The contingency table given below classifies 100 business accounts by salesperson and cash/credit.

<table>
<thead>
<tr>
<th></th>
<th>Jane</th>
<th>Malcolm</th>
<th>Leah</th>
</tr>
</thead>
<tbody>
<tr>
<td>cash</td>
<td>20</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>credit</td>
<td>10</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

1. Refer to the table above. What fraction of all accounts do Jane and Leah together account for?
   a) 60/100  b) 30/100  c) 20/50  d) 70/100  e) 20/30
   \[
   \frac{30 + 40}{100} = \frac{70}{100}
   \]

2. Refer to the table above. What fraction of all accounts are cash accounts?
   a) 60/100  b) 70/100  c) 20/50  d) 70/100  e) 20/30

3. Refer to the table above. What fraction of Jane's accounts are cash accounts?
   a) 60/100  b) 30/100  c) 20/50  d) 70/100  e) 20/30
   \[
   \frac{20}{30}
   \]

4. Refer to the table above. What name is given to \{20/60, 10/60, 30/60\}?
   a) marginal distribution of sales by salesperson
   b) conditional distribution of sales by salesperson, for cash accounts
   c) conditional distribution of sales by salesperson, for credit accounts

5. Refer to the table above. What name is given to \{10/40, 20/40, 10/40\}?
   a) marginal distribution of sales by salesperson
   b) conditional distribution of sales by salesperson, for cash accounts
   c) conditional distribution of sales by salesperson, for credit accounts

6. Refer to the table above. What name is given to \{30/100, 30/100, 40/100\}?
   a) marginal distribution of sales by salesperson
   b) conditional distribution of sales by salesperson, for cash accounts
   c) conditional distribution of sales by salesperson, for credit accounts
12. Determine the lower quartile for the data \{5, 6, 6, 10, 50, 100, 200, 600\}
   a) 6.5   b) 75   c) 7   d) 30   e) 6

13. Determine the sample standard deviation \( s \) for data \{0, 4\}.
   a) \( \sqrt{\frac{8}{2}} \)   b) \( \sqrt{\frac{8}{3-1}} \)   c) \( \sqrt{\frac{4}{2}} \)   d) \( \sqrt{\frac{4}{2-1}} \)
   \( \bar{x} = 2 \)  \[ s = \sqrt{\frac{(0-2)^2 + (4-2)^2}{2-1}} \]

14. Determine the sample standard deviation \( s \) for data \{0, 1, 5\}.
   a) 1.84   b) 0.48   c) 2.32   d) 3.18   e) 2.65
   \( \bar{x} = 2 \)  \[ s = \sqrt{\frac{(0-2)^2 + (1-2)^2 + (5-2)^2}{3-1}} = \sqrt{7} \]

15. Determine the mean of the list \{0, 4, 4, 4\}.
   a) 4   b) 2   c) 3.5   d) 3   e) 12
   \( \bar{y} = 3 \)

16. Here is a number line with numbers indicated by asterisks. Where is the median?
   *   **   ***   *
   a   b   c   d   e
   \( m = 7 \)

17. Here is a number line with numbers indicated by asterisks. Where is the mean?
   *   *   *
   3rd
   a   b   c   d   e
   AVG OF TWO

18. A list has sample standard deviation \( s \) equal to 8. What will \( s \) be changed to if each number on the list is increased by two (new list \( x + 2 \))?
   a) 10   b) 16   c) 8   d) 9
   \( s_{x+2} = s_x = 8 \)

19. A list has mean 6.2. If every number on this list is multiplied by two what will be the mean be changed to?
   a) 8.2   b) 12.4   c) 3.1   d) 5.1   e) none of the others
   \( \bar{x} = 2\bar{x} = 12.4 \)