NAME:_____

1. What property is illustrated by the fact that $(86.5 \cdot 63.9) \cdot 15.3 = 86.5 \cdot (63.9 \cdot 15.3)$?

   [A] commutative property for multiplication

   [B] zero property for multiplication

   [C] associative property for multiplication

   [D] identity property for multiplication

2. Name the property of equality that justifies the statement. $5a^2 = 5a^2$

   [A] Symmetric property

   [B] Additive identity

   [C] Transitive property

   [D] Reflexive property

3. What property is illustrated by the fact that $80.8 \cdot 1 = 80.8$?

4. What property is illustrated by the fact that $(64.9 \cdot 60.9) \cdot 88.8 = 64.9 \cdot (60.9 \cdot 88.8)$?

5. What property is illustrated by the fact that $(81.4 \cdot 43.6) \cdot 0 = 0$?

   [A] commutative property for multiplication

   [B] identity property for multiplication

   [C] zero property for multiplication

   [D] associative property for multiplication

6. Which property is illustrated by the following statement?
   $(46.2 + 25.8) + 29.4 = (25.8 + 46.2) + 29.4$

   [A] addition property of zero

   [B] distributive property of addition

   [C] associative property of addition

   [D] commutative property of addition

7. Which property is illustrated by the following statement?
   $(18.8 + 12.9) + 61.4 = (12.9 + 18.8) + 61.4$

   [A] commutative property of addition

   [B] distributive property of addition

   [C] addition property of zero

   [D] associative property of addition

8. (a) Compare: $\frac{5}{16} + \left(\frac{5}{16} + \frac{4}{16}\right) \bigcirc \left(\frac{5}{16} + \frac{5}{16}\right) + \frac{4}{16}$

   (b) What property is illustrated by this comparison?

9. What property is illustrated by the fact that $77.9 \cdot (77.7 \cdot 95) = (77.7 \cdot 95) \cdot 77.9$?

10. What is another name for the opposite of a number?

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11. Is the equation true or false? If so, what addition property does it illustrate?
$59.5 + (72.9 + 10.1) = (59.5 + 72.9) + 10.1$

12. What property of addition states that the order in which two real numbers are added does not affect the sum?

13. What property is illustrated by the fact that $45.7 \cdot (75.6 \cdot 83) = (75.6 \cdot 83) \cdot 45.7$?

[A] zero property for multiplication

[B] commutative property of multiplication

[C] associative property for multiplication

[D] identity property for multiplication

14. Is the equation true or false? If so, what addition property does it illustrate?
$(67.5 + 19.5) + 0 = 67.5 + 19.5$

15. Which property is illustrated by the following statement?
$(37.5 + 44.2) + 0 = 37.5 + 44.2$

[A] addition property of zero

[B] distributive property of addition

[C] associative property of addition

[D] commutative property of addition

16. Which property is illustrated by the following statement?
$70.8 + (11.3 + 40.5) = (70.8 + 11.3) + 40.5$

[A] commutative property of addition

[B] distributive property of addition

[C] associative property of addition

[D] addition property of zero

17. What property is illustrated by the fact that $59.9 \cdot 1 = 59.9$?

[A] identity property for multiplication

[B] associative property for multiplication

[C] commutative property for multiplication

[D] zero property for multiplication

18. What property is illustrated by the fact that $(90.8 \cdot 88.2) \cdot 0 = 0$?

19. Is the equation true or false? If so, what addition property does it illustrate?
$(30.2 + 24) + 62.2 = (24 + 30.2) + 62.2$

20. Is the equation true or false? If so, what addition property does it illustrate?
$74.4 + (69.9 + 2.2) = (74.4 + 69.9) + (74.4 + 2.2)$

[1] C

[2] D

[3] identity property for multiplication

[4] associative property for multiplication

[5] C

[6] D

[7] A

[8] (a) = (b) The associative property of addition

[9] commutative property of multiplication

[10] Additive inverse

[11] True. The associative property of addition.

[12] Commutative property for addition

[13] B

[14] True. The addition property of zero.

[15] A

[16] C

[17] A

[18] zero property for multiplication

[19] True. The commutative property of addition.

[20] False