Level 2
Revision Sheets

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Answers
1. Measure the lengths of these pencils, in centimetres, and then answer the questions which follow:

(a) What is the **total** of the longest and the shortest lengths?

(b) What is the **difference** between the longest and the shortest lengths?

(c) Write the lengths of the five pencils to the nearest centimetre.

<table>
<thead>
<tr>
<th>(i)</th>
<th>(ii)</th>
<th>(iii)</th>
<th>(iv)</th>
<th>(v)</th>
</tr>
</thead>
</table>

(a) What is the **total** of the longest and the shortest lengths?

(b) What is the **difference** between the longest and the shortest lengths?

(c) Write the lengths of the five pencils to the nearest centimetre.
2. During the school year Mr Wilson’s class made a collection of empty drinks cans to give to charity.

Here are the amounts they collected: January - 367
February - 235
March - 451

Write these amounts to the nearest 10 and to the nearest 100.

3. Mark is starting High School and sets off to buy his P.E. kit. The picture shows what he bought and the cost of the items.

(a) How much did Mark pay for the trousers and the tee shirt altogether?

(b) He paid for these two things with a £20 note. How much change did he receive?

(c) He bought the trainers in another shop and handed over £30 to pay for them. How much change did he get this time?

(d) How much did Mark’s P.E. kit cost him altogether?

4. (a) Serena is organising a party for 100 people and has £2.25 to spend on food for each person. How much is this in total?

(b) She spent £23.40 buying 10 packets of sausage rolls. How much was this for each packet?

5. (a) 6 friends decided to go skating. It cost £5.45 for each person. How much did it cost them altogether?

(b) At the end of the skating they all bought a hot dog. The total cost was £12.90. How much was this for one hot dog?
1. Complete these statements using the facts that you have learned about angles.

(a) An acute angle is one which is less than ……………………………….

(b) An angle of $180^\circ$ is known as a ……………………………………… angle.

(c) An example of the size of an obtuse angle is ………………………………..

(d) An angle which fits into a corner is called a…………………………… and measures ……………………… degrees.

(e) An angle of $234^\circ$ is described as a ……………………………………… angle.

2. Match the angles marked in these diagrams with the kinds of angles you know. Draw an arrow from the object to the kind of angle shown.

3. On this diagram, mark

(a) an OBTUSE angle with (O);

(b) a RIGHT angle with (R).

(c) an ACUTE angle with (A).
4. Saheed was asked to draw an angle of 40° and an angle of 125° in a test. Here is what he drew.

One angle is correct and one is wrong. Put a circle round the ‘cross’ or ‘tick’ to show which is which.

(a) ![Correct Angle]

(b) ![Correct Angle]

Draw the corrected angle for the one that Saheed got wrong. Use the given line as your starting point.

5. Three friends are sharing a Pizza. Catriona is on a diet so wants a small piece, Fiona is hungry and takes a large piece. David has to take what is left.

What is the size of the angle in the piece of pizza that David gets?
1. Use letters to write these stories in a shorter form:

(a) Sara is very hungry so she eats 4 sandwiches then another 2 sandwiches.

(b) There are 8 squares of chocolate. Jamie eats 3 of them.

2. Match up the expression with its simpler form. One has been done for you.

(a) $7c + 2c + 4c$  
(b) $8k + k - 2k$  
(c) $5m - 2m$  
(d) $14x - x$  
(e) $3a + 4d + 2a + 3d$  
(f) $y + 4z + 3y - 2z$  

---

3m

$5a + 7d$

$13c$

$4y + 2z$

$13x$

$7k$
3. A biscuit costs 15p. What prices do these stand for?
   \[ b = 15 \]
   \[
   \begin{array}{lllll}
   (a) & 2b & (b) & 4b & (c) & 10b & (d) & 15b \\
   \end{array}
   \]

4. Each book is 3cm thick. What thickness do these stand for?
   \[
   t = 15
   \]
   \[
   \begin{array}{llll}
   (a) & 3t & (b) & 5t & (c) & 8t & (d) & 20t \\
   \end{array}
   \]

5. Make an equation to help you answer this:
   A race is run in 4 laps. The race is 1600m long. How long is each lap?

6. What is each letter worth?
   \[
   \begin{array}{llll}
   (a) & 4k = 20 & (b) & 6b = 42 & (c) & 2z = 18 & (d) & 10d = 100 \\
   \end{array}
   \]

7. Make an equation to help you answer this:
   Billy is building a wall which has to be 14 layers of brick high. He has built 6 layers. How many layers has he still to build?

