Properties worksheet Name_____

<u>Directions</u>: If the expressions are equivalent, name the property. If not, explain.

1. $(7 + 5) + 3 = (5 + 7) + 3$_____

2. $(8 + 6) + 4 = 8 + (6 + 4)$_____

* 3. $2(3 + x) = 2 \cdot 3 + 2 \cdot x = 6 + 2x$ _____

* 4. $1x = x$_____

5. $8 + 0 = 8$_____

6. $2 \cdot 0 = 0$_____

7. $6 \cdot 0 = 6$_____

8. $(4 - 3) - 1 = 4 - (3 - 1)$_____

9. $5 \cdot 0 = 0$_____

10. $7 + 4 + 2 = 4 + 7 + 2$ _____

11. $6 \cdot (8 \cdot 3) = (6 \cdot 8) \cdot 3$_____

12. $a + b + c = b + a + c$_____

<u>Directions</u>: Apply the given property to the given expression.

13. Identity Property of Addition: 0 + 134 = _____

14. Commutative Property of Multiplication: $3 \cdot 2$ = _____

15. Associative Property of Addition: (2 + 3) + 14 =_____

16. Commutative Property of Addition: (13 + 10) + 7 =_____

17. Identity Property of Multiplication: _____ · _____= 121

18. Distributive Property: 5(____+ 3) = 10x + 15

19. Identity Properties of Multiplication and Addition: _____ · 5 + _____ = 5

20. Commutative Property of Addition **then** Associative Property of Addition: (14 + 29) + 16 =

_____ **then** _____

21. Distributive Property: ___ (3 - n) = 21 - 7n

22. Commutative Property of Multiplication: abc=_____

<u>Directions</u>: Simplify each expression. Name the property or properties used.

23. 6 + (2 + x)

24. $7 \cdot x \cdot 5$

25. 8 + 0

26. 3(x + 5)

<u>Directions</u>: Write each product using the distributive property. Then simplify. Show work.

27. 8(19) = 8 (10 + ____)

28. 6(52) = ___ (___ + ____)