:  $4\frac{5}{8} - 4\frac{1}{2}$

$$\frac{37}{8} - \frac{9}{2} = \frac{4}{8}$$

$$\frac{37}{8} - \frac{36}{8}$$

$$\boxed{\frac{1}{8}}$$

2.)  $\frac{1}{2} - (-3\frac{3}{8})$

$$\frac{4}{8} + \frac{27}{8}$$

$$\frac{4}{8} + \frac{27}{8}$$

$$\boxed{\frac{31}{8}}$$

Ex 3:  $-\frac{9}{7} - 4\frac{6}{7}$

$$-\frac{9}{7} - \frac{34}{7}$$

$$\boxed{-\frac{43}{7}}$$

3.)  $1\frac{1}{2} + (-\frac{1}{4})$

$$\frac{2}{2} \cdot \frac{3}{2} - \frac{1}{4}$$

$$\frac{6}{4} - \frac{1}{4}$$

$$\boxed{\frac{5}{4}}$$

Math 1 - Operations with Fractions

Obj: SWBAT simplify fractions using all operations.

Multiplying Fractions

Ex 1:  $(5\frac{5}{7})(-3\frac{3}{8})$

$$\frac{40}{7} \cdot \frac{-27}{8}$$

$$\frac{-1080}{56} \rightarrow \boxed{\frac{-135}{7}}$$

Ex 2:  $(5\frac{2}{3})(-\frac{4}{3})$

$$(\frac{17}{2})(-\frac{4}{3})$$

$$\frac{-68}{6} \rightarrow \boxed{\frac{-34}{3}}$$

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Ex 3:  $(-2\frac{1}{2})(-\frac{7}{5})$

$$(-\frac{5}{4})(-\frac{7}{5})$$

$$\frac{35}{20} \rightarrow \boxed{\frac{7}{4}}$$

YOU TRY!

1.)  $(-3\frac{3}{5})(\frac{4}{5})$

$$(-\frac{18}{5})(\frac{4}{5})$$

$$\boxed{\frac{-72}{25}}$$

2.)  $9\frac{1}{3}(-\frac{5}{9})$

$$(\frac{28}{3})(-\frac{5}{9})$$

$$\boxed{\frac{-140}{27}}$$

3.)  $(-1\frac{1}{6})(-2)$

$$(-\frac{7}{6})(-\frac{2}{1})$$

$$\frac{14}{6} \rightarrow \boxed{\frac{7}{3}}$$

Dividing Fractions

Ex 1:  $-\frac{16}{9} \div 3\frac{3}{10}$

$$-\frac{16}{9} \cdot \frac{39}{10}$$

$$-\frac{16}{9} \cdot \frac{10}{39}$$

$$\boxed{\frac{-160}{351}}$$

Ex 2:  $\frac{-3\frac{5}{2}}{2}$

$$-\frac{23}{6} \cdot \frac{2}{1}$$

$$-\frac{23}{6} \cdot \frac{1}{2}$$

$$\boxed{\frac{-23}{12}}$$

Ex 3:  $\frac{2\frac{10}{4}}{\frac{7}{7}}$

$$\frac{21}{10} \cdot \frac{4}{7}$$

$$\frac{21}{10} \cdot \frac{7}{4}$$

$$\boxed{\frac{147}{40}}$$

YOU TRY!!

1.)  $\frac{13}{9} \div -2$

$$\frac{13}{9} \cdot \frac{-2}{1}$$

$$\frac{13}{9} \cdot \frac{1}{-2}$$

$$\boxed{\frac{13}{-18}}$$

2.)  $\frac{\frac{1}{2}}{\frac{12}{7}}$

$$\frac{1}{2} \cdot \frac{12}{-7}$$

$$\frac{1}{2} \cdot \frac{-7}{12}$$

$$\boxed{\frac{-7}{24}}$$

3.)  $\frac{\frac{5}{3}}{\frac{7}{2}}$

$$-5\frac{1}{7} \cdot \frac{3}{12}$$

$$-5\frac{1}{7} \cdot \frac{2}{3}$$

$$\boxed{\frac{-10}{21}}$$