8. What is each letter worth?
   \[
   \begin{array}{llll}
   (a) & x + 9 = 14 & (b) & m - 5 = 10 & (c) & 3 + k = 7 & (d) & 10 - n = 7 \\
   \end{array}
   \]
1. A group of pupils were asked what type of film they most liked to watch. The results are shown in this table:

<table>
<thead>
<tr>
<th>Type of Film</th>
<th>Thriller</th>
<th>Comedy</th>
<th>Musical</th>
<th>Romance</th>
<th>Horror</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pupils</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Complete the bar graph below to illustrate the information:

Answer these questions from your graph:

(a) How many pupils preferred Thriller?

(b) What type of film was most popular?

(c) How many more pupils preferred Comedy to Musical?
(d) How many pupils were asked altogether?

(e) List the films in order starting with the least popular.

(f) At the end of term, and as a special treat, the headteacher decided to show a film to pupils in the school. What type of film should he choose to show? **Give a reason for your answer.**

2. Label this pie chart from the information given:

   In the car park,
   \[ \frac{1}{2} \text{ of the cars were red, } \frac{1}{4} \text{ were green and } \frac{1}{4} \text{ were blue.} \]

3. Complete this pie chart to show the information about the kind of sandwiches bought in the school canteen.

<table>
<thead>
<tr>
<th>KIND of SANDWICH</th>
<th>NUMBER SOLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuna</td>
<td>8</td>
</tr>
<tr>
<td>Chicken</td>
<td>5</td>
</tr>
<tr>
<td>Ham</td>
<td>3</td>
</tr>
<tr>
<td>Jam</td>
<td>4</td>
</tr>
</tbody>
</table>
1. Colour \( \frac{4}{15} \) of these squares blue, \( \frac{3}{15} \) of them red and the rest yellow.

How many of the squares are yellow?

2. What fraction of these counters are coloured black?

3. Find:
   (a) \( \frac{1}{4} \) of £12
   (b) \( \frac{1}{7} \) of 28 cm
   (c) \( \frac{1}{9} \) of 18 kg

4. While on safari I saw 100 animals. 24 lions were lions, 17 tigers, 31 elephants and the rest buffalo.

What percentage were:
   (a) lions
   (b) tigers
   (c) elephants
   (d) buffalo

5. Join the percentage to its fraction partner:
   \(50\%\), \(10\%\), \(25\%\), \(\frac{1}{4}\), \(\frac{1}{2}\), \(\frac{1}{10}\)
6. Find:  
(a) \( \frac{2}{3} \) of £30  
(b) \( \frac{5}{6} \) of 24 cm  
(c) \( \frac{3}{8} \) of 72 km

7. Use matching colours (or shadings) to match up the fraction with its equivalent decimal fraction.

8. In the audience at a concert there were 250 people. \( \frac{2}{5} \) of them were male. How many males were there?

9. In the supermarket there is a special offer on bags of oranges. A normal bag contains 8 oranges. How many would you get in the special offer bag?

10. There are 40 pencils in a box. 10% of them are shades of red, 25% shades of blue and the rest are a mixture of other colours. How many pencils are:

    (a) red  
    (b) blue  
    (c) other shades?
1. In the Marina there are eight yachts moored round a speed boat.

2. Answer True (T) or False (F) to each of these statements:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Yacht 2 is to the North of the speed boat.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>(b)</td>
<td>Yacht 1 is to the East of the speed boat.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>(c)</td>
<td>Yacht 5 is to the North West of the speed boat.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>(d)</td>
<td>Yacht 6 is to the South East of the speed boat.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>(e)</td>
<td>Yacht 7 lies to the West of yacht 6.</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>(f)</td>
<td>Yacht 7 lies to the South West of yacht 5.</td>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

2. Fill in the blanks:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Yacht 8 lies to the ______________ of the speed boat.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (b) | The yachts which are South of yacht 5 are __________ and _____________.
| (c) | The speed boat lies to the _________________ of yacht 5. |
| (d) | If the speed boat drifts to the East it will crash into yacht ____________.
3. In a competition there are eight prizes to be won and each one is hidden round a circle at each of the main compass points.

Use these clues to put the prizes in the correct places: The winner is facing North to begin with.

(a) The car is in the box to the North.

(b) The holiday is on a bearing of 225° from North and the house in the diagonally opposite direction.

(c) Turn 270° clockwise from the house to find the rubber duck.

(d) The DVD player is 90° clockwise from East.

(e) The camera is 135° anticlockwise from the house.

(f) Turn 225° clockwise from the camera to find the laptop.
1. Read off the temperatures shown on each of these thermometers:
   (a) 
   (b) 
   (c) 

2. Here are the typical temperatures at midday in winter for various countries:
   
   (a) Which country is the coldest?
   (b) Which is the warmest?
   (c) What is the difference in temperature between these two places?

