

Algebra 1
Section 1.5 #2

Name: _____

In the exercises #1-6, solve the literal equation for y.

1. $4x + y = 7$	2. $3y - 15x = 12$
3. $10x - 2y = 46$	4. $7x - y = 13$
5. $4x + 1 = 9x + 4y$	*6. $3 + \frac{1}{5}y = 2x + 4$

In the exercises #7-10, solve the literal equation for x.

7. $y = 5x - 2x$	8. $y = x + 9x$
9. $b = 3x + 9xy$	*10. $m = 9 + 3x - dx$

In the exercises #11-16, solve the formula for the indicated variable.

11. Force: $f = ma$; for m	12. Volume of a cylinder: $V = \pi r^2 h$; for h
13. Perimeter of a triangle: $P = a + b + c$; For b	14. Linear equation: $ax + by = c$; for y
*15. Slope of a line: $m = \frac{y_2 - y_1}{x_2 - x_1}$; for y_2	*16. Surface area of a Rectangular Prism: $S = 2(lh + lw + wh)$; for w

17. The total cost C (in dollars) to participate in a triathlon series is given by the literal equation $C = 90x + 35$, where x is the number of triathlons in which you participate.

- a) In your own words, how much money does it cost to register for the triathlon series?
- b) Solve the equation for x .
- c) In how many triathlons do you participate if you spend a total of \$305?
- d) If your maximum annual triathlon cost is \$1000, what is the maximum number of triathlons in which you could participate?

18. Describe the error to the right.

$$\begin{aligned} \times \quad k &= ax + bx + d \\ k &= x(a + b + d) \\ x &= \frac{k}{a + b + d} \end{aligned}$$