AQA Foundation Practice Paper

NOT ORDERED BY DIFFICULTY

240 marks’ worth of questions that **COULD** come up in papers 2 and 3. Do not revise these topics exclusively – this is not a predicted paper.

**Materials**
- For this paper you must have:
  - A calculator
  - Mathematical instruments

**Instructions:**
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

**Information:**
- The marks for questions are shown in brackets.

**Advice:**
- In all calculations, show clearly how you work out your answer.
Q1. 15 rulers cost £3
How much do 40 rulers cost?

______________________________________________________________________________
______________________________________________________________________________

Answer £ .................................................................

(Total 2 marks)

Q2. (a) Rob is going to drive 130 miles from Hull to Liverpool.
There are road works for 25 miles of the journey.
He assumes his average speed will be
50 mph where there are road works
70 mph for the rest of the journey.
Using his assumptions, work out his journey time.
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________

(4)

(b) Rob’s assumptions about his average speeds are too high.
How does this affect his journey time?

______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________

(1)

(Total 5 marks)

Q3. 82 children visit a sports centre.
50 of the children swim.
At least one adult is needed for every 12 children who swim.
The other 32 children dance.
At least one adult is needed for every 15 children who dance
Work out the minimum number of adults needed for the 82 children.
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Answer _________________________________________

(Total 4 marks)
Q4. In a quiz, teams are asked 20 questions. Teams score:
- 3 points for a correct answer
- 0 points for questions not attempted
- −2 points for an incorrect answer.

(a) Team A has these results.

<table>
<thead>
<tr>
<th>Correct</th>
<th>Not attempted</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Work out the total number of points Team A scores.

______________________________________________________________________________
______________________________________________________________________________
Answer _________________________________________ (2)

(b) Team B answers 16 out of 20 questions correctly.
Work out the percentage of questions Team B answers correctly.

______________________________________________________________________________
______________________________________________________________________________
Answer _______________________________________ % (2)

(c) After 17 questions, Team C has 35 points.
After 20 questions, Team C has 34 points.
How many of the last three questions are answered correctly, not attempted or answered incorrectly?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Correct _______________________________________
Not attempted _______________________________________
Incorrect _______________________________________(2)
(Total 6 marks)

Q5. A bag contains red counters and blue counters in the ratio 3 : 5.
What fraction of the counters are red?
Circle your answer.

\[
\begin{array}{cccc}
1 & 3 & 3 & 5 \\
3 & 5 & 8 & 8 \\
\end{array}
\]
(Total 1 mark)
Q6. In a school, 60% of the students are girls.
50% of the girls walk to school.
20% of the boys walk to school.
What percentage of the students walk to school?

Answer _______________________________________
(Total 3 marks)

Q7. The ratio of $x : y$ is 2 : 3
Circle the correct statement.

- $x$ is $\frac{2}{3}$ of $y$
- $y$ is $\frac{2}{3}$ of $y$
- $x$ is $\frac{2}{5}$ of $x$
- $y$ is $\frac{3}{5}$ of $x$

(Total 1 mark)

Q8. Circle the word that describes the straight line $PQ$.

- chord
- diameter
- radius
- tangent

(Total 1 mark)
A cycle track has two identical semi-circular ends and two straight sides as shown. Not drawn accurately

A cyclist completes one lap.
Her average speed is 18 m / s
Her target time to complete one lap is 30 seconds.
Does she beat her target?
You must show your working.

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______________________________________________________________________________

Answer _________________________________________
(Total 4 marks)
Q10. (a) The radius of this circle is 2.5 cm
Not drawn accurately

Work out the area.
Give your answer to 1 significant figure.
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Answer ______________________________________ cm$^2$

(b) The diameter of this semicircle is 16 cm
Not drawn accurately

Work out the perimeter of the semicircle.
______________________________________________________________________________
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Answer __________________________________________

(Total 6 marks)

Q11. What is the sum of the exterior angles of any polygon?
Circle your answer.

180°  360°  380°  540°

(Total 1 mark)
Q12. Two identical circles fit inside a rectangle as shown.
Not drawn accurately

\[ \text{The length of the rectangle is 20 cm} \]

Work out the area of the shaded section.