3. Work out the answer to the following:
   (a) $3 + 5$
   (b) $3 + (-7)$
   (c) $4 - 2$
   (d) $4 - (-2)$
4. The table below shows how the temperature changes throughout the day in Anytown:

<table>
<thead>
<tr>
<th>Time</th>
<th>0600</th>
<th>0800</th>
<th>1000</th>
<th>1200</th>
<th>1400</th>
<th>1600</th>
<th>1800</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-4°</td>
<td>0°</td>
<td>3°</td>
<td>7°</td>
<td>5°</td>
<td>4°</td>
<td>0°</td>
<td>-3°</td>
</tr>
</tbody>
</table>

Answer these questions from the information given in the table:

(a) By how many degrees did the temperature rise between 0600 and 1000?

(b) What happened between 1200 and 1600?

(c) Between which two times did the temperature fall by 2 degrees?

(d) Between which two times did the temperature rise by 11 degrees?

(e) Describe what happened to the temperature throughout the day.

(f) For how many hours was the temperature on or above freezing?

5. In these Number Pyramids the number in each box is the sum of the two below it.

Complete each pyramid.

(a)  
   4  
   7 -3 -5  

(b)  
   6  
   -2  
   -1  
   3
1. Answer True (T) or False (F) for each of these statements about this circle:

(a) The diameter is 3cm: T F
(b) The radius is 3cm: T F
(c) The circumference is about 18cm: T F
(d) The circumference is like the perimeter of a circle: T F

2. Draw a circle of diameter 6 cm using the point C as the centre.

3. Using your compasses set at 1.5cm draw this circle pattern and colour it in.
4. Reminder: the circumference of a circle $\approx 3 \times$ the diameter.

Measure the diameter of these circles and work out the circumference.

(a)  

(b)

5. It is going to be Sara’s birthday soon and her Mum has made a cake. It measures 12cm in diameter.

Her Mum has bought a frill to go round it which measures 35cm.

Does she have enough to go round the cake?

Give a reason for your answer.

6. (a) A race has to be run on a circular track of diameter 140m. The race is 400m.

Is the track long enough? Give a reason.

(b) A 5km race will also take place. How many complete laps of the track will have to be run in order to run at least 5km? [1 km = 1000 m]

7. A bracelet measures 18 cm and is fastened to make a circle. It just fits round Joanna’s wrist.

What is the diameter of her wrist?
1. Complete these sentences about these different types of triangle:

(a) A triangle which has 2 equal sides and 2 equal angles is called an
   ______________________________ triangle.

(b) This triangle is called a ___________________ - angled
   ______________________________ triangle.

(c) When a triangle has 3 equal sides and 3 equal angles it is called an
   ______________________________ triangle.

2. Extend this pattern of isosceles triangles until you have 15 triangles altogether.

3. Find the shaded area of these flags:

(a)  

(b)
4. What area of card would be needed to make the sails on this toy yacht?

![Diagram of a sailboat with dimensions 20cm, 25cm, 30cm, and 10cm]

5. Write in the size of the missing angle in these triangles:
   (a) 
   ![Diagram of a triangle with angles 55° and 55°]
   What kind of triangle is this?

   (b) 
   ![Diagram of a triangle with angle 30°]
   What kind of triangle is this?

6. Susanne was making earrings by bending wire into equilateral triangles of side 4 cm.

   ![Diagram of two equilateral triangles]
   How much wire will she need altogether?

7. A farmer is building a pen for his sheep. Here is a drawing of it:

   ![Drawing of a pen with dimensions 8m, 10m, 13m, and 10m]
   He has bought 30m of fencing.
   Does he have enough to build his pen?
   **Give a reason for your answer.**
1. The grid below shows the position of various places and features on an island:

Answer the following questions from the grid shown above:

(a) What would you find at the point (7, 4)?

(b) What would you find at (13, 6)?

(c) Write down the coordinates of the position of the Treasure Chest.

(d) What are the coordinates of the shipwreck?

(e) A pirate ship lands at the point (15, 8). Mark this point on the grid using a ‘X’.
(f) If each box on the grid represents 20m, how far is it from the pirate ship to the treasure chest?

(g) From the pirate’s cave one of the pirates wishes to get to the shelter. Write down the distances and directions in which he should travel to reach the shelter. (He can only walk along lines on the grid.)

2. Plot these sets of points on the grid and answer the questions which follow:

(a) A(2, 3), B(5, 3), C(5, 6) and D(2, 6). What kind of shape is ABCD?

(b) W(10, 8), X(16, 8), Y(16, 11) – Shape WXYZ is a rectangle. Find the point Z and write down its coordinates.

