

Lesson 8 : Operation of
Operations on Decimal

Nov 15, 2022

e.x.
Evaluate : after check w
 calculator

$$-45.05 \times [2.6 \div (-0.6 + 0.2)] - 7.32$$

$$-45.05 [2.6 \div (-0.4)] - 7.32$$

$$-45.05 \times [-6.5] - 7.32$$

$$292.825 - 7.32$$

$$292.825 + (-7.32)$$

$$\begin{array}{r}
 285.505 \\
 292.825 \\
 - 7.320 \\
 \hline
 285.505
 \end{array}$$

$$\begin{array}{r}
 3 \\
 24505 \\
 \times 65 \\
 \hline
 122525 \\
 1470300 \\
 \hline
 292825
 \end{array}$$

which op.
 1st? why?

- ① B small brackets
- ② E
- ③ { D L to R
- ④ { A L to R

do alg. by hand
 for math intuition

Subtraction :

$$2.6 \div 0.4 \quad \begin{array}{r} 0.6 \\ - 0.2 \\ \hline 0.4 \end{array}$$

$$\begin{array}{r}
 2.6 \times 10 \\
 0.4 \times 10 \\
 \hline
 -0.4
 \end{array}$$

$$\begin{array}{r}
 26 \\
 4 \overline{) 26.0} \\
 \underline{24} \\
 20 \\
 \underline{20} \\
 0
 \end{array}$$

$$2.6 \div 0.4 = 6.5$$

You do:

Evaluate:

$$2.1 (\underline{0.3 + 0.2}) - 0.05 + (-22.6 [\underline{-10.4 + 20.6}])$$

$$\underline{2.1 (0.5)} - 0.05 + (-22.6 (10.2))$$

$$\underline{1.05} - 0.05 + (-230.52)$$

$$1 + (-230.52)$$

$$\boxed{-229.52}$$

· same thing (Equivalent to Fractions)
 · Evaluating w/ Decimals and Fractions/mixed #s
 (apples) (oranges)

Ex.

$$3.672 + \left(\frac{5}{8}\right) \div 6.27 - \left(4\frac{1}{3}\right) \times (-5.2 + 7.35)$$

$$3.672 + (0.625 \div 6.27 - 4.333) \times (2.15)$$

$$3.672 + (0.0997 - 4.333) \times 2.15$$

$$3.672 + (-4.2333) \times 2.15$$

$$3.672 + (-9.102)$$

$$\text{\$ } -5.430 \times 10.000$$

$$\text{\$ } 54300$$

$$-5.430352472 \times 1000000$$

$$\text{\$ } 54303.52$$

check w/ calculator and the discrepancy between answers.

step 1
 reluctantly
 convert fractions to decimals.
 (sometimes inaccurate when working w/ rounded #'s) e.g.

$$5/8 = 0.625 \text{ (no rounding)}$$

$4\frac{1}{3} \approx 4.333$ we rounded correctly but decimal is less accurate than fraction

More Evaluating w Algebraic Fraction

example:

Evaluate:

$$\frac{[(\frac{3}{4} + 2.4)(6.91 - \frac{1}{3})]}{[12.3 - 1.23]}$$

$$\frac{[(0.75 + 2.4)(6.91 - 0.333)]}{11.07}$$

$$\frac{[(3.15) \times (6.577)]}{11.07}$$

$$\frac{20.71755}{11.07} \text{ /inaccurate}$$

1.872

better ✓

calculator

1.871409214

$$\frac{3 \times 25}{4 \times 25} = \frac{75}{100} = 0.75$$

nota bene

- B
- E There are
- D implicit/
- S hidden
- A brackets
- S

around the numerator and around the bottom.