1 Administrivia

Announcements

Math Lab: 7:00–9:00 PM Sunday–Thursday in the Math Lab room (Froelicher lobby, across from the Writing Center and near the vending machines).

Assignment

Read Section 1.7. Online quiz.


From Last Time

Median-median line practice.

2 Introduction

Residual plot:

1. What do residuals (deviation) show us about a median-median line? Measure of “goodness” of model.
2. Directed distance: actual $y$ – predicted $y$.

*Example graph.*

How do we find predicted $y$?

3. Look at size of distance.

4. Look at patterns:

   (a) All above.

   (b) All below.

   (c) Both ends above or below.

5. Residual plot: scatter plot of $(x_i, (\text{actual } y_i - \text{predicted } y_i))$.

Example data: (1.3, 114), (1.6, 138), (2.5, 147).
Line: $y = 27.5x + 83.5$.

<table>
<thead>
<tr>
<th>$x$</th>
<th>Actual $y$</th>
<th>Predicted $y$</th>
<th>Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3</td>
<td>114</td>
<td>119.25</td>
<td>-5.25</td>
</tr>
<tr>
<td>1.6</td>
<td>138</td>
<td>127.5</td>
<td>10.5</td>
</tr>
<tr>
<td>2.5</td>
<td>147</td>
<td>152.25</td>
<td>-5.25</td>
</tr>
</tbody>
</table>

3  Class Assignment

1. Pg. 39: 2.