Class / Homework

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Questions
6,7abd, 8ab, 10, 12 ad, 13 ad

Write out the questions and show all work!
(Hint take your time and do one step at a time)

6. Estimate which expression has the greatest value. Then use a calculator to evaluate each expression to verify your prediction.

a) $9.1 - 3.5 \times (4.2)^2$

b) $(9.1 - 3.5) \times (4.2)^2$

c) $9.1 - (3.5 \times 4.2)^2$

d) $9.1[(-3.5) \times (4.2)^2]$

7. Evaluate.

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

b) $\left(-\frac{2}{3}\right) \div \left[\frac{1}{4} + \left(-\frac{1}{2}\right)\right] \times \frac{1}{3}$

d) $\left(-\frac{2}{3}\right) \div \left[\frac{1}{4} + \left(-\frac{1}{2}\right) \times \frac{1}{3}\right]$

8. Find the errors in each solution.
Write the correct solution.

a) $(-3.7) \times (-2.8 + 1.5) - 4.8 \div (-1.2)$

$= (-3.7) \times (1.3) - 4.8 \div (-1.2)$

$= -4.81 - 4.8 \div (-1.2)$

$= -9.61 \div (-1.2)$

$= 8.00\overline{83}$

a) $(-3.7) \times (-2.8 + 1.5) - 4.8 \div (-1.2)$

b) $\quad -\dfrac{3}{8} - \dfrac{4}{5} \times \dfrac{3}{10} \div \left(-\dfrac{4}{5}\right)$

$= -\dfrac{15}{40} - \dfrac{32}{40} \times \dfrac{3}{10} \div \left(-\dfrac{4}{5}\right)$

$= -\dfrac{47}{40} \times \dfrac{3}{10} \div \left(-\dfrac{4}{5}\right)$

$= -\dfrac{141}{400} \div \left(-\dfrac{4}{5}\right)$

$= -\dfrac{141}{400} \times \left(-\dfrac{5}{4}\right)$

$= \dfrac{(-141) \times (-5)}{400 \times 4}$

$= \dfrac{705}{1600}$

b) $\quad -\dfrac{3}{8} - \dfrac{4}{5} \times \dfrac{3}{10} \div \left(-\dfrac{4}{5}\right)$

10. A can of soup is a cylinder with radius 3.5 cm and height 11.5 cm.

3.5 cm

11.5 cm

Use the formula:

Surface area $= 2\pi r^2 + 2\pi r \times \text{height}$,

where r is the radius of the can

a) Determine the area of tin needed to make the can, to the nearest square centimetre.

b) Explain how you used the order of operations in part a.

12. Evaluate. State the order in which you carried out the operations.

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

d) $\left(1\frac{5}{8}\right) - \left(-2\frac{3}{4} + 2\right)\left(-2\frac{3}{4} + 2\right)$

13. Use a calculator to evaluate.
Write the answers to the nearest
hundredth where necessary.

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

$2.3 + \quad 56 \quad - 3.7$

$58.3 \quad - 3.7$

54.6

d) $\dfrac{8.9 \times (-3.1 + 22.7)^2 + 4.7}{(-9.6) \div 0.04 - 0.4}$

17. A student's solution to a problem, to the nearest hundredth, is shown below. The solution is incorrect. Identify the errors. Provide a correct solution.

$$(-8.2)^2 \div (-0.3) - 2.9 \times (-5.7)$$

$$= 67.24 \div (-0.3) - 2.9 \times (-5.7)$$

$$= 67.24 \div (-0.3) - 16.53$$

$$= 67.24 \div (-16.83)$$

$$\doteq 4.00$$