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Answer ________________ cm\(^2\)  
(Total 6 marks)

Q13. \(ABDE\) is a parallelogram.
\(AB = AC\)

Show that \(x = 22^\circ\)

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(Total 3 marks)
Q14. \( AD \) is parallel to \( BC \). \( AE = DE \). Not drawn accurately

Work out the size of angle \( BAE \).

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Answer ___________________________________________ degrees
(Total 3 marks)

Q15.

(a) Which angles are vertically opposite? Circle your answer

\( a \) and \( b \)  \hspace{1cm} \( a \) and \( c \)  \hspace{1cm} \( b \) and \( c \)  \hspace{1cm} \( b \) and \( d \)  \hspace{1cm} \( c \) and \( d \)

(1)

(b) Which angles are alternate? Circle your answer

\( a \) and \( b \)  \hspace{1cm} \( a \) and \( c \)  \hspace{1cm} \( b \) and \( c \)  \hspace{1cm} \( b \) and \( d \)  \hspace{1cm} \( c \) and \( d \)

(1)

(c) Which angles are corresponding? Circle your answer

\( a \) and \( b \)  \hspace{1cm} \( a \) and \( c \)  \hspace{1cm} \( b \) and \( c \)  \hspace{1cm} \( b \) and \( d \)  \hspace{1cm} \( c \) and \( d \)

(1)

(Total 3 marks)
Q16. Here are two closed containers. Four tennis balls just fit in each container. Each tennis ball has diameter 64 mm.

Which container has the smaller surface area? You must show your working.

Answer _________________________________________ (Total 5 marks)
Q17.  *ABC and DEFG are parallel lines. BEH is a straight line.*

(a) Work out the size of angle \( x \).

Answer ___________________________ degrees  

(b) Work out the size of angle \( y \).
You must show your working, which may be on the diagram.

Answer ___________________________ degrees  

(Total 3 marks)

Q18.  (a) Write 1607 in words.

Answer ___________________________  

(b) What is the value of the digit 5 in 13 058?

Answer ___________________________  

(c) Round 17 809 to the nearest thousand.

Answer ___________________________  

(Total 3 marks)
Q19. \( PQRS \) is a trapezium with PQ parallel to SR.
\( P \) and \( Q \) are on the \( x \)-axis.
The \( y \)-coordinate of \( S \) is 8
\( PQ > SR \)

\[ \begin{align*}
P \quad (........................, ........................) \\
Q \quad (........................, ........................) \\
R \quad (........................, ........................) \\
S \quad (........................, ........................) \\
\end{align*} \]

The area of \( PQRS \) is 48 square units.
Work out one possible set of points for \( P \), \( Q \), \( R \) and \( S \).

Q20. Use your calculator to change \( \frac{27}{64} \) to a decimal.
(a) Write down your full calculator display.

Answer _________________________________________ (1)

(b) Give your answer to part (a) to 3 decimal places.

Answer _________________________________________ (1)

(Total 2 marks)
Q21. The angles of a quadrilateral are $140^\circ$, $80^\circ$, $60^\circ$ and $80^\circ$.
What type of quadrilateral could it be?
Circle your answer.

- Kite
- Parallelogram
- Rhombus
- Trapezium

(Total 1 mark)

Q22. The diagram shows a triangle $ACD$ and an equilateral triangle $BCD$.

Work out the size of angle $x$.

Answer __________________________ degrees
(Total 2 marks)

Q23. $AB$ is a straight line.
Work out the size of angle $x$

Answer __________________________ degrees
(Total 2 marks)
Q24. Here is a map of France.

(a) What is the three-figure bearing of Lyon from Bordeaux?  
Circle your answer.

005°  085°  095°  175°  (1)

(b) Work out the actual straight-line distance from Paris to Marseille.

______________________________________________________________________________  
______________________________________________________________________________

Answer ______________________________________ km  (2)

(Total 3 marks)
Q25. A water tank is a cylinder with radius 40 cm and depth 150 cm

It is filled at the rate of 0.2 litres per second.
1 litre = 1000 cm³
Does it take longer than 1 hour to fill the tank?
You must show your working.

