


## Section 3.9- Order of Operations with Fractions

**Order of Operations**

**B**rackets  
**E**xponents  
**D**ivision  
**M**ultiplication  
**A**ddition  
**S**ubtraction



Note: Division/Multiplication- in the order they appear  
Addition/Subtraction- in the order they appear

Ex 1)  $\frac{1}{7} \div \left( \frac{4}{5} \times \frac{1}{2} - \frac{1}{5} \right)$

Section 3.9 - BEDMAS

Ex 2)

$$\frac{1}{5} \times \frac{1}{2} + \frac{1}{3} \div 2$$

BEDMAS.

$$\frac{1}{10} + \frac{1}{3} \div 2$$

$$\frac{1}{10} + \frac{1 \div 2}{3 \div 1}$$

$$\frac{1}{10} + \frac{1 \times 1}{3 \times 2}$$

$$\frac{1}{10} + \frac{1}{6}$$

$$\frac{1}{10} + \frac{1}{6}$$

← Common Denominator

$$= \frac{3}{30} + \frac{5}{30}$$

$$= \frac{8}{30}$$

← reduce

$$= \frac{4}{15}$$

Evaluate.  $\frac{2}{3} \times \frac{7}{8} - \frac{1}{3}$

BEDMAS

$$\frac{14}{21} - \frac{1}{3}$$

← Common Denominator

$$\frac{14}{21} - \frac{7}{21}$$

$$= \frac{7}{21}$$

← Reduce

$$= \frac{1}{3}$$

Section 3.9 - BEDMAS

Evaluate.  $\frac{7}{8} + \left( \frac{3}{4} - \frac{1}{8} \right) \times \frac{4}{5}$

BEDMAS

$$\frac{7}{8} + \left( \frac{6}{8} - \frac{1}{8} \right) \times \frac{4}{5}$$

$$= \frac{7}{8} + \frac{5}{8} \times \frac{4}{5}$$

$$= \frac{7}{8} + \frac{\cancel{5}^1}{8} \times \frac{4}{\cancel{5}_1}$$

$\div 4 = 2$        $\div 5 = 1$

$$= \frac{7}{8} + \frac{1 \times 4}{2 \times 4}$$

$$= \frac{7}{8} + \frac{4}{8}$$

$$= \frac{11}{8}$$

$$= 1 \frac{3}{8}$$

Evaluate.  $\frac{5}{9} \div \frac{4}{9} + \frac{1}{3}$

BEDMAS

$$\frac{5 \times \cancel{9}^1}{\cancel{9}_1} \div \frac{4}{9} + \frac{1}{3}$$

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

$\times 3$        $\times 4$   
 $\times 3$        $\times 4$

$$= \frac{15}{12} + \frac{4}{12}$$

$$= \frac{19}{12}$$

$$= 1 \frac{7}{12}$$