

Name \_\_\_\_\_

Evaluate the expression for the given replacement value.

1)  $\frac{0}{x}$ , for  $x = 150$

Evaluate the expression for the given replacement values

2)  $y^x$ , for  $x = 3$  and  $y = 3$

Translate the word phrase into an algebraic expression.  
Explain what the variable represents.

3) The sum of a person's income and expenses

Determine if the given number is a solution to the given equation. Answer yes or no.

4) Is 7 a solution to  $x^2 = 49$ ?

5) Is 4 a solution to  $y^3 = 12$ ?

Round the whole number to its highest place value.

6) 6783

Compute the square root.

7)  $\sqrt{4}$

8)  $\sqrt{169}$

Evaluate the expression.

9)  $9^2 - 2 \cdot 7$

10)  $48 \div 0 + 4$

11)  $(80 + 4^2) \div 2 \cdot 2^2$

12)  $\frac{8^2 - 2^3 + 119}{50 \div 2 \cdot 5 \cdot 1 \div 5}$

Insert parentheses in order to make the statement true.  
More than one set of parentheses may be needed.

13)  $3 \cdot 7 - 2 = 15$

Solve the problem by estimating.

14) Andy wants to buy a refrigerator for \$799, a stove for \$359, and a dishwasher for \$349. Round each cost to the nearest hundred to estimate the total cost.

Evaluate the algebraic expression for the given values of the variables.

15)  $(\sqrt{a - b} + 5)^2$ , for  $a = 2$ ,  $b = 1$

Combine like terms in the expression. Answer "not possible" if terms cannot be combined.

16)  $5x + 8x$

17)  $26x - y$

18)  $5x - 7xy$

Translate the sentence into an equation using the variable  $x$ . Do not solve the equation. State what the variable represents.

19) Twelve times the number of yards minus four times the same number of yards is 47.

Evaluate the expression  $x + y$  for the given values of the variables.

20)  $x = -16$ ,  $y = -12$

21)  $x = 9$ ,  $y = -5$

Evaluate the expression  $x - y$  for the given values of the variables.

22)  $x = -15$ ,  $y = -14$

23)  $x = -15$ ,  $y = 31$

24)  $x = 6$ ,  $y = -24$

Simplify the expression.

25)  $-12 + 9 - 13$

26)  $-9 + 15 - 12 + (-15)$

Evaluate the expression.

27)  $\frac{3^2 + 9(-2)}{4 + (-7)}$

28)  $\left| \frac{6 - 4(-1)}{12 - (17)} \right|$

29)  $\sqrt{-4 + 5 \cdot 4}$

30)  $5^3 - (8 + 4\sqrt{25 - 9}) + 26 - 13$

## Answer Key

Testname: 01\_7\_1\_4

- 1) 0
- 2) 27
- 3)  $I + E$ , where I represents income and E represents expenses
- 4) yes
- 5) no
- 6) 7000
- 7) 2
- 8) 13
- 9) 67
- 10) undefined
- 11) 192
- 12) 7
- 13)  $3 \cdot (7 - 2) = 15$
- 14) \$1500
- 15) 36
- 16)  $13x$
- 17) not possible
- 18) not possible
- 19)  $12x - 4x = 47$ , where x is the number of yards
- 20) -28
- 21) 4
- 22) -1
- 23) -46
- 24) 30
- 25) -16
- 26) -21
- 27) 3
- 28) 2
- 29) 4
- 30) 114