



Grade 9 Warm Up



1) Determine the missing number in each division statement.

a) $15.225 \div 7.25 = 2.1$

b) $-1.28 \times -0.7 = 0.896$

c) $\frac{91}{42} \div \boxed{\frac{7}{6}} = \frac{13}{7}$

$$\begin{array}{r} 13 \\ 91 \\ \hline 42 \\ 7 \end{array} \times \begin{array}{r} 6 \\ 7 \\ \hline 7 \\ 1 \end{array} = \frac{13}{7}$$

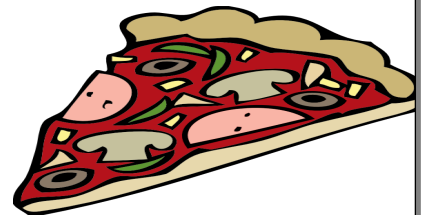
check

Word Problems



1) A pizza cost \$25.98. If 27 people are sharing the cost, what was the cost for each person?

$$\frac{\$25.98}{27 \text{ people}} = \$0.96 / \text{person}$$



Homework Questions

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$$3. a) (-1.5) \div 3 = -0.5$$

$$b) 2.8 \div -2 = -1.4$$

$$\begin{aligned} 11. & \quad \$ \frac{1450.50}{\$30.75/\text{week}} \\ & = 47.17 \text{ weeks} \\ & \quad \textcircled{48} \text{ weeks} \end{aligned}$$

$$\begin{aligned} & \$ \div \frac{\$}{\text{weeks}} \\ & \cancel{\$} \times \text{weeks} \\ & \quad \cancel{\$} \end{aligned}$$

Quiz

Sept 16

Name _____

1. $-\frac{2}{3} + \frac{1}{2}$

$$-\frac{4}{6} + \frac{3}{6}$$
$$-\frac{1}{6}$$

2. $1\frac{5}{6} - 6\frac{3}{4}$

$$\frac{11}{6} - \frac{27}{4}$$
$$\frac{22}{12} - \frac{81}{12}$$
$$-\frac{59}{12}$$
$$-4\frac{7}{12}$$

3. $\frac{5}{4} \times -\frac{16}{5}$

$$= -\frac{80}{20}$$
$$= -4$$

4. $\frac{5}{4} \div -\frac{7}{6}$

$$\frac{5}{4} \times -\frac{6}{7}$$
$$= -\frac{30}{28}$$
$$= -\frac{15}{14}$$
$$= -1\frac{1}{14}$$

Work down the page!

$$-\frac{2}{3} + \frac{1}{2} = -\frac{4}{6} + \frac{3}{6}$$

line up the equal
signs.

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

Section 3.6

Order of Operations with Rational Numbers

Remember "BEDMAS".....for order of operations



In the order that they appear

Brackets
Exponents
Division
Multiplication
Addition
Subtraction



Recall

Evaluate the following

$$\begin{aligned} 1) & (-5) - 3[18 \div (-3)]^2 \\ & = (-5) - 3(-6)^2 \\ & = -5 - 3(36) \\ & = -5 - 108 \\ & = -113 \end{aligned}$$

Using the Order of Operations with Decimals

Evaluate the following:

It is no difference with decimals....follow **BEDMAS**

With decimals you may need to round your final answers



$$1) (-1.3) + 0.8 \div (-0.2) \times 5$$

$$= (-1.3) + (-4) \times 5$$

$$= (-1.3) + -20$$

$$= -21.3$$

$$2) (-3.6) - 1.7 \div [0.6 - (-0.8)]^2$$

$$= (-3.6) - 1.7 \div [1.4]^2$$

$$= (-3.6) - 1.7 \div 1.96$$

$$= (-3.6) - 0.867346938$$

$$(-3.6) - 0.867346938$$

$$=-4.467346939$$

this number does not terminate

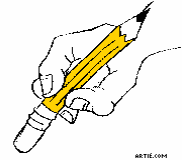
Do we need more practice?



$$\begin{aligned} 1) 3.3 - [(-5) + 1] &= 3.3 - (-4)^3 \\ &= 3.3 - (-64) \leftarrow \dots \dots (-4)^3 = (-4)(-4)(-4) \\ &= 3.3 + 64 \\ &= 67.3 \end{aligned}$$

Using the Order of Operations with Fractions

Remember fractions are just numbers



erase to see solutions

$$1) \left(-\frac{3}{5}\right)\left(\frac{2}{5}\right) - \left(\frac{7}{30}\right) \div \left[\frac{1}{2} + \left(-\frac{1}{6}\right)\right]$$

$$= -\frac{6}{25} - \frac{7}{30} \div \left[\frac{3}{6} + \left(-\frac{1}{6}\right)\right]$$

$$= -\frac{6}{25} - \frac{7}{30} \div \frac{2}{6}$$

$$= -\frac{6}{25} - \frac{7}{30} \div \frac{1}{3}$$

$$= -\frac{6}{25} - \frac{7}{\cancel{30}^{\cancel{10}}_3} \times \frac{3}{1}$$

$$= -\frac{6}{25} - \frac{7}{10}$$

$$= -\frac{12}{50} - \frac{35}{50}$$

$$= -\frac{47}{50}$$

=

Step 1) BRACKETS

- find common denominator
then add the #s in brackets
Common Denominator = 6

Reduce sum if possible

Step 2) Multiply next

$$\left(-\frac{3}{5}\right)\left(\frac{2}{5}\right)$$

Step 3) Divide next

- multiply by the reciprocal of the divisor.

$$\left(\frac{7}{30}\right) \div \left[\frac{2}{6}\right] = \left(\frac{7}{30}\right) \times \left[\frac{6}{2}\right]$$

reduce at this point to work with smaller fractions

Step 4)

Subtract....find common denominator



Do we need more practice?



1)

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

$$= -\frac{7}{4} - \left(-\frac{7}{2} + \frac{5}{1}\right)\left(-\frac{7}{2} + \frac{5}{1}\right)$$

$$= -\frac{7}{4} - \left(-\frac{7}{2} + \frac{10}{2}\right)\left(-\frac{7}{2} + \frac{10}{2}\right)$$

$$= -\frac{7}{4} - \left(\frac{3}{2}\right)\left(\frac{3}{2}\right)$$

$$= -\frac{7}{4} - \frac{9}{4}$$

$$= -\frac{16}{4}$$

$$= -4$$

Remember to switch mixed to improper fractions

Class / Homework

Page 140 & 141

homework in yellow...

3 show work...follow BEDMAS

4 no calculators follow BEDMAS

but show work...for instance show where you used common denominators when add/subtract

7

8 Remember to write out the right solutions show all work

9

10

11 a(i, ii, iii) b(i, ii, iii) c

12

13

17

18

if finished
early