(c) R(2, 10), S(6, 10), T(8, 13) and U(4, 13). What kind of shape is RSTU?

(d) D(10, 2), E(13, 0), F(16, 2) – Shape DEFG is a rhombus. Find the point G and write down its coordinates.
1. Match the labels with the objects:

(a)  
(b)  
(c)  
(d)  

35mm  175cm  30cm  5m

2. mm  cm  m  km

Which of these units of length would you use to measure the following distances?

(a) The height of an elephant.

(b) The distance run in the London Marathon.

(c) The width of a one pence coin.

(d) The length of your foot.

3. Write down an example of something you would measure using:

(a) millimetres  (b) centimetres  (c) metres  (d) kilometres

Name: 
Class: 
Mark: 

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4. Change:

(a) 7m to cm  
(b) 5.7m to cm  
(c) 600cm to m  
(d) 654cm to m  

(e) 6.7km to m  
(f) 7m to mm  
(g) 450mm to cm  
(h) 6000m to km

5. Karen and David were on a driving holiday. They were driving a total distance of 645km and had already driven 234km. How far did they still have to go?

6. Harry was playing a round of golf. His first drive was 134m and his second shot was 74m. How far is this in total?

7. Peter has been practicing for the forthcoming swimming gala. One day he swam the following distances:

250m  345m  680m  126m

What was the total distance he swam (in metres)?

Write this distance in kilometers.

8. A snail is crawling along a path. The distances it moved in 5 hours were:

34mm  67mm  22mm  7mm  51mm

What was the total distance it crawled (in millimeters)?

Write this distance in centimeters.
Reminders: The PERIMETER of a shape is the distance round it.

1. Answer these questions about the 5 shapes shown above:

(a) Which shape has the smallest PERIMETER?

(b) Which shape has the largest PERIMETER?

(c) Which TWO shapes have the same PERIMETER?

(d) What is the total of ALL the PERIMETERS?

(e) What is the difference between the largest and smallest PERIMETERS?
Reminder: The AREA of a shape is the surface covered by it. Area is always measured in SQUARE UNITS.

2. Which of these shapes has the largest area? Each box on the grid is 1 cm².

![Shapes A, B, C, D](image)

The shape with the largest area is shape [A, B, C, D].

3. Use these grids to draw 3 shapes which all have the same area. Try to make your shapes interesting. Write down the area of your shapes.
1. Match the label with the object:

(a) 200cm³  (b) 1 litre  (c) 1m³  (d) 125mls

2. Circle the correct volume in each of these:

(a) The baby drank 30 mls / 30 litres of milk at tea time.
(b) The piece of cheese had a volume of 200 cm³ / 200 mm³.
(c) The bottle held 2 mls / 2 litres of juice.
(d) The room had a volume of 300 m³ / 300 cm³.

3. Here is a cube of sugar beside its box. How many cubes do you think could be fitted into the large box?

4. Put these shapes in order of volume starting with the smallest.

Write your answer here:
5. Change to litres:  
(a) 3000 mls  
(b) 7600 mls

6. Change to millilitres:  
(a) 6 litres  
(b) 8.9 litres

7. Shakeel made a punch using 750 mls lemonade, 500 mls orange juice, 500 mls pineapple juice and 250 mls grapefruit juice.

(a) How many millilitres is this altogether? 
(b) How many \( \frac{1}{4} \) litre glasses can be filled from this?

8. Daisy the cow gave 10 litres of milk yesterday. 
How many \( \frac{1}{2} \) litre cartons can be filled from the 10 litres?

9. My fish tank holds 25 litres. It can be filled using 10 pots which all hold the same amount.

(a) How many litres can be put in each pot? 
(b) How many millilitres is this?

10. The Bains were decorating their sitting room and needed 3 litres of paint. They set off to the DIY store and notice that paint is sold in the following pots:

Write down THREE different ways in which the Bains could buy EXACTLY 3 litres of paint.
1. Mary, Jean and Margaret joined a Slimming Club. Their weights at the beginning are shown on the scales:

Mary | Jean | Margaret
--- | --- | ---
90 kg | 78 kg | 100 kg

Fill in the table to show how heavy they were:

2. (a) How much heavier than Jean was Margaret?
(b) What was the total weight of all three ladies?

3. After 6 weeks their weights were:

<table>
<thead>
<tr>
<th>Name</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary</td>
<td>90 kg</td>
</tr>
<tr>
<td>Jean</td>
<td>78 kg</td>
</tr>
<tr>
<td>Margaret</td>
<td>100 kg</td>
</tr>
</tbody>
</table>

What had happened?

