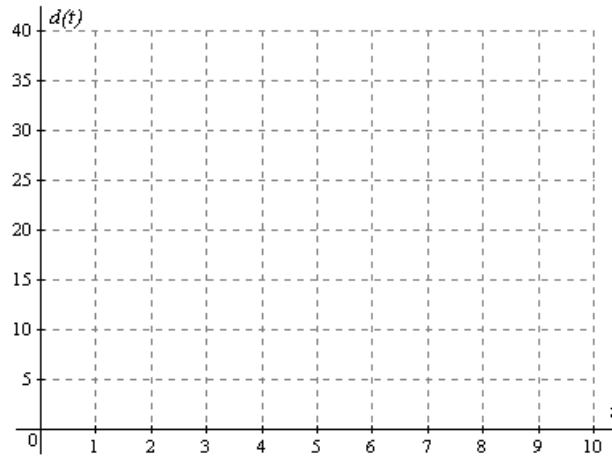


Modeling and Predicting Using Linear Equations

1. Suppose you have the given data of time (in seconds) and distance (in meters). Use the data to create a scatter plot in the window provided.

t	$d(t)$
0	6
1	9
2	13
3	15
4	19
5	23
6	24
7	28
8	32
9	35
10	37



2. Describe the data in the scatter plot, and then draw a line to fit the data.
3. What is the slope of the line drawn? What does it represent in this application?
4. What is the y-intercept of the line drawn? What does it represent in this application?
5. Using appropriate variables, write the equation for the line drawn.
6. Use your equation to predict the distance at 15 seconds.
7. Use your equation to predict when the distance is 25 meters.
8. Enter the data into your calculator and perform a linear regression for the data on the calculator. Using appropriate variables, state the equation.
9. Use the calculator's equation to predict the distance at 6.5 seconds.
10. Use the calculator's equation to predict when the distance is 52.3 meters.