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Answer _________________________________________ (Total 4 marks)

Q26. (a) Simplify 3a + 7b - a + 4b

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Answer ______________________________________________________________________ (2)

(b) Expand 4(2d + 5)

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______________________________________________________________________________
______________________________________________________________________________

Answer ______________________________________________________________________ (2)

(c) Factorise 15x + 18y

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Answer ______________________________________________________________________ (1)
(Total 5 marks)
Q27.

(a) Expand and simplify \(2(a + 3) + 5(a - 1)\)

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______________________________________________________________________________

Answer _________________________________________ (2)

(b) Simplify \(5c^4d^2 \times c^2d^3\)

______________________________________________________________________________

______________________________________________________________________________

Answer _________________________________________ (2)

(c) Simplify fully

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Answer _________________________________________ (2)

Q28. Circle the correct words to complete each sentence.

(a) \(5x + 1 = 16\) is
    an expression    an equation    a formula

(b) \(V = \pi r^2h\) is
    an expression    an equation    a formula

(c) \(x + 3\) is
    an expression    an equation    a formula

(d) \(2x + 3y\) is
    an expression    an equation    a formula

(Total 4 marks)
Q29.
(a) Solve \( x + 12 = 29 \)
\[ x = \text{__________________________} \] (1)
(b) Solve \( 0.5y = 20 \)
\[ y = \text{__________________________} \] (1)
(Total 2 marks)

Q30. Here is a centimetre grid.

A \((3, 5)\), B \((0, -3)\) and C \((-5, 2)\) are three points.
What type of triangle is \(ABC\)?
You must show your working, which may be on the diagram.

Answer \____________________________\ (Total 2 marks)

Q31. A straight line has the equation \( y = 6 - 2x \)
Circle the gradient of the line.

\( \square \) \(-2\) \( \square \) \(2\) \( \square \) \(2x\) \(6\)
(Total 1 mark)
Q32. By rounding each number to 1 significant figure, estimate the answer to \( \frac{78 \times 11.6}{391} \)
You must show your working.

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______________________________________________________________________________
Answer _________________________________________
(Total 3 marks)

33. Use your calculator to work out \( \frac{3.21 + 4.89}{5.62 - 1.89} \) as a decimal.
(a) Write down your full calculator display.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Answer _________________________________________ (1)

(b) Write your answer to 1 decimal place.

______________________________________________________________________________
______________________________________________________________________________
Answer _________________________________________ (1)
(Total 2 marks)

Q34. Sam spends exactly £20 on petrol.
The petrol costs £1.45 per litre.
Work out the number of litres of petrol she buys.
Give your answer to 1 decimal place.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Answer ________________________________ litres
(Total 3 marks)

Q35. A pop concert has a crowd of 2000 people rounded to 1 significant figure.
A rock concert has a crowd of 2000 people rounded to 2 significant figures.

Work out the largest possible difference between the exact numbers of the two crowds.

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Answer ________________________________
(Total 3 marks)
Q36. Diaries are sold in boxes of 12
Pencils are sold in boxes of 10
Rulers are sold in boxes of 6
A teacher wants to buy the same number of diaries, pencils and rulers.
Work out the smallest number of boxes of each item he could buy.

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____________________________ boxes of diaries

____________________________ boxes of pencils

____________________________ boxes of rulers

(Total 3 marks)

Q37. \( x = 2500 \) to the nearest 100
Circle the smallest possible value of \( x \).

\[ \begin{array}{c}
  2449 \\
  2450 \\
  2495 \\
  2499 \\
\end{array} \]

(Total 1 mark)

Q38. Here is a sequence.

\[ \begin{array}{c}
  40 \\
  35 \\
  30 \\
  25 \\
  20 \\
\end{array} \]

Circle the expression for the \( n \)th term of the sequence.

\[ \begin{array}{c}
  5n + 35 \\
  5n - 45 \\
  45 - 5n \\
  n - 5 \\
\end{array} \]

(Total 1 mark)
Q39. The region $R$ satisfies the three inequalities.

\[ x > -3 \quad x + y \leq 2 \quad y \geq \frac{x}{2} - 1 \]

Show the region $R$ on the grid.

