MAT0024 Chapter 1 Practice Problems 1.3 – 1.7 Carson/Gillespie/Jordan

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Indicate whether the equation illustrates the additive identity, commutative property of addition, associative property of addition, or additive inverse.

1) $0.2 + 0 = 0.2$ 1) _____

Indicate whether the equation illustrates the multiplicative property of 0, the multiplicative identity, the commutative property of multiplication, the associative property of multiplication, or the distributive property.

2) $8(5 + 1) = 8 \cdot 5 + 8 \cdot 1$ 2) _____

Identify the base and the exponent. Do not evaluate.

3) 10^{14} 3) _____

Translate the phrase to an algebraic expression.

4) the difference of four and y, all raised to the third power 4) _____

Evaluate the expression using the given values.

5) $9x - 4y$; $x = 6, y = -3$ 5) _____

6) $\sqrt{uv} - 5v^2$; $u = 2, v = 50$ 6) _____

Find all values that can replace the variable and cause the expression to be undefined.

7) $\frac{4}{z + 7}$ 7) _____

Use the distributive property to write an equivalent expression.

8) $-3(2x + 11)$ 8) _____

Identify the coefficient of the given term.

9) $-2.5y$ 9) _____

Simplify by combining like terms.

10) $-4.3p + 5.6q - (8p + 0.5q) + 5.6p$ 10) _____

Translate the indicated phrase.

11) The width of a rectangle is one–half of the length. If the length is represented by a, then write an expression that describes the width. 11) _____

Translate the description to symbolic form.

12) The volume of a cone is one–third of the product of π, the square of the radius, and the height of the cone. 12) _____

Translate expression to a word phrase.

13) $\frac{3}{4}cd$ 13) _____

Evaluate the expression.

14) -10^4 14) _____

Find all square roots of the given number.

15) 121 15) _____

Find the square root. If it is not a real number, say so.

16) $\sqrt{169}$ 16) _____

Evaluate using the order of operations.

17) $(12 + 3) \cdot (24 - 4)$ 17) _____

18) $\dfrac{9^2 + (11 - 5)^2}{28 \div 4 - (5 + 1)}$ 18) _____

19) $-9 \cdot (-|45|) \div 9 \cdot (-|2|)$ 19) _____

20) $\dfrac{-13 + 48 \div -6(-8)}{287 - 8(54) \div 6 \cdot 4}$ 20) _____

A property of arithmetic was used as an alternative to the order of operations. Determine what property of arithmetic was applied, and explain how it is different from the order –of–operations agreement.

21) $3\left[2 + 4^2\right] - \sqrt{9} + 2$ 21) _____
$= 3[2 + 16] - 3 + 2$
$= 6 + 48 - 1$
$= 53$

Solve.

22) Stephen can exempt his math exam if he has a test average greater than or equal to 66 on the five tests in the course. His current test scores are 74, 44, 74, 93. Using trial and error, determine the minimum score on the last test that will give him an average of 66. 22) _____

Multiply.

23) $(4)(-5)$ 23) _____

Find the multiplicative inverse.

24) 14 24) _____

Divide.

25) $9 \div 0$ 25) _____

26) $\dfrac{4}{5} \div \left(-\dfrac{1}{4}\right)$ 26) _____

27) $0.2 \div 0.01$ 27) _____

Solve.

28) On a map, 1 in. represents 420 miles. How much does $\frac{2}{5}$ in. represent? 28) _____

Add.

29) $69 + (-39)$ 29) _____

30) $\left(-\frac{5}{8}\right) + \left(\frac{7}{9}\right)$ 30) _____

31) $-9.9 + (-10.5)$ 31) _____

Find the additive inverse.

32) 22 32) _____

Subtract.

33) $-20 - (-5)$ 33) _____

34) $\left(\frac{3}{2}\right) - \left(-\frac{5}{6}\right)$ 34) _____

35) $1.6 - 9.1$ 35) _____

Add or subtract.

36) $|-18| + |12|$ 36) _____

Solve.

37) Company A showed a profit of \$61,740 last year, while Company B had a loss of \$67,930. Find the difference between these amounts. 37) _____

Answer Key
Testname: CARSON GILLESPIE JORDAN PRACTICE PROBLEMS 1.2 - 1.7

1) Additive identity
2) Distributive property
3) Base: 10, exponent: 14
4) $(4 - y)^3$
5) 66
6) −12,490
7) −7
8) −6x − 33
9) −2.5
10) −6.7p + 5.1q
11) $\frac{1}{2}a$
12) $\frac{1}{3}\pi r^2 h$
13) Three fourths the product of c and d
14) −10,000
15) ±11
16) ± 13
17) 300
18) 117
19) −90
20) −0.04460967
21) Distributive property. The parentheses were not simplified first.
22) 45
23) −20
24) $\frac{1}{14}$
25) Undefined
26) $-\frac{16}{5}$
27) 20
28) 168 mi
29) 30
30) $\frac{11}{72}$
31) −20.4
32) −22
33) −15
34) $\frac{7}{3}$
35) −7.5
36) 30
37) $129,670