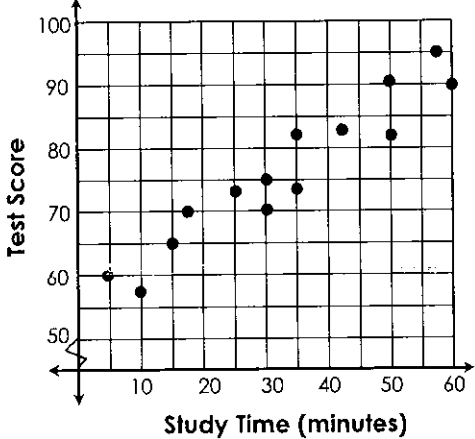


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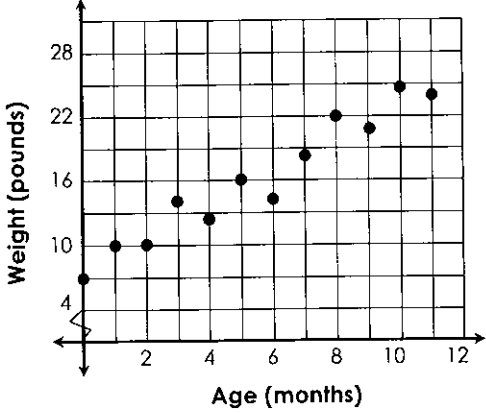
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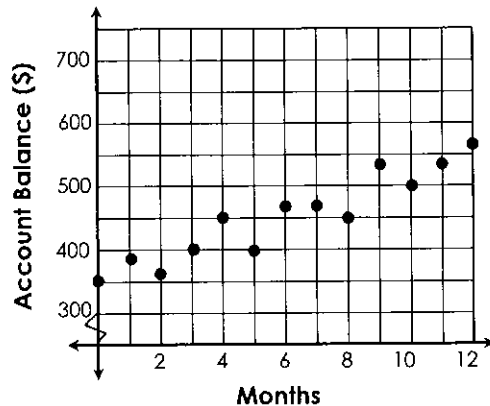
Class:

Main Ideas/Questions	Notes/Examples
<h2>Line of Best Fit</h2>	<p><b>Example:</b> The graph below shows the relationship between minutes spent studying and the test scores for a math class. Which line best represents the data? Graph each line to justify your answer.</p> <div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 20px;"> <p><b>Line A:</b> <math>y = \frac{2}{3}x + 50</math></p> <p><b>Line B:</b> <math>y = \frac{3}{2}x + 50</math></p> <p><b>Line C:</b> <math>y = \frac{2}{3}x + 55</math></p> <p><b>Line D:</b> <math>y = \frac{3}{2}x + 55</math></p> </div> </div>

<h2>Finding the Line of Best Fit</h2>	<ol style="list-style-type: none"> <li>1 Draw a line that is close to most data points. It should "split" the data.</li> <li>2 Find the <b>slope</b> between any two points on the line. (Use the slope formula!)</li> <li>3 Identify the <b>y-intercept</b>, the point where the line intersects the y-axis.</li> <li>4 Write the equation in <b>slope-intercept form</b> (<math>y = mx + b</math>) where <math>m</math> is the slope and <math>b</math> is the y-intercept.</li> </ol>
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<h2>Examples</h2>	<p>1. The graph below shows the ages and weights of twelve babies.</p> <div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 20px;"> <p>a) Write an equation for the line of best fit.</p> <p>b) Estimate the weight of a baby that is 12 months old.</p> </div> </div>
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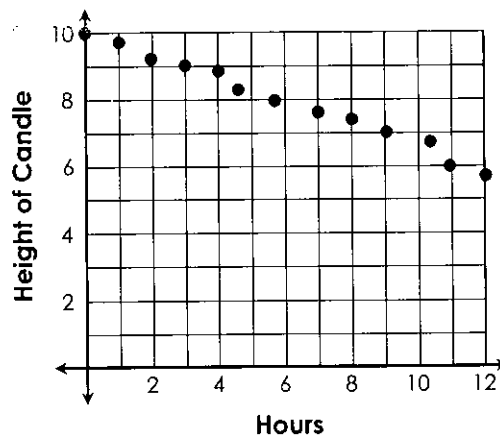
2. Beth started a new bank account. The graph below shows the monthly balance of the account in its first year.



a) Write an equation for the line of best fit.

b) Estimate the balance of the account after two years.

3. A 10-inch tall candle is lit. The graph below shows its height after each hour.

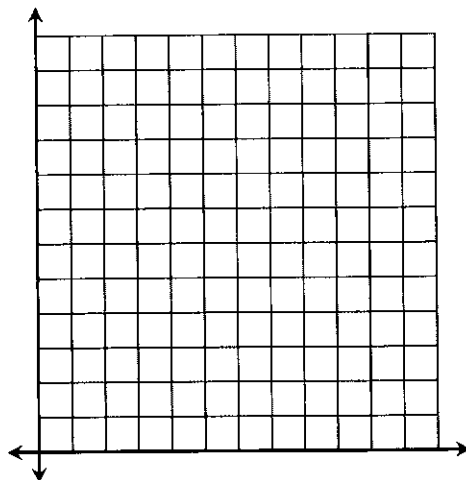


a) Write an equation for the line of best fit.

b) Estimate the height of the candle after 15 hours.

4. The table to the left shows Nick's weight each week into his diet. Make a scatter plot of this data.

Time (weeks)	Weight (lbs)
1	238
2	235
3	233
4	231
5	228
6	227
7	225
8	222
9	220
10	217



a) Write an equation for the line of best fit.

b) Estimate Nick's weight after 24 weeks.