

NAME: _____

P.I. A.N.1: Identify the properties of real numbers (commutative, associative, distributive, identity, inverse)

1. What property is illustrated by the fact that $(71.3 \cdot 3.7) \cdot 0 = 0$?
[A] zero property for multiplication
[B] commutative property for multiplication
[C] identity property for multiplication
[D] associative 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 $26.7 \cdot (62.1 \cdot 7.1) = (62.1 \cdot 7.1) \cdot 26.7$?
[A] commutative property of multiplication
[B] associative property for multiplication
[C] identity property for multiplication
[D] zero 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?

NAME: _____

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 $37.6 \cdot 1 = 37.6$?
- [A] commutative property for multiplication
 - [B] identity property for multiplication
 - [C] associative property for multiplication
 - [D] zero 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 $(81.9 \cdot 11.9) \cdot 52 = 81.9 \cdot (11.9 \cdot 52)$?
- [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] A
- [2] D
- [3] identity property for multiplication
- [4] associative property for multiplication
- [5] A
- [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] B
- [18] zero property for multiplication
- [19] True. The commutative property of addition.
- [20] False