

Math Inventory Practice

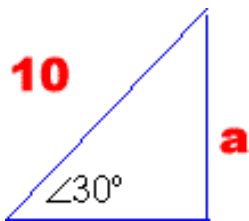
The following notations can be used when typing out equations:

- / for fraction bar
- * for multiplication
- ^ for exponents (x^2 is x squared)
- sqrt for square root ($\text{sqrt}(4) = 2$)

Parentheses to distinguish numerator and denominator

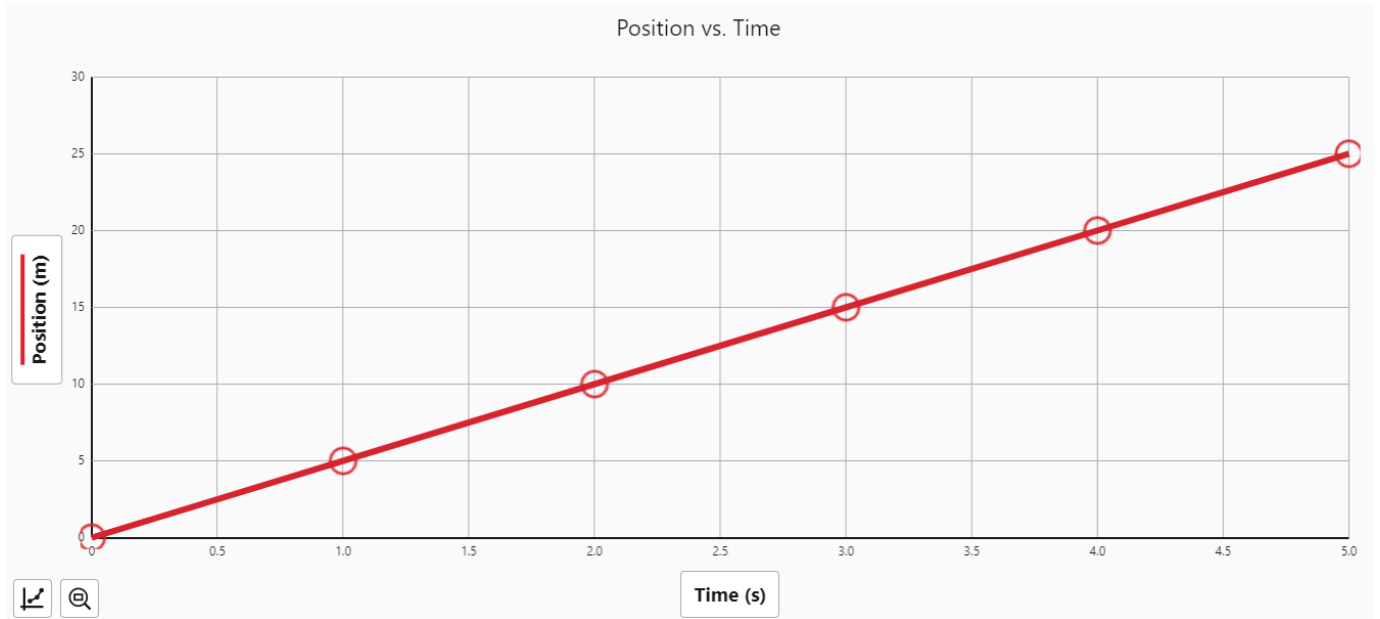
You can also use Equation editor to type math solutions out in your assignments.

1. Simplify completely: $-3(4 - 9) + 6 - 2(-8 + 5)$
2. Simplify by collecting like terms: $2x - 4 - 6x + 8$
3. Solve for H: $V = LWH$
4. Determine the value of side "a" in the right triangle.



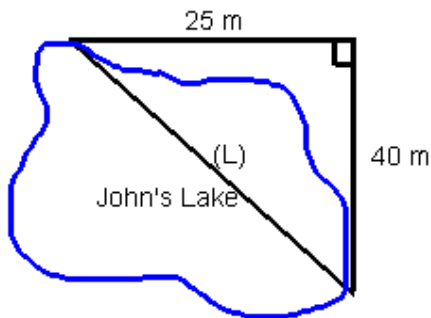
Solution:

5. Calculate the slope of the line containing the two points $(1, -1)$ and $(-5, -3)$.
6. In $y = mx + b$, what do the m and the b represent.
7. Evaluate $3 + 2 \times 4$ and $(3 + 2) \times 4$.
8. Using the following equation, $F = ma$, solve for a if $F = 20.8$ and $m = 14$.
9. During an experiment, the stretch of a rubber band was measured as different weights were added to it. What are the independent and dependent variables?
10. Manipulate the following equation to solve for t : $s = \frac{1}{2}at^2$
11. Solve the equation: $5x - 6 = 19$
12. Solve the equation: $3x + 3 = 2x + 5$
13. Solve the equation: $-2(x - 3) = 2(x + 1)$
14. $2X + 2Z = 10Y$. If $X = 5$ and $Y = 3$, what does Z equal?
15. Find the average (mean) of the following data set: 98, 87, 92, 79, 65, 91, 80, 92, 85, 86.
16. In the following graph, what is the slope?



17. At summer camp, the swimming course runs the length (L) of a small lake. To determine the length of the course, the camp counselors measure the two "dry" legs of a right triangle. What is the length in meters of the swimming course in the figure below?

Solution:



18. The following table will either give you a number in standard notation, scientific notation, or E notation (calculator). Fill out the other two missing pieces.

Standard Notation	Scientific Notation	E Notation
3,568,000,000		
	-4.2×10^6	
		7.36 E 7
	9.2×10^{-8}	
		$-3.3 \text{ E } -4$
0.00000803		

19. How many significant digits does each given number have in the table above?