

Warm-up

January 13, 2020

1. Group and simplify

$$(2n^2 - 6) - (5 + 5n^2) + (5n^2 + 3)$$

$$2n^2 - 6 - 5 - 5n^2 + 5n^2 + 3$$

$$2n^2 - 5n^2 + 5n^2 - 6 - 5 + 3$$

$$2n^2 - 8$$

2. Simplify

$$\text{a) } 6(p-3)$$

$$6p - 18$$

$$\text{b) } 8x(4x-8)$$

$$32x^2 - 64x$$

Chapter 3 Rational #'s

Order from least to greatest [record your answer in its original form]

$$\cancel{\frac{-2}{5}}, \cancel{\frac{2}{-5}}, -1.3, \cancel{\frac{-5}{3}}, \sqrt{3}, \cancel{-0.3}, 0.57, \cancel{-\frac{1}{6}}$$

Handwritten annotations: -0.4 above $\frac{2}{-5}$; -1.67 above $\frac{-5}{3}$; 1.73 above $\sqrt{3}$; -0.167 above $-\frac{1}{6}$.

$$-\frac{5}{3}, -1.3, -\frac{2}{5}, -0.3, -\frac{1}{6}, 0.57, \sqrt{3}$$

Rational Numbers \leftarrow Stops [terminates] OR Repeats

	<i>1, 2, 3, ...</i> Natural	<i>0, 1, 2, 3, ...</i> Whole	<i>Never have decimals</i> Integers	Rational	<i>no pattern, doesn't stop</i> Irrational
a) -4.3				✓	✓
b) $\sqrt{3} = 1.7\dots$					
c) $-\frac{24}{6} = -4$			✓	✓	✓
d) 1.43621...	✓	✓	✓	✓	.
e) 14	✓	✓	✓	✓	
f) 0		✓	✓	✓	

Solve each of the following making sure to express your answer in lowest terms and mixed number if needed:

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

$$\frac{2 \times 2}{2 \times 5} + \frac{-9 \times 5}{2 \times 5}$$

$$\frac{24}{10} + \frac{-45}{10}$$

$$\frac{-21}{10} = -2\frac{1}{10}$$

$$\left(\frac{10}{7}\right)\left(-\frac{13}{8}\right)$$

$$\frac{10}{7} \times \frac{-13}{8}$$

$$-\frac{130}{56} = -2\frac{18}{56}$$
$$-2\frac{9}{28}$$

Lowest terms mixed # when needed.

$$\left(-4\frac{3}{5}\right)\left(-2\frac{5}{12}\right)$$

$$-\frac{23}{5} \times -\frac{29}{12}$$

$$\frac{667}{60}$$

$$11\frac{7}{60}$$

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

Common
denominators

$$\overset{\times 3}{\times 3} \frac{13}{4} - \frac{8 \times 4}{3 \times 4}$$

$$\frac{39}{12} - \frac{32}{12}$$

$$\frac{71}{12} = 5\frac{11}{12}$$

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

$$-\frac{11}{5} \div -\frac{19}{4}$$

Flip

$$-\frac{11}{5} \times -\frac{4}{19}$$

$$\frac{44}{95}$$

SOLVE...REMEMBER ORDERS OF OPERATION!!!

BEDMAS

$$3^2 - 14 + 8 \times 2 - 3^2 + (-8 - 7) \times 5$$

$$9 - 14 + 8 \times 2 - 9 + -15 \times 5$$

$$9 - 14 + 16 - 9 + -15 \times 5$$

$$9 - 14 + 16 - 9 + -75$$

$$-73$$

BEDMAS

$$\frac{2}{3} \times \left(-\frac{1}{2} \right) + \frac{5}{6}$$

$$\frac{-2}{6} + \frac{5}{6}$$
$$\frac{3}{6} = \left(\frac{1}{2} \right)$$

$$\frac{3}{8} - \frac{9}{4} \div \left[\left(\frac{x^5}{x^4} \right) + \left(-\frac{1 \times 2}{10 \times 2} \right) \right]$$

BEDMAS

$$\frac{3}{8} - \frac{9}{4} \div \left(\frac{-25}{20} + \frac{-2}{20} \right)$$

$$\frac{3}{8} - \frac{9}{4} \div \frac{-27}{20}$$

$$\frac{3}{8} - \frac{9}{4} \times \frac{-20}{27}$$

$$\frac{x^{27}}{x^{27}} \frac{3}{8} - \frac{-180 \times 2}{108 \times 2}$$

$$\frac{81}{216} - \frac{-360}{216} = \frac{441}{216} \therefore$$

$$2 \frac{9}{216}$$

$$2 \frac{1}{24}$$

$$-4\frac{2}{3} \div \left[\left(-\frac{1}{3} \right) + 4\frac{1}{6} \right] + \left(-3\frac{2}{5} \right)$$

$$-\frac{14}{3} \div \left(\frac{-1}{3} + \frac{25}{6} \right) + -\frac{17}{5}$$

$$-\frac{14}{3} \div \left(\frac{-2}{6} + \frac{25}{6} \right) + -\frac{17}{5}$$

$$\boxed{-\frac{14}{3} \div \frac{23}{6} + -\frac{17}{5}}$$

$$-\frac{14}{3} \times \frac{6}{23} + -\frac{17}{5}$$

$$\rightarrow -\frac{84}{69} + -\frac{17}{5}$$

$$\frac{-420}{345} + \frac{-1173}{345} = -\frac{1593}{345}$$

$$-4\frac{213}{345}$$

$$\textcircled{-4\frac{71}{115}}$$

$$-4\frac{71}{115}$$

Review Sheets
 1-13 M.C show work when needed
 14-19 show all work
 21, 23

DO NOT MARK ON THE REVIEW SHEETS!!!