

Algebra I

Finding Equations from Two Points

Name _____

1. What is slope-intercept form?
2. What two pieces of information must you know in order to write the equation of a line?

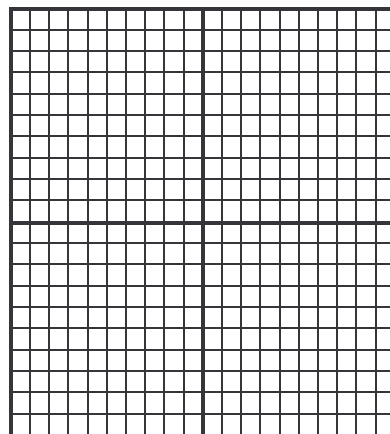
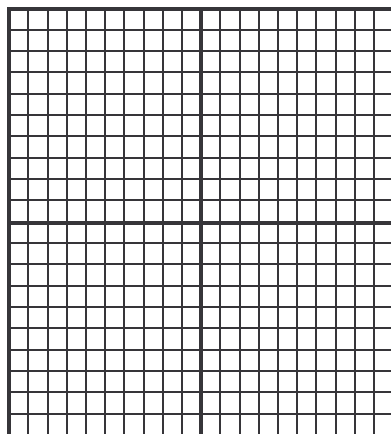
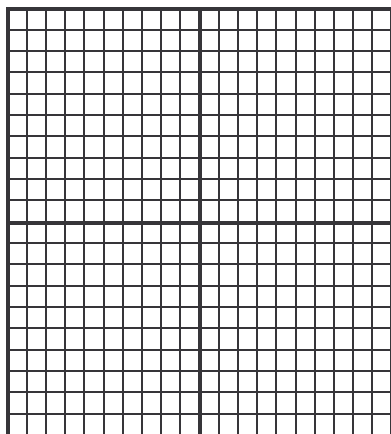
Find the equation of the line that passes through each pair of points.

3. $(0, 5)$ and $(-2, 3)$ 4. $(8, 3)$ and $(4, 9)$ 5. $(-1, 3)$ and $(5, 0)$

6. $(2, 7)$ and $(1, -2)$ 7. $(3, 10)$ and $(7, 2)$ 8. $(0, -9)$ and $(3, -8)$

Find an equation of the line for each graph below. (Remember to find slope and y-intercept!!!)

9. _____ 10. _____ 11. _____



12. In 1995, the cost of a new Porsche 911 Carrera was \$68,000. Now, in 1999, the cost of a new one is \$79,920. Write an equation that relates the cost c of the Porsche in terms of the year t . For the year 1995, let $t = 5$, and for the year 1999, let $t = 9$.
(Hint: Find the slope first, then find the y-intercept)

What would you predict the cost of a 2001 Porsche to be?

In what year do you think the Porsche cost \$50,000?

13. Five seconds after a parachutist jumps out of a plane, he is 8000 feet above the ground. Three seconds later, he is 5600 feet above the ground. Write an equation that relates the distance d parachutist is from the ground after time t in seconds.
(Hint: Find the slope first, then find the y-intercept)

At what time does the parachutist land on the ground?