4. Change to grams:
   (a) 4 kg
   (b) 2.7 kg

5. Change to kilograms:
   (a) 2000 g
   (b) 4500 g
6. Match the labels with the objects:

![Images of 35g, 90kg, 6000kg, 7.5kg]

7. Mrs Anderson was making scones and used this recipe:

- 200 g flour
- 150 g sugar
- 75 g butter
- 25 g currants
- 2 eggs (each weighing 30g)
- some milk to mix

If each scone that she made weighed 30g, how many scones did she get from the batch?

8. Say whether each of these statements is TRUE (T) or FALSE (F):

(a) Brian told everyone his baby brother weighed 3.5 g when he was born.  
(b) The small bag of feathers weighed 6 kg.  
(c) The weight of the box of strawberries was 200g.  
(d) The bag of coal weighed 30 kg.

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. In a box there were 10 chocolates each weighing 35 g.

The box weighed 50g.

What was the total weight of the box and the chocolates?

10. A baby was 3.5 kg when she was born. By the time she was 12 weeks old she had doubled her weight and in the next 6 weeks had put on another 4.2 kg.

What weight was she after the 18 weeks?
1. Say whether each of these statements is TRUE (T) or FALSE (F):

(a) If the cost of an ice-cream is 75p, 3 ice-creams will be 25p.  
(b) The more cars parked in a line, the shorter it will be.  
(c) If 3 burgers cost £2.40, 6 burgers will cost £4.80.  
(d) The more hours you work, the more you get paid.  
(e) The cheaper a cake, the more you can buy for £1.

2. A glass of juice cost 80p. How much would it be for:

(a) 2 glasses  
(b) 6 glasses  
(c) 9 glasses  
(d) 10 glasses?

3. In the supermarket 3 cartons of pop corn cost £1.80. How much is this for each one?

4. At the garden centre 4 bags of compost can be bought for £11.

Heather needs 12 bags. How much will they cost her?

Jason needs 6 bags. How much will he have to pay?
5. 6 eggs weigh 120g. How much would:

(a) 2 eggs  (b) 12 eggs  (c) 5 eggs  (d) 10 eggs weigh?

6. Tony and Jenna were helping their Mum with the housework to get some extra pocket money.

Jenna did two-thirds of the work. Mum gave them £6.

How much should Jenna get?

7. Sean is a delivery driver and gets paid £5 for every 10km he travels.

How much does Sean get paid if he drives:

(a) 20 km  (b) 80 km  (c) 120 km  (d) 150 km

(e) One day Sean earned £50.

How far did he drive that day?

(f) The next day he earned £35. How many km less did he travel than the day before?

8. In the sweet shop it costs £1.20 for a pack of 4 bars of chocolate.

If you wanted to buy them separately they would cost 35p each.

How much would you save by buying the special pack?

9. Which is the best buy?

Six bottles of coke for £3.50 or 3 bottles for £1.70.

GIVE A REASON FOR YOUR ANSWER
1. Write down the name of the 3-dimensional shape described in each of these:

   (a) This solid has 6 faces which are all exactly the same shape:
       
   (b) This solid shape is often bought full of ice-cream:
       
   (c) These solids can be found in Egypt:
       
   (d) This solid is made up from 2 triangles and 3 rectangles:
       
   (e) You might use these solids to build a wall:

2. Identify the 3-dimensional shape in each of these pictures:

   (a)  
   (b)  
   (c)  
   (d)  

3. Say which 3-D shape can be made from each set of shapes:

   (a) 
   
   (b) 

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4. Complete the table for the 3D shapes shown here:

(a) 
(b) 
(c) 
(d) 

<table>
<thead>
<tr>
<th>Name of Shape</th>
<th>Number of Faces</th>
<th>Number of Edges</th>
<th>Number of Vertices</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. From these three drawings choose the one which is the net of a cube:

(a) 
(b) 

Colour (or shade) it so that opposite faces are the same.

