**6th GRADE MATH – SEMESTER ONE Study Guide**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\***Directions**: Please circle the correct answer for each question below. You are welcome to use a calculator if needed. Take your time, read everything carefully, raise your hand if you need help or have a question! We’ll go over answers before you leave!

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1. In the expression 4 x (5 + 7), which vocabulary word below describes 5 + 7?

a.) quotient

b.) difference

c.) sum

d.) product

2. Which integer below would best describe “*a loss of 15 yards*”?

a.) 15

b.) 1/5

c.) 5

d.) -15

3. Which of the following expressions match the statement: “*Subtract 6 from e, then divide by 3*”

a.) (6 – e) ÷ 3

b.) (e – 6) ÷ 3

c.) 6 – e ÷ 3

d.) e – 6 ÷ 3

4. Find the absolute value of | -70 |.

a.) 70

b.) 1/70

c.) 70%

d.) -70

5. Tyler walked 2 miles a day for the first week of his new exercise plan. Then, he walked 3 miles a day for the next 9 days. How many miles did Tyler walk all together?

a.) 54 miles

b.) 29 miles

c.) 14 miles

d.) 41 miles

6. If x = 2.4 and y = 5, use substitution to solve: 2(x + y)

a.) 14.8

b.) 58

c.) 18.4

d.) 85

7. Solve the following one-step equation and find the value of x**. 3x = 59.1**

a.) 19.7

b.) 31.5

c.) 20.3

d.) 30.3

8. Solving the following equation and find the value of x. 9 + m = 10.8

a.) 54

b.) 0.18

c.) 6

d.) 1.8

9. Which algebraic expression is equivalent to the expression: 9(3x + 5)

a.) 9x + 8

b.) 27x + 45

c.) 72x

d.) 27x + 5

10. Simplify/Solve the expression: [2 + (3 x 9)] + 0.75

a.) 38.25

b.) 25.5

c.) 17

d.) 29.75

11. Translate “the sum of 6 and b, then multiply by 3” into an algebraic expression.

a.)

b.)

c.)

d.)

12. Simplify/Solve 2³

a.) 6

b.) 8

c.) 5

d.) 2

13. Evaluate: **5.734 – 0.78 =**

a.) 56.56

b.) 4.954

c.) 4.929

d.) 4.997

14. Evaluate: **56.993 – 56.96 =**

a.) 0.33

b.) 0.336

c.) 0.041

d.) 0.033

15. Find the **QUOTIENT** of 528 ÷ 11.

a.) 517

b.) 11

c.) 48

d.) 49

16. Which inequality below would describe the following scenario: John is allowed to miss exactly 2 days or less of practice during baseball season.

a.) d > 2

b.) d < 2

c.) d ≥ 2

d.) d ≤ 2

17. Find the quotient of

a.)

b.)

c.)

d.)

18. Translate “the product of 2 and m” into an algebraic expression.

a.) 2 + m

b.) 2 – m

c.) 2m

d.) m²

19. Solve **6.21 + 0.055 =**

a.) 4.435

b.) 6.265

c.) 4.3808

d.) 4.45

20. Find the quotient of 2 ÷ =

a.)

b.) 6

c.)

d.)

21. If Stephen Curry shoots a 3-point shot, which integer below would best describe “a gain of 3 points”?

a.) -3

b.) 1/3

c.) 3

d.) - |3|

22. What is the Greatest Common Factor (GCF) of 18 and 24?

a.) 2

b.) 4

c.) 9

d.) 6

23. What is the Least Common Multiple (LCM) of 6 and 9?

a.) 18

b.) 12

c.) 54

d.) 36

24. On a coordinate plane, in which quadrant would the point (-13, 7) lie?

a.) Quadrant I

b.) Quadrant II

c.) Quadrant III

d.) Quadrant IV

25. Would m = 6 be a possible solution for the inequality 10 ≥ m?

a.) yes

b.) no

26. From the set {3, 5, 7, 9}, which would be a possible solution for the inequality x ≤ 3?

a.) 3

b.) 5

c.) 7

d.) 9

27. Graph the inequality x < 2 on the number line provided.

28. Graph the inequality x ≥ 2 on the number line provided.

29. What is the rule for the function table?

|  |  |
| --- | --- |
| **X** | **Y** |
| 2 | 0 |
| 4 | 2 |
| 6 | 4 |
| 8 | 6 |

a.) y = 2x

b.) y = 2x + 1

c.) y = x + 2

d.) y = x – 2

30. What is the missing value in the function table?

a.) y = 2x

|  |  |
| --- | --- |
| **X** | **Y** |
| 2 | 5 |
| 4 | 9 |
| 6 | 13 |
| 8 | 17 |

b.) y = 2x + 1

c.) y = x + 2

d.) y = x – 2