Problem 1: List the 4 parts of a complete model:

1. 
2. 
3. 
4. 

Problem 2: The revenue for International Game Technology was $2128.1 million in 2003 and $2484.8 million in 2004. Assume that revenue was increasing at a constant rate.

a. Find the rate of change of revenue.

b. By how much did revenue increase each quarter of 2004?

c. Find a complete linear model for revenue in terms of the year.

d. Use the model to find the amount of revenue in 2005.

Problem 3: You are a summer employee in a souvenir shop. The catalog cost for sweatshirt orders are shown in the table. The shop owner asks you to estimate the cost for 650 shirts.

<table>
<thead>
<tr>
<th>Sweatshirts Purchased</th>
<th>Total Cost (dollars)</th>
<th>Sweatshirts Purchased</th>
<th>Total Cost (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>250</td>
<td>250</td>
<td>700</td>
</tr>
<tr>
<td>100</td>
<td>375</td>
<td>300</td>
<td>825</td>
</tr>
<tr>
<td>150</td>
<td>500</td>
<td>350</td>
<td>950</td>
</tr>
<tr>
<td>200</td>
<td>600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Find a complete linear model for the data.

b. Use the model to find the cost for 650 shirts. Round to the nearest multiple of 25.

c. Determine the average cost per shirt for 650 shirts.

d. The shop owner is preparing a newspaper advertisement. If the standard markup is 700%, what should the advertised price be?