Manatees were surveyed along Florida’s Crystal and Indian Rivers by observation from airplanes and helicopters. The question of interest was whether helicopters and airplanes provide the same information about manatee counts or whether the counts for the two methods are different. On each of 10 days, manatees were counted by airplane and helicopter. The following data was collected:

<table>
<thead>
<tr>
<th>Day</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count by Airplane</td>
<td>24</td>
<td>31</td>
<td>32</td>
<td>39</td>
<td>47</td>
<td>47</td>
<td>76</td>
<td>96</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Count by Helicopter</td>
<td>30</td>
<td>30</td>
<td>33</td>
<td>38</td>
<td>58</td>
<td>58</td>
<td>48</td>
<td>75</td>
<td>85</td>
<td>85</td>
</tr>
</tbody>
</table>

### Analysis of Measurement Methods for Manatees

i. Do the measurement methods differ?

ii. The fitted regression model is shown in the plot below: $\mu\{\text{Helicopter}|\text{Airplane}\} = -7.5 + 1.1 \ \text{Airplane}$

iii. A test of $H_0: \hat{\beta}_{\text{Airplane}} = 0$ vs. $H_a: \hat{\beta}_{\text{Airplane}} \neq 0$ results in a p-value of 0.0011.

iv. Thus we reject $H_o$ and conclude that there is evidence that the measurement methods are different.

![Manatee Counts](image)

(d) Critique the text of item (ii). [5 pts.]
(e) Critique the text of item (iii). [5 pts.]

(f) If items (ii) and (iii) were corrected, would the analysis be correct? If not, describe why. [5 pts.]