6. Draw the net of this shape on the grid. It has been started for you.

7. Shona wants to make decorations using straw models of the shape above and has 1 metre of straw.

How many decorations will she be able to make?
1. Stevie and his three friends are going on an activity holiday. Here is the timetable that they will follow on the first day which was 23rd July 2004.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00 am</td>
<td>Enrolment and allocation of rooms.</td>
</tr>
<tr>
<td>9.30</td>
<td>Meet your fellow team members</td>
</tr>
<tr>
<td>9.45</td>
<td>Safety Lecture</td>
</tr>
<tr>
<td>11.00</td>
<td>Biscuits and Juice break</td>
</tr>
<tr>
<td>11.20</td>
<td>Swimming</td>
</tr>
<tr>
<td>12.30 pm</td>
<td>Lunch</td>
</tr>
<tr>
<td>1.30</td>
<td>Ten-pin Bowling</td>
</tr>
<tr>
<td>3.45</td>
<td>Afternoon Break</td>
</tr>
<tr>
<td>4.10</td>
<td>Preparing for Tomorrow</td>
</tr>
<tr>
<td>4.45</td>
<td>Tea</td>
</tr>
<tr>
<td>5.30</td>
<td>Quiz</td>
</tr>
<tr>
<td>7.00</td>
<td>Disco</td>
</tr>
<tr>
<td>9.30</td>
<td>Supper</td>
</tr>
<tr>
<td>10.00</td>
<td>Bed</td>
</tr>
</tbody>
</table>

Use the above timetable to answer these questions:

1. What activity was beginning at:  
   (a) 9.30 am  
   (b) 7.00 pm

2. What activity was taking place at:  
   (a) 11.30 am  
   (b) 7.35 pm
3. Write down, in words, the starting times of:
   (a) The safety lecture. 
   (b) Supper.

4. How many minutes did these activities last?
   (a) Biscuits and Juice break. 
   (b) Supper. 

5. Write the date of the second day in two different ways.

6. Write the times of these activities in 24 hour time.
   (a) Swimming. 
   (b) Quiz. 

7. How many hours and minutes do each of these activities last?
   (a) Safety Lecture. 
   (b) Disco. 

8. How many hours in total does the day last from beginning until bedtime?

9. (a) How many hours are used up for breaks, lunchtime, tea and supper in total?
   (b) By subtracting this answer from the answer in Question 8, calculate how long is spent in activities during the day?
1. Can these shapes be used to make a tiling? Circle Yes or No for each one.

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
<th>(c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes/No</td>
<td>Yes/No</td>
<td>Yes/No</td>
<td></td>
</tr>
</tbody>
</table>

2. Extend these tilings so that there are about 12 tiles in each one. Make sure you use a ruler and make your diagrams neat and tidy.
3. Each of these shapes has 1 line of symmetry – draw it in on the diagram.

(a) (b) (c) (d)

4. Complete each shape so that the dotted line is a line of symmetry.

(a) (b) (c) (d)

5. Each of these shapes has more than one line of symmetry. Draw them all in and write down how many lines of symmetry each shape has.

(a) (b) (c)
1. The number of burgers required was ‘5 more than the number of people at the barbeque’.

How many burgers would be needed for:
(a) 8 people  
(b) 20 people

2. The number of pieces of rope required is ‘1 less than the number of posts’.

How many pieces of rope would be needed for:
(a) 10 posts  
(b) 34 posts

3. At the local car boot sale, Julie was selling soft toys at £2 each.

She worked out how much money she collected using the rule:

‘Multiply the number of toys sold by 2’

How much did she get for selling:
(a) 6 toys  
(b) 20 toys

If Julie went home with £60, how many toys did she actually sell?

4. For party, Margaret allows ‘8 nibbles per person plus an extra 20’ for hungry guests.

How many nibbles would she need if the number of people at the party was:
(a) 6  
(b) 15

5. The number of people that can be seated in a restaurant is found using the rule: ‘number of tables × 4 and take away 2’.

How many people can be seated if there are:
(a) 6 tables  
(b) 10 tables?
6. Complete this table to show the number of tapes and the length of time that can be recorded

<table>
<thead>
<tr>
<th>Number of Tapes</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>10</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Hours</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) Write down a rule for finding the number of hours recording time when you know the number of tapes.

(c) Fiona has 6 tapes. How many hours can she record?

(d) Jasmine wants to record 24 hours of a TV series. How many tapes will he need to buy.

7. These patterns are made up from a number of rhombuses.

(a) Complete the table to show the number of rhombuses used in each.

<table>
<thead>
<tr>
<th>Pattern Number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Rhombuses</td>
<td>4</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(b) How many rhombuses would be needed for the 7th pattern?

(c) How many rhombuses would be in the 10th pattern?

(d) Write down a rule for finding the number of rhombuses in any pattern number.

(e) What pattern number would have 34 rhombuses in it?
1. Place these events on the Probability line above.

A. At a T-junction a car will turn Left.
B. When a die is thrown it will show a 6.
C. From a bunch of yellow balloons a red one will burst first.
D. Your Maths teacher will give you homework.
E. From a packet of 6 red and 3 blue counters a blue one will be picked first.
F. When a card is picked from a pack of cards it will be more than 7.
G. Christmas day will be on the 25th December this year.

2. (a) Write a list of the possible numbers when a die is thrown.

