

## 2.1d ORDER OF OPERATIONS p. 51

REVIEW - Gr. 8 "B E D/M A/S"

$$3(-2+6) - 5(4-1)$$

$$3(4) - 5(3)$$

$$12 - 15$$

$$-3$$

GRADE 9 :

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

$$\frac{-2}{3} + \left( \frac{-2}{3} \right)$$

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

- NO BRACKETS
- NO EXPONENT
- 1ST STEP: REDUCE + MULT.

- ADD NUMERATORS + KEEP DENOM.

- REMEMBER TO "CLEAN UP"
  - REDUCE
  - MIXED # } IF NECESSARY

$$2) \frac{4}{5} \times \left[ \frac{3}{8} + \left( \frac{7}{4} \right) \right]$$

- 1st STEP - BRACKETS
- COMMON DENOM.
- TO ADD

MOVE -VE SIGN TO NUMERATOR

$$\frac{4}{5} \times \left[ \frac{3}{8} + \left( \frac{-14}{8} \right) \right]$$

$$\frac{4}{5} \times \left[ \frac{3 + (-14)}{8} \right]$$

$$\equiv \frac{4}{5} \times \left[ \frac{3-14}{8} \right]$$

$$\frac{4}{5} \times \left( \frac{-11}{8} \right)$$

- 2nd STEP - REDUCE + MULT.

$$\frac{-11}{10} = -1\frac{1}{10}$$

$$3) \left(\frac{1}{2}\right)^2 + \left(\frac{-3}{5}\right) \div 2 \frac{1}{4}$$

• 1st-step  
EXPONENT

$$\left(\frac{1}{2}\right)\left(\frac{1}{2}\right) + \left(\frac{-3}{5}\right) \div 2 \frac{1}{4}$$

CHANGE TO  
IMPROPER

$$\frac{1}{4} + \left(\frac{-3}{5}\right) \div 2 \frac{1}{4}$$

• 2nd-step  
÷

$$\frac{1}{4} + \left(\frac{-3}{5}\right) \times \frac{4}{9}$$

"KISS + FLIP"  
REDUCE + MULT.

$$\frac{1}{4} + \left( \frac{-4}{15} \right)$$

• 3rd step: +

- CHANGE TO  
COMMON DENOM.  
\$ ADD

$$\frac{15}{60} + \frac{-16}{60}$$

$$\frac{15 + (-16)}{60} \quad \text{OR} \quad \frac{15 - 16}{60}$$

$$\frac{-1}{60}$$

$$4) [1.7 - (-2.3)] \times (-0.4)$$

$$[1.7 + 2.3] \times (-0.4)$$

$$(4.0) \times (-0.4)$$

$$-1.6$$

$$\begin{array}{r} 4.0 \\ 0.4 \\ \hline 160 \end{array}$$

$$5) (8.5 - 3.2) \times (1.2)^2$$

$$5.3 \times (1.2)^2$$

$$5.3 \times 1.44$$

$$\begin{array}{r} 8.5 \\ -3.2 \\ \hline 5.3 \\ 1.2 \\ 1.2 \\ \hline 1.2 \end{array}$$

7.632

$21 \overline{) 144}$   
53

$\underline{432}$   
 $\underline{7200}$

$$c) 2.3 + (-11.2) \div (-0.2) - 3.7$$

$$2.3 + (+56) - 3.7$$

$0.2 \overline{) 11.2}$   
56

$$58.3 - 3.7$$

$2 \overline{) 1112}$   
104  
12

54.6

7  
58.3  
3.7  
 $\underline{54.6}$

