

3.3 Properties (Honors)

Name _____ Date _____

Copy and complete the statement using the specified property.

1. Commutative Property of Addition: $h + 11 =$
2. Commutative Property of Multiplication: $12 \cdot k =$
3. Associative Property of Addition: $21 + (9 + 8) =$
4. Associative Property of Multiplication: $12 \cdot (5 \cdot 4) =$
5. Multiplication Property of One: $18 \cdot w \cdot 1 =$
6. Addition Property of Zero: $26 + c + 0 =$

Simplify the expression. Explain each step.

7. $2 + (a + 8)$
8. $(2x) \cdot 5$
9. $7(4y)$
10. $(0 + c) + 12$
11. $(8e) \cdot 1$
12. $7 \cdot x \cdot 5$
13. $16 + (f + 4)$
14. $(3y) \cdot 9$
15. $5(8y)$
16. $(0 + n) + 15$
17. $(21 \cdot y) \cdot 1$
18. $10 \cdot x \cdot 4$
19. $34 \cdot y \cdot 0$
20. $35 + (p + 5)$