(b) What are the four suites in a pack of cards?

(c) What are the possibilities when a balloon is chosen from this bunch?
3. A square has to be picked from one of these sets. Which set gives the best chance?

```
Group A

Group B
```

4. Which egg is more likely to be chosen from this group?

```
Stripes or dots?
```

5. Amy chooses a letter from the word: SCOTLAND

(a) How many letters are there in her word?

(b) How many vowels are there in it?

(c) What are the chances that Amy’s chosen letter will be a vowel?

6. In a game at the fair you win if you throw a dart and it lands on an Ace.

```
(a) Is this a fair game?

(b) Why do you say this?

(c) Why do the fair owners do this?

(d) What are the chances that you will win a pr
WORKING WITH NUMBERS

1. (i) 5·4  (ii) 7·3  (iii) 8·3  (iv) 3·9  (v) 14·8
   (a) 18·7  (b) 10·9
   (c)  
   (i) 5  (ii) 7  (iii) 8  (iv) 4  (v) 15

2.  

<table>
<thead>
<tr>
<th>Nearest 10</th>
<th>Nearest 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>370</td>
<td>400</td>
</tr>
<tr>
<td>240</td>
<td>200</td>
</tr>
<tr>
<td>450</td>
<td>500</td>
</tr>
</tbody>
</table>

3. (a) £19·15  (b) 85p  (c) £8·01  (d) £41·14
4. (a) £225  (b) £2·34
5. (a) £32·70  (b) £2·15

WORKING WITH ANGLES

1. (a) 90°  (b) straight  (c) any obtuse angle size
   (d) right and 90°  (e) reflex
2. Arrows drawn.
3. Three angles marked on diagram.
4. (a) correct  (b) wrong
5. 115°

LETTERS AND NUMBERS

1. (a) 4s + 2s = 6s  (b) 8s – 3s = 5s
2. Table of links.
3. (a) 30p  (b) 60p  (c) 150p (£1·50)  (d) 225p (£2·25)
4. (a) 9cm  (b) 15 cm  (c) 24 cm  (d) 60 cm
5. 4l = 1600, l = 400
6. (a) 5  (b) 7  (c) 9  (d) 10
7. 14 – l = 6, l = 8
8. (a) 5  (b) 15  (c) 4  (d) 3

STATISTICS

1. Bar chart  (a) 5  (b) Comedy  (c) 5  (d) 22
   (e) Musical, Romance, Thriller/Horror, Comedy  (f) Comedy – most popular
2. Pie chart labelled
3. Pie chart drawn.
FRACTIONS/PERCENTAGES/DECIMALS

1. Squares coloured 4 blue, 3 red. 8 squares are yellow.
2. \[ \frac{5}{12} \]
3. (a) £3 (b) 4 cm (c) 2 kg
4. (a) 24% (b) 17% (c) 31% (d) 28%
5. equivalents fractions and percentages joined by arrows.
6. (a) £20 (b) 20 cm (c) 27 km
7. Equivalent fractions/decimals shaded in the same way.
8. 100 males
9. 12 oranges
10. (a) 4 (b) 10 (c) 26

DISTANCES and DIRECTIONS

1. (a) T (b) F (c) F (d) T (e) T (f) T
2. (a) North-west (b) 3 and 6 (c) South-east (d) 3

TEMPERATURE

1. (a) 0° (b) 25° (c) 52°
2. (a) Canada (b) UK (c) 11°C
3. (a) 8 (b) -4 (c) 2 (d) 6
4. (a) 7° (b) fell by 3° (c) 1200 & 1400 (d) 0600 & 1200
   (e) Rose and then fell (f) 10 hours
5. (a)
CIRCLES
1. (a) T (b) F (c) F (d) T
2. Circle diameter 6cm drawn
3. Circle pattern drawn
4. (a) 12cm (b) 7.5cm
5. No; needs 36cm at least
6. (a) Yes; the track as about 420m (b) 12 laps
7. About 6cm

TRIANGLES
1. (a) Isosceles (b) Right-angled, isosceles (c) Equilateral
2. Tiling pattern extended
3. (a) 120 cm² (b) 48 cm²
4. 400 cm²
5. (a) 70º; isosceles (b) 60º; right-angled
6. 24cm
7. No; he needs 31m

COORDINATES
1. (a) Palm Tree (b) Mooring (c) (8, 8) (d) (14, 9)
   (e) Point marked on grid. (f) 140m
   (g) 40m North then 100m East (or equi.)
2. (a) Points plotted; Square (b) (10, 11)
   (c) Points plotted; Parallelogram (d) (13, 4)

METRIC LENGTH
1. Arrows drawn from: man to 175cm; ruler to 30cm; lorry to 5m; paper clip to 35mm.
2. (a) m (b) km (c) mm (d) cm
