

## Algebra Preparedness

Date \_\_\_\_\_ Period \_\_\_\_\_

**Writing Verbal Expressions****Write each as an algebraic expression.**1) the sum of  $t$  and 122)  $y$  less than 273) 2 increased by  $w$ 4)  $q$  cubed

5) 16 decreased by 6

**Order of Operations****Evaluate each expression.**6)  $10 \div (5 - 3)$ 7)  $6 \div (2 \times 3)$ 8)  $6 + 1 - 1$ 9)  $(5 - 3) \times 6$ 10)  $5 - (5 - 5)$

## Types of Numbers

Name the set or sets to which each number belongs.

Natural, Whole, Real, Integers, Rational, Irrational

11) 8

12) 7

13) 0

14) 15

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

## Adding and Subtracting Rational Numbers

Evaluate each expression.

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

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

18)  $7 - 5$

19)  $8 + (-7)$

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

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

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

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

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

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

**Multiplying Rational Numbers**  
Find each product.

26)  $(-8)(7)$

27)  $(-3)(8)$

28)  $(-3)(3)$

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

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

**Dividing Rational Numbers**  
Find each quotient.

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

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

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

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

**Combining Like Terms**  
Simplify each expression.

$$35) 8n + 5n$$

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

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

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

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

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

