1. Evaluate the following using your calculator,

(a) \( \frac{0.743 + 4.2}{0.51^2} \), correct to 2 significant figures

(b) \( \sqrt[3]{6859} + 5^{-5} \), correct to nearest whole number

(c) \( \frac{7\frac{11}{21}}{8\frac{5}{19}} + \left(\frac{3}{4}\right)^2 \)

Answer (a): .................. [2]

Answer (b): .................. [2]

Answer (c): .................. [2]

2. (a) Julie drives 177 kilometres in three hours.
Work out her speed in km/ h.

Answer (a): .................. [1]
(b) Paula buys 5 litres of milk for $8.50. How much does 2 litres of milk cost?

Answer (a): .................... [2]

3. 3 bags of jelly beans and 2 bags of chocolate raisins weigh 670 g. 5 bags of jelly beans and 3 bags of chocolate raisins weigh 1070 g. Find the weight of a bag of jelly beans and the weight of a bag of chocolate raisins.

Answer: 
- Weight of a bag of jelly beans = ................ g
- Weight of a bag of chocolate raisins = ................ g

[3]

4. (a) Express 1155 as a product of prime factors.

Answer (a): .................... [2]

(b) Find the value of the following, expressing your answer in standard form.

\[(3.15 \times 10^{-3}) - (0.36 \times 10^{-3})\]

Answer (b): .................... [2]
5. For the following set of numbers, 

11, 14, 15, 8, 9, 8, 8, 17, 14, 12

find (a) the mode, Answer (a): ...................... [1]

(b) the mean, Answer (b): ...................... [2]

(c) the median. Answer (c): ...................... [2]

6. In the diagram below, SPT and UQRV are parallel lines. PQ = PR and angle QPR = 80°. 

Find the value of:

(a) a Answer (a): a = ......................° [2]

(b) b Answer (b): b = ......................° [2]
7. (a) Calculate the price to be paid for the video camera below.

I'll be yours for a down payment of $100 and 2 years monthly instalments of $155 each.

Answer (a): $ .............. [2]

(b) Find the simple interest on $3 000 for 6 months at 6% per annum.

Answer (b): $ .............. [2]
8. Below shows a regular hexagon.

(a) Find \( a \)

Answer (a): \( a = \ldots \ldots\ldots\ldots\ldots^\circ \) [2]

(b) Find \( b \)

Answer (b): \( b = \ldots \ldots\ldots\ldots\ldots^\circ \) [2]

9. (a) Construct an isosceles triangle \( STU \), where \( SU = TU = 7 \text{ cm} \) and \( ST = 8 \text{ cm} \).

(b) Bisect the line \( ST \) and label the point where the perpendicular bisector cuts \( ST \) as \( V \). [1]
(c) From the construction,
(i) measure $UV$

Answer (c)(i): ............... cm [1]

(ii) find the area of the triangle $STU$

Answer (c)(ii): ............... cm$^2$ [2]

10.  

$20 \%$ discount on ALL items!!!

Usual Price: $2 345$

Purchase MACBOOK AIR now & you are entitled to get 500 GB Transcend External Hard Drive @ $99 only.

$99$

(a) What is the price of the laptop after discount?

Answer (a): $ ...............$ [2]
(b) Rose wants to buy the external hard disk and Kimberly wants to buy the laptop.

How much will it cost if

(i) they combined their purchases in a single receipt,

Answer (b)(i): $ ……………… [1]

(ii) they purchased the items separately?

Answer (b)(ii): $ ……………… [2]
11. A teacher asked 30 Year 7 students to name their favourite colour. The replies are shown in the pictogram below.

<table>
<thead>
<tr>
<th>Colour</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pink</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Purple</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td></td>
</tr>
</tbody>
</table>

represents 2 students

(a) Complete the table below.

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>NUMBER OF STUDENTS</th>
<th>ANGLE REPRESENTED IN PIE CHART</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>5</td>
<td>36°</td>
</tr>
<tr>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purple</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(b) Illustrate the answer in part (i) by drawing a clearly labelled pie chart.

12. Link the measurement to the most appropriate unit.

<table>
<thead>
<tr>
<th>grams</th>
<th>litres</th>
<th>millilitres</th>
</tr>
</thead>
<tbody>
<tr>
<td>kilometres</td>
<td>kilograms</td>
<td>metres</td>
</tr>
<tr>
<td>cubic centimetres</td>
<td>square centimetres</td>
<td>square metres</td>
</tr>
</tbody>
</table>

(a) The height of a house is measured in ................................................

(b) A large jug of water is measured in ..................................................

(c) The area of the school courtyard is measured in ..................................

(d) The distance between Seria and Tutong is measured in ..........................

(e) The mass of an elephant is measured in .............................................

(f) The volume of the box is measured in ................................................

(g) The capacity of a teaspoon is measured in ..........................................

[7]
13. In a school there are 64 teachers, 1024 girls and 1536 boys.

(a) Find the ratio of the number of teachers to the number of pupils.

Answer (a): ........ : ........ [2]

(b) Find the ratio of the number of girls to the total number of pupils.

Answer (b): ........ : ........ [2]

(c) Express the number of teachers as a fraction to the number of boys.

Answer (c): .................. [2]

14. (a) Factorise

\[ 6ac - 6a + 5 - 5c \]

Answer (a): .................. [2]

(b) Solve the equation

\[ 4(1 - p) = 3(p - 2) \]

Answer (b): \( p = ............ [3] \)
(c) A man and his family went for a holiday to Thailand. If the exchange rate was S$8.50 to 100 Bahts, how many Singapore dollars were exchanged for 5000 Thai Bahts?

Answer (c): S$ ............. [2]