2-1 – 2-3 Operations Involving Rational Numbers

Addition

1. $2 + (-5) =$ _____
2. $-8 + (-3) =$ _____
3. $-12 + 4 =$ _____
4. $-9 + (-1) =$ _____
5. $7.6 + 9.5 =$ _____
6. $\frac{2}{7} + \frac{4}{7} =$ _____
7. $\frac{1}{2} + \frac{3}{8} =$ _____
8. $\frac{2}{3} + \frac{5}{9} =$ _____

Subtraction

1. $4 - 10 =$ _____
2. $6 - (-7) =$ _____
3. $-9 - 5 =$ _____
4. $-3 - (-1) =$ _____
5. $0.9 - 0.5 =$ _____
6. $\frac{5}{11} - \frac{2}{11} =$ _____
7. $\frac{7}{12} - \frac{1}{4} =$ _____
8. $\frac{9}{10} - \frac{3}{5} =$ _____

Multiplication

1. $-3 \cdot 5 =$ _____
2. $-13 \cdot -6 =$ _____
3. $12(-2) =$ _____
4. $-20(-4) =$ _____
5. $3 \cdot (-4)^3 =$ _____
6. $\frac{1}{4} \cdot \frac{3}{4} =$ _____
7. $\frac{2}{5} \cdot \frac{1}{3} =$ _____
8. $5 \cdot \frac{2}{3} =$ _____

Division

1. $121 \div (-11) =$ _____
2. $-36 \div (-9) =$ _____
3. $\frac{6}{-3} =$ _____
4. $\frac{-60}{-12} =$ _____
5. $-64/5 =$ _____
6. $\frac{3-17}{2} =$ _____
7. $\frac{2^3}{-8} =$ _____
8. $\frac{2}{9} \div \frac{1}{3} =$ _____

Some Key Vocabulary

Identity	Inverse
Additive Identity	Additive Inverse
Multiplicative Identity	Multiplicative Inverse (Reciprocal)

Distributive Property: $3(2x+6) =$

1. $2(-5x-1) =$

2. $-5(4x-2y) =$

3. $-(7x+3y-2z) =$

4. $\frac{1}{4}(-8r-12s+4t) =$

5. $4(3a+5b-c+2d-8e-4g) =$

Some Word Problems

1. Jennifer paid $39.75 for some packs of gum. If each pack of gum costs $1.59, how many packs of gum did Jennifer buy?

2. This month, Gerald deposited $12.50 into his bank account but then withdrew $8.75 a few days later. If Gerald started the month with $83.95, how much money does he have in his bank account now?

Practice 2-1 – 2-3 Name _____

Evaluate the following using Mental Math and then check with the calculator.

1. $(-3)^2 + (-4)(-9) =$ _____

2. $|-4.3 - (-7.2)| =$ _____

3. $\frac{2}{5} - \frac{1}{15} =$ _____

4. $\frac{(-3)^3}{-9} =$ _____

5. $12 \div (-4) - 5 \div (-10) =$ _____

6. $\frac{2}{3} \cdot \frac{5}{9} =$ _____

Use the Distributive Property to Expand the following.

7. $-6(-3x - 2)$

8. $\frac{2}{3}(6x - 9y)$

9. $-(-2x - y + 10z)$

Match the following property with its example.

_____ 10. Additive Identity

_____ 11. Additive Inverse

_____ 12. Multiplicative Identity

_____ 13. Multiplicative Inverse

A. $-7 \cdot 1 = -7$

B. $4 + 0 = 4$

C. $\frac{3}{4} \cdot \frac{4}{3} = 1$

D. $\frac{1}{3} + \left(-\frac{1}{3}\right) = 0$

Solve the following Word Problem.

14. When Jeremy woke up in the morning the temperature was 65° F. Throughout the day the temperature rose 8° F, then fell 1° F, the rose 5° F, and finally fell 10° F. What was the final temperature at the end of the day?