

Ch 1.3 A.7 – Word Problems, Writing an Equation of a Line

DAY 2

Slope-Intercept Form: _____

Standard Form: _____

Point-Slope Form: _____

Write equations in point-slope, slope-intercept, AND standard forms.

1. $P = (1, 3); m = -\frac{2}{5}$	2. $P = (-2, 0);$ slope undefined
3. Containing $(-3, 4)$ and $(2, 5)$	4. Vertical; containing $(4, -5)$
5. Perpendicular to $x - 2y = -5$ containing $(0, 4)$	

Translate each word problem into a mathematical equation; then solve.

6. Going into the final exam, which will count as two-thirds of the final grade, Mike has test scores of 86, 80, 84, and 90. What score does Mike need on the final in order to earn a B, which is an average score of 80?

7. The perimeter of a rectangle is 60 feet. Find its length and width if the length is 8 feet longer than the width.

8. Erin, by herself, can paint four rooms in 10 hours. If she hires Alex to help, they can do it together in 6 hours. If she lets Alex work alone, how long will it take him to paint four rooms?

9. An open box is to be constructed from a rectangular piece of sheet metal whose length is twice its width by removing a square of side 1 foot from each corner and turning up the edges. If the box is to hold 4 cubic feet, what should be the dimensions of the sheet metal?

10. An object is propelled vertically upward with an initial velocity of 20 meters per second. The distance s (in meters) of the object from the ground after t seconds is $s = -4.9t^2 + 20t$

(a) When will the object be 15 meters above the ground?

(b) When will it strike the ground?

(c) Will the object reach a height of 100 meters?

(d) What is the maximum height?

11. A gardener has 46 feet of fencing to be used to enclose a rectangular garden that has a border 2 feet wide surrounding it.

(a) If the length of the garden is to be twice its width, what will be the dimensions of the garden?

(b) What is the area of the garden?

(c) If the length and width of the garden are to be the same, what would be the dimensions of the garden?

(d) What would be the area of the square garden?