3. (a), (b), (c) and (d) – pupil’s own ideas.
4. (a) 700 (b) 570 (c) 6 (d) 6.54
   (e) 6700 (f) 7000 (g) 45 (h) 6
5. 411km
6. 208m
7. 1401; 1.401
8. 181mm; 18.1cm

PERIMETER and AREA
1. (a) Square (b) Octagon (c) Pentagon/Hexagon (d) 169m
   (e) 20m
2. D
3. Pupil’s drawings – all should have the same area – none specified.
VOLUME

1. Arrows drawn from: parcel to 1m³; cheese to 200cm³; wine to 125mls; milk to 1 litre.
2. (a) 30mls  (b) 200cm³  (c) 2 litres  (d) 300m³
3. About 280 – accept any reasonable answer.
4. B, C, A
5. (a) 3  (b) 7·6
6. (a) 6000  (b) 8900
7. (a) 2000  (b) 8
8. 20
9. (a) 2·5  (b) 2500
10. Any combination adding up to exactly 3000 mls.

METRIC WEIGHT

1. Mary:100kgs; Jean:75kgs; Margaret;110kg.
2. (a) 35kg  (b) 285kg
3. Margaret and Mary lost weight but Jean gained weight.
4. (a) 4000  (b) 2700
5. (a) 2  (b) 4·5
6. Arrows drawn from: man to 90kg; chicken to 7·5kg; leaf to 35g; bus to 6000kg.
7. 17 scones
8. (a) F  (b) F  (c) T  (d) T
9. 400g
10. 11·2kg

PROPORTION

1. (a) F  (b) F  (c) T  (d) T  (e) T
2. (a) £1·60  (b) £4·80  (c) £7·20  (d) £8
3. 60p
4. £33; £16-50
5. (a) 40g  (b) 240g  (c) 100g  (d) 200g
6. £4
7. (a) £10  (b) £40  (c) £60  (d) £75  (e) 100km  (f) 30km
8. 20p
9. 3 for £1·70. 6 would cost only £3-40 this way.

3D SHAPES

1. (a) Cube  (b) Cone  (c) Pyramids  (d) Triangular Prism  (e) Cuboids
2. (a) Sphere  (b) Cylinder  (c) Cone  (d) Cuboid
3. (a) Cylinder  (b) Cuboid
4. | Name of Shape   | Number of Faces | Number of Edges | Number of Vertices |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Cube</td>
<td>6</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>(b) Cylinder</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>(c) Triangular Prism</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>(d) Cone</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
5. (b) will make a cube; coloured with opposite faces the same.
6. Net completed
7. 3 decorations can be made
TIME and TIMETABLES

1. (a) Meet team members  (b) Disco
2. (a) Swimming        (b) Disco
3. (a) Quarter to ten  (b) Half past nine
4. (a) 20 minutes      (b) 30 minutes
5. 24th July 2004; 14/7/04 (or equi)
6. (a) 11:20 am        (b) 5:30 pm
7. (a) 1 hour 15 minutes (b) 1 hour 30 minutes
8. 13 hours
9. (a) 3 hours         (b) 10 hours

TILING and SYMMETRY

1. (a) Yes       (b) Yes       (c) No
2. Tilings extended
3. One line of symmetry drawn on each diagram.
4. Shapes completed.
5. (a) 4       (b) 2        (c) 3

USING and FINDING RULES

1. (a) 13       (b) 25
2. (a) 9        (b) 33
3. (a) £12      (b) £40
4. (a) 68       (b) 140
5. (a) 22       (b) 38
6. (a) 12, 15, 30, 45 (b) Number of tapes × 3 (c) 18  (d) 8
7. (a) 10, 13, 16, 19 (b) 22 (c) 28  (d) multiply by 3 and add 1  (e) 11

PROBABILITY

1.  

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>B</th>
<th>E</th>
<th>A</th>
<th>F</th>
<th>D</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impossible</td>
<td>Unlikely</td>
<td>Less likely</td>
<td>Evens</td>
<td>More likely</td>
<td>Very likely</td>
<td>Certain</td>
</tr>
</tbody>
</table>

2. (a) 1, 2, 3, 4, 5, 6. (b) Hearts, Clubs, Diamonds, Spades.
   (c) Red, Yellow, Green.
3. Group A
4. Stripes
5. (a) 8       (b) 2      (c) \(\frac{2}{8}\) or \(\frac{1}{4}\)
6. (a) No      (b) More blanks (c) Make money   (d) \(\frac{4}{16}\) or \(\frac{1}{4}\)