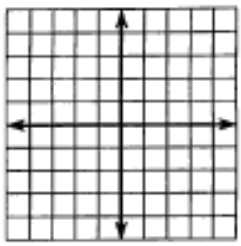
Name:_____Date:_____Period_____

Functions and Linear Equations



Fill in each blank with one of the choices to the right. The circled letter to the left of each blank goes in the box containing the number of the answer.

The Coordinate Plane

(F) The _____ plane has two number lines that intersect
(L) at a point called the _____. The horizontal number
(T) line is called the _____. The vertical number line is
(W) called the _____. The two axes divide the coordinate
(I) plane into four parts called _____. The location of a
(E) point in the coordinate plane is given using an _____
(A) of numbers. The first number is the _____. The
(S) second number is the _____. Label the origin, axes, and quadrants in the figure at the top of the answer column.

15. origin
1. x-coordinate
23. intercept
9. quadrants
6. coordinate
17. y-coordinate
26. x-axis
22. ordered pair
7. graph
19. y-axis

Equations in Two Variables

For an equation with two variables, x and y, a pair of values
(N) (x,y) that make the equation true is a called a _____
(L) of the equation. Each solution is an _____. The
(S) value of x is written _____: the value of y is written
(A) _____. Each solution can be represented as a
(O) _____ in the coordinate plane. The set of all points
(E) representing solutions is called the _____ of the
(S) equation. An equation in two variables has an _____ number of solutions, so there is an infinite number of
(L) _____ in the graph.

24. second
11. slope
27. infinite
10. first
5. point
13. solution
2. points
18. number
3. ordered pair
16. graph

Linear Equations in Two Variables

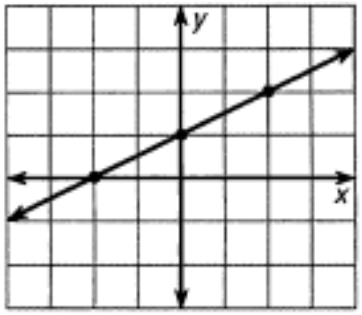
If the graph of an equation in two variables is a straight line,
(E) the equation is a _____ equation. Every solution
(H) can be represented by a _____ on the line. For example, the equation $y = 2x + 5$ is a linear equation because
(U) its graph is a _____. One solution of this equation is
(R) _____. $2x + 3y = 90$ is a linear equation because its
(N) _____ is a line. In a linear equation, the highest
(C) power of either variable is the _____ power.

21. (3,11)
8. point
23. (5,12)
12. line
14. first
4. intercept
20. linear
25. graph

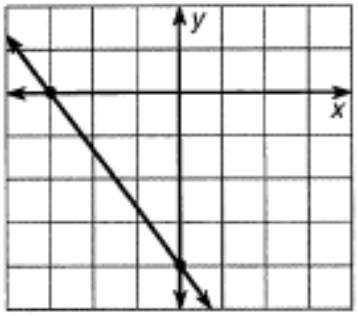
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Slopes and Intercepts

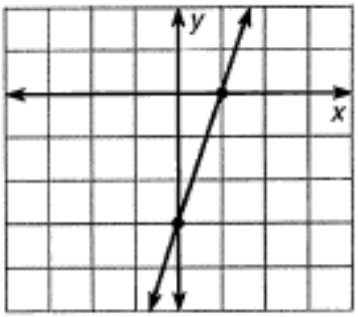
Find the slope and intercepts for each line.



