

Math 6 Benchmark 1 Study Guide #1

Honors Accelerated

Test Instructions: Read each problem carefully and choose the correct answer for each question.

1. Give the value: 6^2
2. Which exponential form represents the following expression: $4 \times 4 \times 4 \times 4 \times 4$?
3. Mrs. Peak buys 6 cards for \$2 each, 4 metallic pens for \$1 each and 2 pad of writing paper for \$4. Simplify $6 \times 2 + 4 \times 1 + 2 \times 4$ to find the total amount Mrs. Peak spends.
4. Evaluate the following expression using order of operations: $25 - 8 \div 4 + 4^2$
5. Evaluate the algebraic expression for the given value of the variable:
 $41 + 3(y - 4)$ for $y=9$
6. Evaluate the algebraic expression for the given value of the variable:
 $5m + 7(4^2 - 5)$ for $m=3$
7. Write a verbal expression to match $12y$?
8. Write a verbal expression to match $m + 15$?
9. Mrs. Elkins is buying ice cream for the Jackets. She has \$60 to spend. If y represents the cost of the ice cream, write an expression to represent how much change she will have left.
10. Write an algebraic expression to match "the quotient of 24 and a number."
11. Identify the property: $14 + 0 = 14$
12. Identify the property: $6(5 + 3) = 30 + 18$
13. Identify the property: $(10 + 7) + 4 = 10 + (7 + 4)$
14. Identify the property: $9 + 5 = 5 + 9$
15. Write an algebraic expressions that is equivalent: $s + s + s + s$
16. Are the following expressions equivalent? $6(2y + 4w) = 12y + 24w$
17. Use the distributive property to simplify the following expression: $7(n + 2y)$
18. Use GCF to identify an equivalent expression: $6c - 42$
19. Jose and Linda each evaluated the expression $9 - 7 + 3 - 2$. Who evaluated the expression correctly and why?

Jose's Solution

$$9 - 7 + 3 - 2$$

$$9 - 7 = 2$$

$$2 + 3 = 5$$

$$5 - 2 = 3$$

Linda's Solution

$$9 - 7 + 3 - 2$$

$$7 + 3 = 10$$

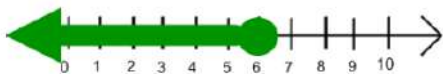
$$10 - 2 = 8$$

$$9 - 8 = 1$$

20. Lisa is cooking muffins. The recipe calls for 6 cups of sugar. 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:
 $120 \div v = 8$ {12, 15, 18}
22. Solve the equation using substitution:
 $j - 27 = 29$ {50, 52, 56}
23. Determine which number makes the inequality true by substitution:
 $y + 9 < 26$ {9, 18, 20}
24. Determine which numbers makes the inequality true by substitution:
 $a \div 7 \leq 4$ {28, 35, 42}
25. Use the inverse operation to solve the equation: $7x = 35$
26. Use the inverse operation to solve the equation: $a + 35 = 73$
27. Use the inverse operation to solve the equation: $b - 20 = 44$
28. Use the inverse operation to solve the equation:

$$\frac{x}{20} = 100$$

29. Write an inequality for the following: Leslie can spend at most \$200 on the baby.
30. Identify the inequality based on the given graph.



31. Solve with cross multiplication.
32. $\frac{15}{n} = \frac{25}{10}$
33. Find 7% of 20.
34. 22 is what percent of 88?
35. 24 is 60% of what number?
36. Which of the following represents the independent variable? (16,10)