

Name : \_\_\_\_\_

Score : \_\_\_\_\_

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### Identify the Properties of Mathematics

- 1) The product of any number and one is that number. For example  $a \times 1 = a$ . \_\_\_\_\_
- 2) Adding 0 to any number leaves it unchanged. For example  $a + 0 = a$ . \_\_\_\_\_
- 3) If you subtract the same number from both sides of an equation, the equation is still true. For example if  $a = b$ , then  $a - c = b - c$ . \_\_\_\_\_
- 4) When three or more numbers are multiplied, the product is the same regardless of the order of the multiplicands. For example  $(a \times b) \times c = a \times (b \times c)$  \_\_\_\_\_
- 5) When three or more numbers are added, the sum is the same regardless of the grouping of the addends. For example  $(a + b) + c = a + (b + c)$  \_\_\_\_\_
- 6) If you add the same number to both sides of an equation, the equation is still true. For example if  $a = b$ , then  $a + c = b + c$ . \_\_\_\_\_
- 7) Multiplying any number by 0 yields 0. For example  $a \times 0 = 0$ . \_\_\_\_\_
- 8) If you divide the same number to both sides of an equation, the equation is still true. For example if  $a = b$ , then  $a \div c = b \div c$ . \_\_\_\_\_
- 9) If you multiply the same number to both sides of an equation, the equation is still true. For example if  $a = b$ , then  $a \times c = b \times c$ . \_\_\_\_\_
- 10) The sum of two numbers times a third number is equal to the sum of each addend times the third number. For example  $a \times (b + c) = a \times b + a \times c$  \_\_\_\_\_
- 11) The multiplicative inverse of a number,  $a$  is  $\frac{1}{a}$  so that  $a \times \frac{1}{a} = 1$ . \_\_\_\_\_
- 12) When two numbers are added, the sum is the same regardless of the order of the addends. For example  $a + b = b + a$  \_\_\_\_\_
- 13) The sum of any number and zero is the original number. For example  $a + 0 = a$ . \_\_\_\_\_
- 14) When two numbers are multiplied together, the product is the same regardless of the order of the multiplicands. For example  $a \times b = b \times a$  \_\_\_\_\_
- 15) The additive inverse of a number,  $a$  is  $-a$  so that  $a + -a = 0$ . \_\_\_\_\_

