3.8 WS – Rewriting Equations and Formulas Algebra 1 CP		Name: Hour:	
Write the equation so that y is a function of x.			
1. 2x + y = 7	2. 12 = 9x + 3y	3. $7y - 6x = 14$	
4. 9x – 5y = 30	5. 2 + 6y = 3x + 4	6. 9 – 0.5y = 2.5x	
Solve the equation for x. 7. $c = \frac{x+a}{b}$	8. $\frac{x}{a} + b = c$	9. $ax = bx - c$	
10. $ax + b = cx - d$	11. $\frac{x}{a} = \frac{b}{c}$	12. a – bx = c	

Solve the formula for the given variable.

13. $V = lwh$; solve for w	14. $S = 2B + Ph$; solve for h	15. $A = \frac{1}{2}h(b_1 + b_2)$; solve for b_1
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16. The penny size d of a nail is given by d = 4n - 2 where n is the length (in inches) of the nail.

a) Solve the formula for *n*.

b) Use the new formula to find the lengths of nails with penny sizes 5 and 12.

- 17. To participate in a bowling league, you pay a \$25 sign-up fee and \$12 for each league night that you bowl. The total cost C (in dollars) is given by the equation C = 12x + 25 where x is the number of nights you bowled.
 - a) Solve the equation for x.
 - b) How many nights have you bowled if you spent \$145 total?
- 18. You practice your guitar every day. You spend 15 minutes practicing chords and the rest of the time practicing new songs. The total number of minutes y you practice each week is given by y = 7(15 + x) where x is the number of minutes you spend on practicing new songs.

a) Solve the equation for x.

b) How many minutes did you spend on learning new songs if you practiced 210 minutes last week?