(Total 4 marks)

Q40. Circle the two equations that are equivalent to $2y = 3x + 4$

A \hspace{1cm} 2x = 3y + 4 \hspace{1cm} \text{B} \hspace{1cm} y - \frac{3}{2}x = 2

C \hspace{1cm} y = \frac{3}{2}x + 4 \hspace{1cm} \text{D} \hspace{1cm} 3x - 2y + 4 = 0

(Total 2 marks)
Q41. Expand and simplify \((2x + 5y)(3x - 8y)\)

Answer _________________________________________ (Total 3 marks)

Q42.  
(a) Expand and simplify \((x + 5)(x - 4)\)

Answer _________________________________________ (2)

(b) Solve \((x - 8)(x + 7) = 0\)

Answer _________________________________________ (1) (Total 3 marks)
Q43. The pie charts show the eye colour of some students.

The areas of the pie charts are proportional to the number of students.
The radius of the girls’ pie chart is 5 cm
The radius of the boys’ pie chart is 4 cm
5 girls have green eyes.
How many boys and girls altogether have blue eyes?

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Answer ____________________________________
(Total 5 marks)
Q44. These two right-angled triangles are similar.

(a) Write down the value of tan \( x \).
   Give your answer as a fraction.

   Answer: \[
   \frac{3}{4} \]

(b) Work out the value of \( y \).

   Answer: \[
   \frac{9}{2} \]

(Q45 marks)

Q45. A charity collection was made.
Information about the amounts given by men is shown in the table.

<table>
<thead>
<tr>
<th>Amount, ( x ) (£)</th>
<th>Midpoint</th>
<th>Number of men</th>
</tr>
</thead>
<tbody>
<tr>
<td>( 0 \leq x &lt; 5 )</td>
<td>2.5</td>
<td>11</td>
</tr>
<tr>
<td>( 5 \leq x &lt; 10 )</td>
<td>7.5</td>
<td>7</td>
</tr>
<tr>
<td>( 10 \leq x &lt; 15 )</td>
<td>12.5</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total = 20</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The mean amount given by women was £6.30 per person.
Compare the mean amounts given by men and women.

(Total 4 marks)
Q46. The pie chart shows information about the sales of 800 tickets. There were twice as many adult ticket sales as senior ticket sales. Not drawn accurately

(a) Show that there were 140 senior ticket sales.

(b) Draw a bar chart on the grid to represent the child, adult and senior ticket sales.

(Total 7 marks)
Q47. At a nursery, the mean age of 4 children is 31 months. Katy joins the nursery. The mean age of all 5 children is now 30 months. Work out the age of Katy.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Answer ___________________________________ months
(Total 4 marks)

Q48. The times that 80 customers waited at a supermarket checkout are shown.

<table>
<thead>
<tr>
<th>Time, t (minutes)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ≤ t &lt; 2</td>
<td>32</td>
</tr>
<tr>
<td>2 ≤ t &lt; 4</td>
<td>19</td>
</tr>
<tr>
<td>4 ≤ t &lt; 6</td>
<td>20</td>
</tr>
<tr>
<td>6 ≤ t &lt; 8</td>
<td>7</td>
</tr>
<tr>
<td>8 ≤ t &lt; 10</td>
<td>2</td>
</tr>
</tbody>
</table>

(a) In which class interval is the median? Circle your answer.
0 ≤ t < 2       2 ≤ t < 4       4 ≤ t < 6       6 ≤ t < 8
(1)

(b) The manager of the supermarket says, "90% of our customers wait less than 6 minutes." Does the data support this statement? You must show your working.

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______________________________________________________________________________
Answer _______________________________________ (1)
(Total 2 marks)
The scatter graph shows the number of driving lessons and the number of tests needed to pass by 10 people.

(a) What proportion of the 10 people passed on their first test?

__________________________

Answer _________________________________________ (1)

(b) Describe the correlation.
Circle your answer.

strong positive  weak positive  weak negative  strong negative

(1)

(c) Use a line of best fit to estimate the number of tests needed to pass by a person who has 50 lessons.

