1) The planet Jupiter has 69 moons. The closest moon is called Io and is 421,800 km from Jupiter. Write this distance in words.

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2) Callisto is another moon of Jupiter and its maximum distance from Jupiter as it orbits is 1,882,700 km. Write this distance in words.

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........................................................................................................................................
........................................................................................................................................

3) 

\[\text{Museum} \]

\[\text{entrance fee} \]

\[\£1.20 \text{ per person} \]

a) 240 people paid to go to the museum on Monday. How much money is that altogether?

........................................................................................................................................
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4) The museum took a total of £600 in entrance fees one Friday. How many people paid to visit the museum that Friday?

5) Look at the New York Subway train timetable below and then answer the questions on the next page.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brooklyn Bridge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
a) I need to catch a train from Bleecker Street to ensure I arrive at Pelham Bay Park before 13:30. What time does the latest train I could catch leave Bleecker Street?

b) How many minutes does the train’s journey from Brooklyn Bridge to 125th Street take?

c) Write 14:00 using am or pm time.

6) I live 0.6 miles from Goodison Park football stadium. There are 1760 yards in a mile.

a) How many yards away from Goodison Park do I live?

b) I live 4,400 yards from Anfield football stadium. How many miles from Anfield football stadium do I live?
c) A kilometre is five eighths of a mile. How many kilometres away from Anfield do I live?

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7) My clock shows the following time. Both hours and minutes are multiples of 3, as shown.

![Clock showing 09:15](image)

a) Write a **different time** when the hours and minutes are both multiples of 3.

...............................................................

b) Later, my clock shows

![Clock showing 11:58](image)

c) How many minutes will it be before the next time the hours and minutes are both multiples of 6?
8) Solve the following:

a) I think of a number, multiply it by 17 and then subtract 19. The result is 66. What was the number I first thought of?

b) What number must $k$ be to make this mathematical statement true?

$$10 \times k + 23 = 4 \times k + 35$$

9) Look at these angles:

One of the angles measures 120°
Write down which angle it must be.
10) Write the next two numbers for each of the following sequences.

a) 1 7 13 20 27 ... ...

b) 7 14 28 56 112 ... ...

c) 1 1.75 2.5 3.25 4 ... ...

d) 500 100 20 4 0.8 ... ...

11) Here is the 65 times table:

<table>
<thead>
<tr>
<th></th>
<th>× 65 =</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>130</td>
</tr>
<tr>
<td>3</td>
<td>195</td>
</tr>
<tr>
<td>4</td>
<td>260</td>
</tr>
<tr>
<td>5</td>
<td>325</td>
</tr>
<tr>
<td>6</td>
<td>390</td>
</tr>
<tr>
<td>7</td>
<td>455</td>
</tr>
<tr>
<td>8</td>
<td>520</td>
</tr>
<tr>
<td>9</td>
<td>585</td>
</tr>
<tr>
<td>10</td>
<td>650</td>
</tr>
</tbody>
</table>
Use the table to answer the following questions

a) $12 \times 65 = \ldots \ldots \ldots\ldots\ldots\ldots\ldots\ldots$  

b) $20 \times 65 = \ldots \ldots \ldots\ldots\ldots\ldots\ldots\ldots$

c) Use values in the table to work out $4.55 \div 6.5$

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12) Look at the shape on the grid below:
a) Circle **two** words from the list that are **both** names of the shape.

   Quadrilateral  Trapezium  Pentagon  Kite  Parallelogram

b) Write down the co-ordinates of point B……………………………

c) Now look at the diagram which shows the shape **reflected**. Put a cross on the grid to show where B is reflected to.
d) Now look at the diagram which shows the shape rotated. Put a cross on the grid to show where B is rotated to.
11) In a survey, some football fans were asked “Who was England’s best player at the World Cup?” The results are shown in the chart below (with the club the player plays for in brackets).

Who was England’s best player in the World Cup?

<table>
<thead>
<tr>
<th>Player</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henderson</td>
<td>26</td>
</tr>
<tr>
<td>Pickford</td>
<td>22</td>
</tr>
<tr>
<td>Sterling</td>
<td>8</td>
</tr>
<tr>
<td>Kane</td>
<td>6</td>
</tr>
<tr>
<td>Trippier</td>
<td>4</td>
</tr>
<tr>
<td>Maguire</td>
<td>8</td>
</tr>
<tr>
<td>Stones</td>
<td>2</td>
</tr>
</tbody>
</table>

a) How many fans said Maguire?

b) In total, how many fans were questioned in the survey?

c) Which player is the mode?
d) The fans who completed the survey were all pupils at St Anselm’s College. Do you think this is a fair way to do the survey? Explain your answer.

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12)

a) What fraction of the shape below is shaded? Give your answer as simply as possible.

![Diagram of a shape divided into squares with some shaded]

…………………………………………………………………………………………
b) What **percentage** of the shape below is shaded?

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c) Which of the two shapes below has a greater percentage shaded? Explain how you know.
13) Round each of the following measurements to the accuracy given in brackets.

a) 76.49 cm (nearest cm)

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b) 127569 km (nearest one thousand km)

.................................................................

c) 1.073 cm (nearest mm)

.................................................................

14) Write the following numbers in order of size, starting with the smallest.

0.2 \(\frac{3}{10}\) 0.21 \(\frac{37}{100}\) 0.36

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15) I am thinking of three different, positive, whole numbers.

The mean of my three numbers is 8.
The median of my three numbers is 9.

Write down one possible set of three numbers that my numbers could be.

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16) I have a bag containing red, blue and white counters. A counter is chosen at random from the bag. There are 24 red counters in the bag and the probability of choosing a red counter is $\frac{1}{6}$. The bag contains 15 blue counters. How many white counters are there in the bag?

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17) Which of the following distances is the most likely height of the Eiffel Tower in Paris? Circle your answer.

a) 1250 m
b) 305 feet
c) 300 metres
d) 36,000 inches

18) On a farm 80 sheep gave birth. 30% of the sheep gave birth to two lambs. The rest of the sheep gave birth to one lamb. In total, how many lambs were born?

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19) Look at the list of numbers below.

6  10  17  30  52  81  96

a) Which of the numbers has an odd number of factors?
(Hint: there is only one)

b) Give another example of a number with an odd number of factors.

c) These numbers have a special name. What is it?

d) Which of the numbers is a prime number?

e) Using each of the first four numbers in the list once (6, 10, 17, 30) and any of the four operations (+ − ÷ ×) show how you can make 33.
(You must use all the four numbers and use each number only once. You can use any of the + − × ÷ as many times as you like and you do not need to use all of them).
20) In September 2015 Mary was seven years older than Anna and Rebecca was three years older than Mary.

   In September 2018 Rebecca’s age is three times Anna’s age.

   How old were the three girls in September 2015?