

Pre-Algebra, Unit 2A Practice Test: Properties & Simple Equations

Name:

Date

1. In words, describe the *Associative Property of Multiplication*. Give an example illustrating this property.
2. Define and give an example of an *equation*.
3. Define and give an example of *like terms*.
4. In the expression $3x - 7$, what is the coefficient? _____
What is the constant term? _____
5. Describe the general strategy for solving an equation.
6. Identify the properties of addition and multiplication that are used in each step of evaluating the expression.

$-4(28)(25) = [-4(28)](25)$	<u>Use order of operations</u>
$= -4[(28)(25)]$	_____
$= -4[(25)(28)]$	_____
$= [(-4)(25)](28)$	_____
$= (-100)(28)$	<u>Multiply -4 and 25</u>
$= -2800$	<u>Multiply -100 and 28</u>

7. The mathematics teacher wrote this procedure on the board:

Step 1: $4x + 2(3 + 5x)$
Step 2: $4x + 6 + 10x$
Step 3: $4x + 10x + 6$
Step 4: $14x + 6$

- a) Which property justifies Step 2? _____
- b) Which property justifies Step 3? _____

8. Which expression below shows a correct use of the Distributive Property?

$$4b + 6 - 2(b + 3)$$

- A. $4b + 6 - 2b + 6$
- B. $4b + 6 - 2b - 6$
- C. $4b + 6 - 2b + 3$
- D. $4b + 6 - 2b - 3$

9. Simplify the expression below.

$$-3(p - 4) - p + 2$$

- A. $-3p - 2$
- B. $-3p + 14$
- C. $-4p - 2$
- D. $-4p + 14$

For problems 10 - 11, simplify each expression. Show your work.

10. $4x - 8 + x - 6$

11. $6b + 5 - 2(b - 5)$

12. In which of the following is the given value for the variable a solution of the equation?

- A. $a + 8 = 14$, $a = -6$
- B. $14 - b = -3$, $b = 17$
- C. $72 = 6c$, $c = -12$
- D. $\frac{d}{-3} = -5$, $d = -15$

13. What value of x makes the equation below true?

$$27 - x = 12$$

- A. -39
- B. -15
- C. 15
- D. 39

14. Solve for y . Show your work.

$$3y + 7 = -5$$

15. Find the solution. Show your work.

$$\frac{x}{-2} - 3 = 1$$

16. Which equation below does not have a solution of 5?

- A. $x + 1 = 6$
- B. $x - 2 = 3$
- C. $-2x = -10$
- D. $\frac{1}{x} = 5$

17. What value of x makes the equation below true? Show your work.

$$7 - 4x = 19$$