__________________________

Answer _________________________________________ (2)

(d) Meera says,
"I can use the trend to predict the number of driving tests needed to pass for any number of driving lessons."
Comment on her statement.

__________________________

__________________________

__________________________

__________________________

(1)

(Total 5 marks)
Q50.  \(ABC\) and \(DEC\) are similar triangles. Not drawn accurately

\[B\]
\[\begin{array}{c}
(x + 5) \text{ cm} \\
\end{array}
\]
\[E\]
\[x \text{ cm} \\
\]
\[\begin{array}{c}
A \\
4 \text{ cm} \\
D \\
6 \text{ cm} \\
C \\
\end{array}
\]

Work out the value of \(x\).

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Answer ______________________________________ cm
(Total 4 marks)

Q51.  Not drawn accurately

Work out the length \(AC\).
Give your answer to 1 decimal place.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Answer ______________________________________ cm
(Total 4 marks)
Q52. The area of the rectangle is 68 cm$^2$

Work out the size of angle $x$.

Answer __________________________ degrees

(Total 3 marks)

Q53. Noah is attempting to work out the base of different right-angled triangles.

Here is his method with the working for $y = 10$ and $x = 6$

- Work out the value of $y^2$: $10^2 = 100$
- Work out the value of $x^2$: $6^2 = 36$
- Work out the value of $y^2 - x^2$: $100 - 36 = 64$
- The base is $\sqrt{y^2 - x^2}$, $\text{base} = \sqrt{64}$

Tick the correct statement.

- The method will always give an answer which is a whole number.
- The method will sometimes give an answer which is a whole number.
- The method will never give an answer which is a whole number.

Show working to support your answer

_________________________________________________________

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(Total 3 marks)
Q54. A children’s nursery uses one room for babies and one room for toddlers.

Each baby needs at least 3.5 m\(^2\) of floor space.
Each toddler needs at least 2.5 m\(^2\) of floor space.
Show that the total number of children allowed is larger if
the toddlers are in Room A
and the babies are in Room B.

\[
\begin{array}{|c|c|}
\hline
\text{Room A} & \text{Room B} \\
\hline
\text{Area = 40 m}^2 & \text{Area = 37 m}^2 \\
\hline
\end{array}
\]

Q55. The table shows information about journeys A and B. Complete the table.

<table>
<thead>
<tr>
<th>Distance travelled</th>
<th>Time taken</th>
<th>Average speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 32 miles</td>
<td></td>
<td>64 mph</td>
</tr>
<tr>
<td>B 1 hour 20 minutes</td>
<td>42 mph</td>
<td></td>
</tr>
</tbody>
</table>

Q56. Which of these is used to work out density? Tick a box.

- mass × volume
- mass\(^2\) × volume
- mass ÷ volume
- volume ÷ mass

(Total marks)
Q57. Increase 4200 by 38%

Increase 4200 by 38%

\[
\text{Answer } \underline{} \quad \text{(Total 2 marks)}
\]

Q58. £800 is invested for 3 years at 2% simple interest per year. Work out the total interest.

\[
\begin{align*}
\text{Interest} &= \text{Principal} \times \text{Rate} \times \text{Time} \\
&= 800 \times 0.02 \times 3 \\
&= 48
\end{align*}
\]

Answer £\underline{48} \quad \text{(Total 3 marks)}

Q59. Toilet rolls come in packs of 4 and 9

Which pack is better value? You must show your working.

\[
\text{Cost per roll for 4 pack} = \frac{1.89}{4} = 0.4725 \\
\text{Cost per roll for 9 pack} = \frac{3.99}{9} = 0.4433
\]

Answer \underline{4} \quad \text{(Total 3 marks)}
Q60. Write 180 g as a fraction of 3 kg
Give your answer in its simplest form.

______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________ (Total 2 marks)

Q61. In March, Kim pays the same amount for each song she downloads.
She pays £35.60 for 40 songs.
In April, she pays 5p more for each song.
She has a £30 voucher.
What is the maximum number of songs she can download using the voucher?

