## Working with the Properties of Mathematics

1) Which equation shows the Zero Property of Multiplication?
A. $4 \times 3=3 \times 4$
B. $7 \times 0=0$
C. $6+6+6=3 \times 6$
D. $5 \times 1=5$
2) Which Property of Multiplication is shown? $(5+7) \times 8=5 \times 8+7 \times 8$
A. Distributive Property
B. Commutative Property
C. Associative Property
D. Identity Property

3 ) Which equation shows the Commutative Property of Multiplication?
A. $7 \times 3=7+7+7$
B. $6 \times 4-2 \times 4=(6-2) \times 7$
C. $9 \times 5=5 \times 9$
D. $3 \times 1=3$

4 ) Which property is used in the following?
$9 \times(2+5)=9 \times 2+9 \times 5$
A. None of the above
B. Distributive Property
C. Associative Property
D. Commutative Property

5 ) Which equation shows the Identity Property of Multiplication?
A. $a(b+c)=a b+a c$
B. $\mathrm{a} \times 1$
C. $(a+b)+3=a+(3+b)$
D. $a+a+a=3 \times a$

6 ) Which of the following does not show the Commutative Property ?
A. $9+y=y+9$
B. $x+y=y+x$
C. $y x=x y$
D. $x y-6=x y$

7 ) Which operation will not change the value of any nonzero number ?
A. Adding One
B. Multiplying by Zero
C. Multiplying by One
D. Dividing by Zero

8 ) Which Property of Addition does $8+0=8$ illustrate?
A. Distributive Property
B. Commutative Property
C. Zero Property
D. Identity Property

9 ) Which of the following does not show the Commutative Property of Addition ?
A. $3 x+4 y=4 y+3 x$
B. $a+b=b+a$
C. $2+x=x+2$
D. $\mathrm{ab}=\mathrm{ba}$

10 ) Which property would you use to simplify the following expression? $3(y+5)$
A. Distributive Property
B. Multiplication Property of Zero
C. Commutative Property
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11 ) Which property of addition is used in the following? $(3+8)+7=3+(8+7)$
A. Distributive Property
B. Commutative Property
C. Associative Property
D. Identity Property

12 ) Simplify this expression: 6(y+z)
A. $6 y+6 z$
B. $6 y z$
C. $6 y+z$
D. $6 z+y$

13 ) The value of any nonzero number will be changed by $\qquad$ .
A. adding zero
B. multiplying by one
C. multiplying by zero
D. dividing by one

14 ) Which is an example of Identity Property of Addition?
A. $4+3=3+4$
B. $5 \times 1=5$
C. $2+0=2$
D. $(3+8)+7=3+(8+7)$

15 ) Which equation shows the Multiplicative Inverse of a Number ?
A. $\mathrm{a}+-\mathrm{a}=0$
B. $a x(1 / a)=1$
C. $a \times 0=0$
D. $a \times 1=a$

16 ) Which is an example of Associative Property of Addition?
A. $(9+4)+7=9+(4+7)$
B. $6+9=9+6$
C. $5+(-5)=0$
D. $2+0=2$

17 ) Which of the following is an example of Commutative Property of Addition ?
A. $9 \times 1=9$
B. $4+8=8+4$
C. $(8+7)+2=8+(7+2)$
D. $5+3=6+5$

18 ) Which property is used in the following expression? $(3 \times 8) \times 6=8 \times(6 \times 3)$
A. Associative Property of Multiplication
B. Commutative Property of Addition
C. Distributive Property of Multiplication
D. Associative Property of Addition

19 ) Which property is used in the following expression? ( $a \times b) \times c=a \times(b \times c)$
A. Commutative Property of Addition
B. Associative Property of Addition
C. Associative Property of Multiplication
D. Distributive Property

20 ) Which property is used in the following expression? $4(9+5)=36+20$
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