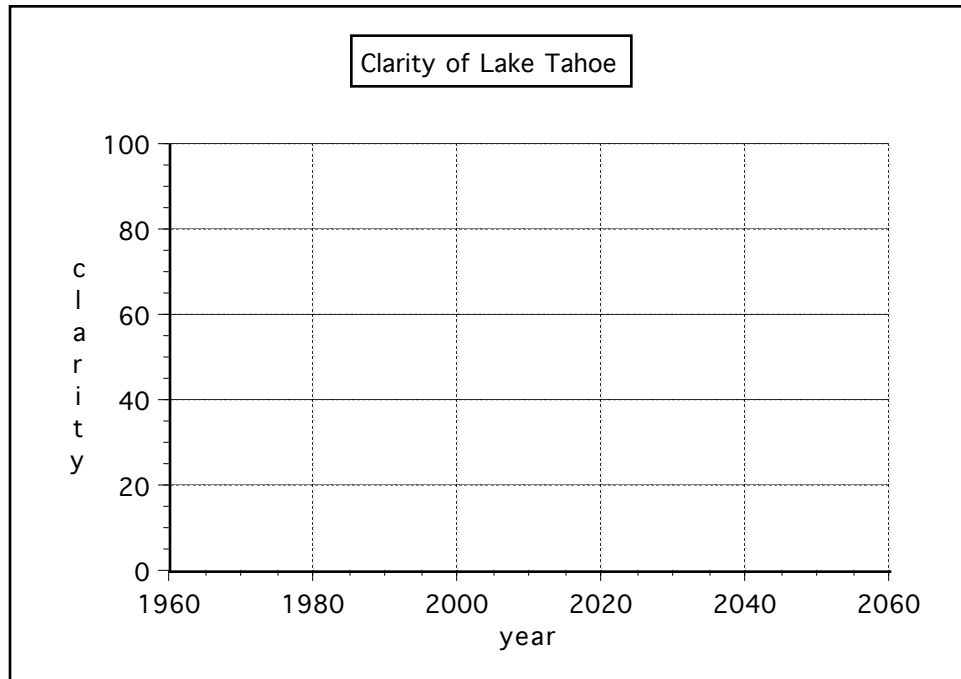


## Lake Tahoe Worksheet

Begin by graphing the data on the graph below:



Let:  $t$  represent the number of years since 1970, and  
 $C$  represent the water clarity, in feet

Use the graph to choose two points which will give a line that shows the trend of the data.

Find the equation of the line determined by the two points. Solve for  $C$ . The result is the mathematical model.

Model:  $C =$

Use your formula for the mathematical model to complete the following table (or use a spreadsheet to construct a similar table):

	A	B	C	D
1		Water Clarity of Lake Tahoe		
2				
3	t	year	data	model
4				
5	0	1970	99	
6	5	1975	92	
7		1980	82	
8		1985	79	
9		1990	77	
10		1995	71	
11		2000	64	
12		2005	72	
13		2010		
14		2050		

Graph your model on the graph above (or use a spreadsheet to construct a graph of the data and the model).

The assignment asks you to make the following projections:

- the clarity level in the years 1992, 2010, 2050
- the year in which the clarity level will reach 30 feet

Use the graph, table, and equation of the mathematical model to make each of the projections.

What do you conclude about the trend of the water clarity of Lake Tahoe?