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Answer _________________________________________ (Total 3 marks)

Q62. Two straight lines are shown. B is the midpoint of AC. TB : BS = 2 : 3

Work out the coordinates of T.

______________________________________________________________________________

Answer (___________, ___________) (Total 4 marks)
Q63. Three whole numbers have a total of 100
The first number is a multiple of 15
The second number is ten times the third number.
Work out the three numbers.

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Answer ___________ , ___________ , ___________  (Total 3 marks)

Q64. (a) The outcomes of two independent experiments are success and failure.
Complete the tree diagram.

(b) Work out the probability of success in both experiments.

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Answer _________________________________________  (2)

Q65. There are 20 students. 12 are boys.
What fraction are boys?
Circle your answer.

\[
\frac{2}{3} \quad \frac{2}{5} \quad \frac{3}{5} \quad \frac{3}{4}
\]

(Total 1 mark)
Q66. Bag A contains 3 red balls and 7 blue balls.
Bag B contains 8 red balls and 2 blue balls.

A ball is picked at random from each bag.
(a) Complete the tree diagram to show all the probabilities.
(b) Work out the probability of picking a red ball from Bag A and a blue ball from Bag B.

Answer __________________________________________________________________________

(Total 5 marks)
Q67. Two ordinary fair dice are rolled.
(a) Complete the tree diagram.

(b) Circle the probability that both dice land on 4

(c) Work out the probability that at least one of the dice does not land on 4

Answer _________________________________________

(Total 4 marks)

Q68. The probability that a biased coin lands on heads is $\frac{2}{3}$
The coin is spun twice.
Circle the probability of two heads.

Answer _________________________________________

(Total 1 mark)
Q69. John goes to work by car or by train.
(a) The probability that John goes by car is 0.4
Work out the probability he goes by train.

______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________  (1)

(b) John works for 200 days each year.
How many days would you expect him to go to work by car?

______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________  (2)

(c) Ben also goes to work by car or by train.
Out of 200 days, he went by car on 150 days.
Work out the relative frequency that Ben goes to work by car.

______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________  (1)

(Total 4 marks)

Q70. (a) What is $\frac{1}{5}$ as a percentage?
Circle your answer.

1.5%  5%  15%  20%  

(b) What is 0.9 as a percentage?
Circle your answer.

0.009%  0.09%  9%  90%  

(Total 2 marks)

Q71. A spinner has four sections A, B, C and D.
The table shows the probabilities of the spinner landing on A, B or C.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability</td>
<td>0.2</td>
<td>0.3</td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

Work out the probability of landing on D.

______________________________________________________________________________
______________________________________________________________________________

Answer _________________________________________  (Total 2 marks)
Q72. The four possible outcomes of an experiment are A, B, C and D.
\[ P(A) = 0.28 \]
\[ P(B) = 2P(A) \]
\[ P(C) = P(D) \]
Work out \( P(D) \)

Answer __________________________________________ (Total 3 marks)

Q73. 240 people go to a rugby match.
183 of the people support the home team.
The other people support the away team.
162 of the supporters are male.
45 of the away supporters are male.
Complete the frequency tree.

(Total 4 marks)
Q74.  50 people took a test.  
Before the test, they predicted whether they would pass or fail.  
30 people predicted they would pass.  
26 of the people who predicted they would pass did pass.  
37 people passed altogether.  
Complete the frequency tree.

(Total 2 marks)
Q75.

(a) Work out the size of angle $x$.

```
```

Answer ___________________________ degrees (2)

(b) Work out length $y$.

```
```

Answer ______________________________ cm (2)

(Total 4 marks)
The table shows information about water used in a household.
The value for April is missing.

<table>
<thead>
<tr>
<th>Month</th>
<th>Water used (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>16.2</td>
</tr>
<tr>
<td>February</td>
<td>18.1</td>
</tr>
<tr>
<td>March</td>
<td>15.9</td>
</tr>
<tr>
<td>April</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>17.8</td>
</tr>
<tr>
<td>June</td>
<td>21.0</td>
</tr>
</tbody>
</table>

The mean monthly water used for the six months is 18 m$^3$.

Work out the value for April.

Answer ______________________ m$^3$

(Total 3 marks)