

Algebra Preparedness

Date _____ Period _____

Writing Verbal Expressions**Write each as an algebraic expression.**1) the sum of t and 12

$$t + 12$$

2) y less than 27

$$27 - y$$

3) 2 increased by w

$$2 + w$$

4) q cubed

$$q^3$$

5) 16 decreased by 6

$$16 - 6$$

Order of Operations**Evaluate each expression.**6) $10 \div (5 - 3)$

$$5$$

7) $6 \div (2 \times 3)$

$$1$$

8) $6 + 1 - 1$

$$6$$

9) $(5 - 3) \times 6$

$$12$$

10) $5 - (5 - 5)$

$$5$$

Types of Numbers

Name the set or sets to which each number belongs.

Natural, Whole, Real, Integers, Rational, Irrational

11) 8

Natural, Whole, Real, Integers, Rational

12) 7

Natural, Whole, Real, Integers, Rational,

13) 0

Whole, Real, Integers, Rational

14) 15

Natural, Whole, Real, Integers, Rational

15) $\frac{2}{5}$

Real, Rational

Adding and Subtracting Rational Numbers

Evaluate each expression.

16) $(-5) + (-8)$

-13

17) $(-4) - (-7)$

3

18) $7 - 5$

2

19) $8 + (-7)$

1

20) $(-7) + (-5)$

-12

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

$\frac{1}{12}$

$$22) \left(-1\frac{1}{5}\right) + \frac{4}{3}$$
$$\frac{2}{15}$$

$$23) \left(-\frac{9}{7}\right) - \frac{9}{7}$$
$$-\frac{18}{7}$$

$$24) \left(-1\frac{6}{7}\right) - 7\frac{5}{6}$$
$$-\frac{407}{42}$$

$$25) 1\frac{2}{5} - \frac{8}{7}$$
$$\frac{9}{35}$$

Multiplying Rational Numbers
Find each product.

$$26) (-8)(7)$$
$$-56$$

$$27) (-3)(8)$$
$$-24$$

$$28) (-3)(3)$$
$$-9$$

$$29) (-4)\left(\frac{16}{9}\right)$$
$$-\frac{64}{9}$$

$$30) \left(-\frac{5}{8}\right)\left(-\frac{15}{8}\right)$$
$$\frac{75}{64}$$

Dividing Rational Numbers
Find each quotient.

$$31) \frac{56}{7}$$
$$8$$

$$32) \frac{32}{8}$$
$$4$$

$$33) \frac{-\frac{1}{3}}{\frac{1}{3}}$$

$$-1$$

$$34) \frac{-9\frac{4}{5}}{\frac{2}{3}}$$

$$-\frac{147}{10}$$

Combining Like Terms
Simplify each expression.

$$35) 8n + 5n$$

$$13n$$

$$36) 1 + 6m + 10$$

$$11 + 6m$$

$$37) 10 - 6a - 5a$$

$$10 - 11a$$

$$38) -1 - 6v + 8v - 8$$

$$-9 + 2v$$

$$39) -4 - 9v + 5v$$

$$-4 - 4v$$

- 40) Plot the following coordinates
 (3, 5)
 (-1, 0)
 (2, -3)
 (6, 0)

