

Sec 1H Unit 1 Day 2 - Symbols Assignment

Mrs. Bagley loves to do triathlons, where people swim, then ride a bike, then run as fast as they can. Short triathlons are called Sprints, and they can be completed in about an hour. Ironman Triathlons can take an entire day to complete – racers have to swim 2.4 miles, ride 112 miles on a bike, then run a full marathon (26.2 miles). Remember that to find distance traveled, we multiply speed by time. $D = R \cdot T$

B represents the number of minutes biking	V_B is the average speed biking
S represents the number of minutes swimming	V_S is the average speed swimming
R represents the number of minutes running	V_R is the average speed running
T represents the total minutes for the race	

- Write an expression using the symbols above that would represent the distance someone runs in a triathlon.
- Write an expression for the distance in the biking portion of the race.
- Write an expression that would represent the total distance of a triathlon.
- Write an expression without using B to represent the number of minutes on the bike.

Give the meaning for each expression. If there is no meaning explain why.

5. $S + B + R$

6. $V_S + V_B + V_R$

7. SBR

8. $V_S S$

9. $T - R$

10. $R - V_B$

If it doesn't challenge you, it won't change you.



Review: Evaluate the following expressions for $a = -3$, $b = 2$, $c = 5$, and $d = -4$.

11. $2a + 3b$

12. $4c + d$

13. $5ac - 2b$

14. $\frac{2a}{c+d}$

15. $\frac{3b}{d}$

16. $\frac{a-4b}{3c+2d}$

The equation $c = 2000 + 3r$ represents the cost in dollars (c) of producing a given number of remote controls (r).

17. What is the cost of producing 1000 remote controls?

18. What is the cost of producing 2000 remote controls?

19. What is the cost of producing 2500 remote controls?

Simplify these expressions and make sure to show your work:

20. a) $3(x - 6)$

b) $-3(x - 6)$

21. $\frac{2}{3} + \frac{4}{5}$

22. $4x - 16 + x + 2(x + 1) + 11$

23. $\frac{9}{1} \left(\frac{4}{3}x \right)$