Revised 2018

Math 6 Benchmark 1 Study Guide #2 Honors Accelerated

1. Give the value: 3^3

2. Which exponential form represents the following expression: 8x8x8?

3. Mrs. Smith buys 3 cards for $3 each, 2 metallic pens for $5 each and 6 pad of writing paper for $4. Simplify 3 x 3 + 2 x 5 + 6 x 4 to find the total amount Mrs. Peak spends.

4. Evaluate the following expression using order of operations: $17 – 15 \div 3 + 2^3$

5. Evaluate the algebraic expression for the given value of the variable:
   $41 + 3 (y – 4)$ for y=7

6. Evaluate the algebraic expression for the given value of the variable:
   $5m + 7(5^2 – 8)$ for m=6

7. Write a verbal expression to match y - 5?

8. Write a verbal expression to match $\frac{n}{16}$?

9. Mrs. Jones is buying gifts for the Jackets. She has $30 to spend. If g represents the cost of the gifts, write an expression to represent how much change she will have left.

10. Write an algebraic expression to match "the product of 24 and a number."

11. Identify the property: (10 + 7) + 4 = 10 + (7 + 4)

12. Identify the property: 6(6 + n) = 36 + 6n

13. Identify the property: 15 x 1 = 15

14. Identify the property: 19 + 5 = 5 + 19

15. Write an algebraic expressions that is equivalent: (b)(b)(b)

16. Are the following expressions equivalent? 7(2y + 3w) = 14y + 24w

17. Use the distributive property to simplify the following expression: 9(2n + y)

18. Use GCF to identify an equivalent expression: 7c – 28

19. Jose and Linda each evaluated the expression 9 - 3 + 5 + 2. Who evaluated the expression correctly and why?

Jose's Solution
9 - 3 + 5 + 2
3 + 5 = 8
9 - 8 = 1
1 + 2 = 3

Linda's Solution
9 - 3 + 5 + 2
9 - 3 = 6
6 + 5 = 11
11 + 2 = 13

20. Lisa is baking cookies. The recipe calls for 4 cups of flour. She has already put in 2 cups. How many more cups does she need to put in? Write an equation to match the situation?

21. Solve the equation using substitution:
    125 ÷ v = 25 {5, 7, 9}

22. Solve the equation using substitution:
    j – 37 = 19 {50, 52, 56}

23. Determine which number(s) make(s) the inequality true by substitution:
    y - 17 < 26 {42, 43, 44, 45}

24. Determine which number(s) make(s) the inequality true by substitution:
    6a ≤ 24 {3, 4, 5, 6}

25. Use the inverse operation to solve the equation: 14x = 42

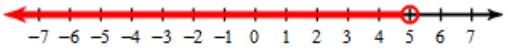
26. Use the inverse operation to solve the equation: a + 37 = 73

27. Use the inverse operation to solve the equation: b – 17 = 44

28. Use the inverse operation to solve the equation: $\frac{n}{15} = 5$

29. Write an inequality for the following: Billy can spend at least $20 on the game.

30. Identify the inequality based on the given graph.



31. Solve with cross multiplication.

32. $\frac{12}{n} = \frac{32}{12}$

33. Find 8% of 20.

34. 24 is what percent of 96?

35. 24 is 40% of what number?

36. Which of the following represents the dependent variable? (15,12)