1. slope _____
2. x-intercept _____
3. y-intercept _____

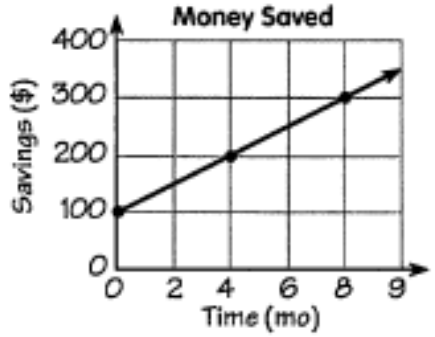


4. slope _____
5. x-intercept _____
6. y-intercept _____

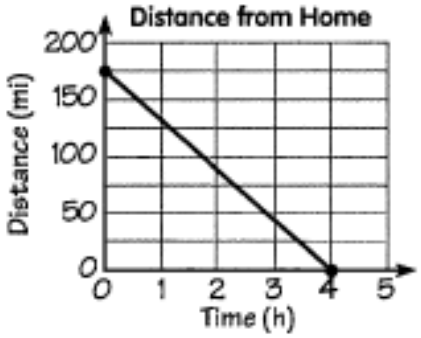


7. slope _____
8. x-intercept _____
9. y-intercept _____

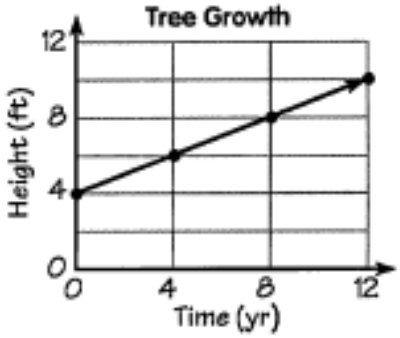
Answer the questions for each graph. Be sure to include a unit of measurement with each answer.



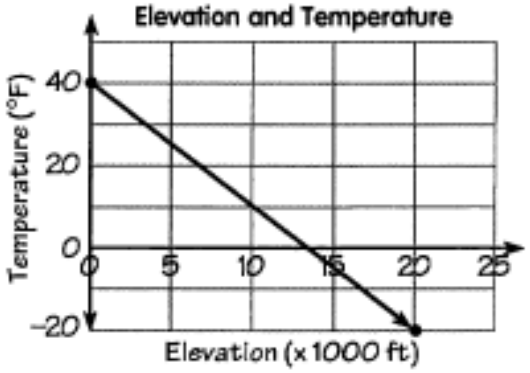
10. How much money had been saved at time 0?
11. What was the rate of saving ($/mo)?



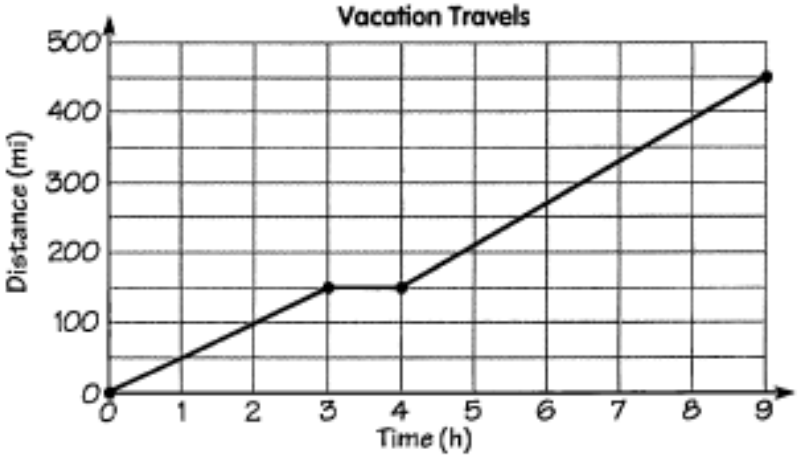
12. What was the distance from home at time 0?
13. What was the rate of speed (mph)?



14. What was the height of the tree at time 0?
15. What was the rate of growth (ft/yr)?



16. What was the temperature at sea level? At 20,000 ft?
17. At what rate did the temperature change (°F/1000 ft)?
18. At about what elevation was the temperature 0°F?
19. What would the temperature be outside a jet flying at 40,000 ft?



20. What was the rate of speed from 0 to 3 h?
21. What was the rate of speed from 3 to 4 h?
22. What was the rate of speed from 4 to 9 h?
23. What was the overall average rate of speed (total distance divided by total time)?