1. Simplify the following expressions;
   a. \( \frac{8-3.5+0.7+285}{3} \)  
   b. \( \frac{7(2k+3)+4k-3}{2(k+1)+4k+} \)  
   3mks
2. Round off:
   a. 468.3894 to two decimal places  
   b. 43264 to the nearest thousand  
   1mk
3. What is the Greatest Common Division of 33, 121 and 143?  
   1mk
4. Express the following numbers in terms of their prime factors;
   a. 360  
   b. 90  
   2mks
5. What is the place value and total value of digit 5 in 8950403?  
   2mks
6. A farmer sold milk for all the day of the week. The table below shows the amount of milk the farmer sold for six of the seven day.
   
<table>
<thead>
<tr>
<th>Day</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed.</th>
<th>Thur</th>
<th>Fri</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount in Kg</td>
<td>410</td>
<td>315</td>
<td>400</td>
<td>410</td>
<td>300</td>
<td>420</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   
   One kilogram of milk was sold at sh.18. If the mean sale per day was 380kg, how much more money did the farmer get from selling milk on Friday than on Tuesday?  
   4mks
7. What is the value of \( \frac{1}{4} \times \frac{2}{2} - \frac{1}{2} \)  
   2mks
8. When \( P = 3, \ k = p + n, \ r = 5 \ and \ n = r - 3, \) work out \( \frac{p^2 + k}{r + 2k} \)  
   2mks
9. What is the LCM of 45, 12, and 9?  
   2mks
10. The diagonal of a rectangular piece of paper is 10cm. If its length is 8cm, what is its perimeter?  
   3mks
11. Solve for \( x \) in \( x - \frac{4x}{3} = 3 \)  
   2mks
12. If the price of an item is increased by 12%, the increase in the price is sh.90. Find the new price of the item.  
   3mks
13. The pie chart below shows how a farmer spent his income of sh.90000. Calculate the much he spent on farm tools.  

![Pie Chart]

14. A vendor is paid a commission of 10% for all the goods he sells. One day he sold 50 umbrellas each costing sh.250. How much did the owner of the business get?  

15. The diagram below shows four straight lines. The two triangles so formed are isosceles as indicated. Find the value of angle x.  

16. A cylindrical solid of height 40cm and radius 7cm is cut into two equal parts along the diameter. What is the volume of each part in cm$^3$? (Take $\pi = \frac{22}{7}$)  

17. The masses of nine pupils were taken in kilograms as follows; 

40, 37, 34, 36, 45, 37, 38, 43, and 41 

What is?  

a) The mode of their masses  

b) The median of their masses  

c) The mean of their masses  

18. On the figure below, draw perpendicular bisectors of lines PQ and QR to meet at point X  

What is the length of line QX