Ms. Emanarie

Ms. Mary Ann

Room 9

6th Grade

Due: Thursday

June 6

Name _____ Date _____

Practice 23.1

Algebra: Expressions With Rational Numbers

Evaluate each expression for the given values.

1. $8 - x + y$, given $x = {}^{-}4$ and $y = 9$

_____

2. $4x - 3y$, given $x = \frac{3}{5}$ and $y = {}^{-}\frac{4}{3}$

_____

3. $x^2 + y - 2.3$, given $x = 2.3$ and $y = 8.2$

_____

4. $x - 4y + 3x$, given $x = \frac{5}{3}$ and $y = 2\frac{1}{2}$

_____

5. ${}^{-}\frac{5}{6}(x - \frac{1}{3}) + 4y$, given $x = {}^{-}\frac{1}{4}$ and $y = \frac{7}{8}$

_____

6. $x^2 + 2y^2 - 3x + 4y$, given $x = {}^{-}4$ and $y = 3$

_____

7. $\frac{3}{4}x + {}^{-}\frac{3}{5}y$, given $x = {}^{-}4$ and $y = {}^{-}10$

_____

8. $1.2x + 3.7y$, given $x = {}^{-}2.4$ and $y = 1.5$

_____

9. $\frac{2}{5}x^2 - \frac{1}{3}y$, given $x = {}^{-}4$ and $y = 12$

_____

10. $(4x^2 + 2)y^2$, given $x = {}^{-}\frac{1}{4}$ and $y = 1.1$

_____

Test Prep

11. Melody's temperature was 98.6°F. When she was sick, her temperature rose 2.1°. Later, her temperature dropped 1.8°. Which of the following is Melody's temperature at the current time?

A 100.7°

B 100.4°

C 98.9°

D 98.6°

12. Raymond evaluated the expression $2x + 2y$ for $x = {}^{-}4$ and $y = 8$. He added 8 and 16 to get 24. Explain Raymond's mistake.

_____

_____

Use with text pages 606–607.

Name _____ Date _____

Practice 22.4

Order of Operations With Rational Numbers

Evaluate each expression.

1. $3 + 8 \div 9$

_____

2. $(16 + 2) \div 2.5$

_____

3. $\frac{1}{4} \times 2 + 3^2$

_____

4. $0.12 \div (4 + 2)$

_____

5. $(4.5 - 1\frac{1}{4})^2$

_____

6. $2.3 \times 1\frac{1}{4} - 1.2$

_____

7. $^-2^2 + 4\frac{2}{3}$

_____

8. $2.62 - {}^-1 \times 1.2$

_____

9. $(\frac{1}{3} + \frac{1}{6}) \times 12 - 4^2$

_____

10. $\frac{1}{2} \times (\frac{1}{4} + \frac{3}{8}) - {}^-12$

_____

11. $^-2 + 3 \times 6 - 27 \div {}^-3$

_____

12. $5 \times 2.2 + 5^2$

_____

13. $8(2 - 4)^2$

_____

14. $\frac{2}{5} + {}^-\frac{1}{3} \times 6$

_____

15. $(5 - 2)^2 + (2 + 4)^2$

_____

Test Prep

16. Which of the following has a value of 2?

A $(9 - 7)^2 - 2$

B $5 \times \frac{1}{5} + 1$

C $(3 \times 2) \div 1.5 - 2$

D All of the above

17. Explain the steps you would take to simplify $\frac{3}{4} \times {}^-0.5 + 6$. What is the solution?

_____

Use with text pages 594–596.

Name _____ Date _____

Practice 22.5

Problem-Solving Application: Use Rational Numbers

Solve. Use rational numbers to solve each problem.

Show Your Work

1. When the cold front moved in, the temperature dropped from 25°F to $^{-}15$°F. If the drop took place over 4 hours, what was the drop in temperature per hour?

_____

2. On a hike, two climbers reached the top of the mountain at noon. They were at a height of 1,500 feet. If they descended at a rate of 200 feet per hour, when will they reach the bottom?

_____

3. A scuba diver descended at a rate of $5\frac{1}{2}$ yards every five minutes. At what depth was the diver after 20 minutes?

_____

4. Water in a pot evaporated at a rate of 2 ounces every 3 minutes. How long would it take for a pan of 2 cups of water to completely evaporate?

_____

5. Which temperature decreased at a faster rate: one that drops 15 degrees in 30 minutes, or one that drops 20 degrees in 42 minutes?

_____

Use with text pages 598–600.