50 Houses surveyed about the number of pets

<table>
<thead>
<tr>
<th>Value</th>
<th>Frequency</th>
<th>Relative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Value | Frequency
--- | ---
0 | 5
1 | 13
2 | 14
3 | 7
4 | 7
5 | 4

SCORES IN A STATS CLASS

<table>
<thead>
<tr>
<th>Value</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>56</td>
</tr>
<tr>
<td>98</td>
<td>86</td>
</tr>
<tr>
<td>35</td>
<td>97</td>
</tr>
<tr>
<td>54</td>
<td>27</td>
</tr>
<tr>
<td>89</td>
<td>63</td>
</tr>
<tr>
<td>97</td>
<td>100</td>
</tr>
<tr>
<td>85</td>
<td>75</td>
</tr>
<tr>
<td>68</td>
<td>94</td>
</tr>
<tr>
<td>85</td>
<td>69</td>
</tr>
<tr>
<td>72</td>
<td>70</td>
</tr>
<tr>
<td>83</td>
<td>91</td>
</tr>
<tr>
<td>91</td>
<td>80</td>
</tr>
<tr>
<td>80</td>
<td>78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ≤ x &lt; 10</td>
<td>0</td>
</tr>
<tr>
<td>10 ≤ x &lt; 20</td>
<td>0</td>
</tr>
<tr>
<td>20 ≤ x &lt; 30</td>
<td>2</td>
</tr>
<tr>
<td>30 ≤ x &lt; 40</td>
<td>1</td>
</tr>
<tr>
<td>40 ≤ x &lt; 50</td>
<td>2</td>
</tr>
<tr>
<td>50 ≤ x &lt; 60</td>
<td>3</td>
</tr>
<tr>
<td>60 ≤ x &lt; 70</td>
<td>4</td>
</tr>
<tr>
<td>70 ≤ x &lt; 80</td>
<td>8</td>
</tr>
<tr>
<td>80 ≤ x &lt; 90</td>
<td>8</td>
</tr>
<tr>
<td>90 ≤ x ≤ 100</td>
<td>7</td>
</tr>
</tbody>
</table>
### BERT

<table>
<thead>
<tr>
<th>x</th>
<th>$x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>185</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td></td>
</tr>
<tr>
<td>250</td>
<td></td>
</tr>
<tr>
<td>155</td>
<td></td>
</tr>
</tbody>
</table>

$\sum x^2$

### ERNIE

<table>
<thead>
<tr>
<th>x</th>
<th>$x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>182</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td></td>
</tr>
<tr>
<td>180</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td></td>
</tr>
</tbody>
</table>

$\sum x^2$
### 50 houses surveyed about the number of pets

<table>
<thead>
<tr>
<th># of pets</th>
<th>frequency</th>
<th>$f \cdot x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

$\sum (f) = n = \sum f \cdot x^2$

### Grades in a stats class

<table>
<thead>
<tr>
<th>grade</th>
<th># of students</th>
<th>x=midpoint</th>
<th>$f \cdot x^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 \leq x &lt; 10$</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>$10 \leq x &lt; 20$</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>$20 \leq x &lt; 30$</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>$30 \leq x &lt; 40$</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>$40 \leq x &lt; 50$</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>$50 \leq x &lt; 60$</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>$60 \leq x &lt; 70$</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>$70 \leq x &lt; 80$</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>$80 \leq x &lt; 90$</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>$90 \leq x \leq 100$</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

$\sum (f) = n = \sum f \cdot x^2$