# PASSPORT TWO
## ANSWERS

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>ANSWERS</th>
<th>TOPICS</th>
<th>ANSWERS</th>
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</thead>
<tbody>
<tr>
<td><strong>1) Time</strong></td>
<td></td>
<td><strong>7) Shapes</strong></td>
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<tr>
<td></td>
<td>a) 6 hours and 20 mins</td>
<td>a) Isosceles Triangle</td>
<td></td>
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<td></td>
<td>b) 8:15 am</td>
<td>b) Cylinder</td>
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<td><strong>2) Directed Number</strong></td>
<td></td>
<td><strong>8) Area</strong></td>
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<tr>
<td></td>
<td></td>
<td>a) 8cm²</td>
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<td></td>
<td></td>
<td>b) 8cm²</td>
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</tr>
<tr>
<td><strong>3) Types of Number</strong></td>
<td></td>
<td><strong>9) Angles</strong></td>
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<tr>
<td></td>
<td></td>
<td>1) 75 degrees</td>
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<td></td>
<td></td>
<td>2) 150 ÷ 2 = 75 degrees</td>
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</tr>
<tr>
<td></td>
<td>a) 18</td>
<td></td>
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<tr>
<td></td>
<td>b) 3</td>
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</tr>
<tr>
<td></td>
<td>c) 3</td>
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<td></td>
<td>d) 64</td>
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<tr>
<td></td>
<td>d) 27 or 125</td>
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<tr>
<td><strong>4) Coordinates</strong></td>
<td></td>
<td><strong>10) Bar Charts</strong></td>
<td>Maybe = 20 – 15 = 5</td>
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<tr>
<td></td>
<td>a) i) (3,-3)</td>
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<td></td>
<td>ii) (-5,-3)</td>
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<td></td>
<td>b) along to -1 up to 5</td>
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<td></td>
<td>c) Triangle (Isosceles)</td>
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<tr>
<td><strong>5) Simplifying</strong></td>
<td></td>
<td><strong>11) Probability</strong></td>
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<tr>
<td></td>
<td></td>
<td>a) ( \frac{8}{12} = \frac{2}{3} )</td>
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<tr>
<td></td>
<td></td>
<td>b) ( \frac{4}{12} = \frac{1}{3} )</td>
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<tr>
<td></td>
<td>1) 8a+7b</td>
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<td></td>
<td>2) 3a</td>
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<td></td>
<td>3) 7b-3a+7c</td>
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<tr>
<td><strong>6) Sequences</strong></td>
<td></td>
<td><strong>12) Outcomes</strong></td>
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<tr>
<td></td>
<td></td>
<td>T1</td>
<td></td>
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<tr>
<td></td>
<td>a) 13, 15</td>
<td>T</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>b) -3, -8</td>
<td>T</td>
<td>W</td>
</tr>
<tr>
<td></td>
<td>c) 13, 17 and 25</td>
<td>W</td>
<td>C</td>
</tr>
<tr>
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<td></td>
<td>W</td>
<td>T</td>
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<td>C</td>
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<td></td>
<td></td>
<td>T</td>
<td>W</td>
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</tbody>
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## Index Notation

<table>
<thead>
<tr>
<th>Topics</th>
<th>Answers</th>
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</tr>
</thead>
<tbody>
<tr>
<td>a) $3^{2+4} = 3^6$</td>
<td></td>
<td>Percentage Decrease</td>
<td>$18.60 \times 0.85 = £15.81$</td>
</tr>
<tr>
<td>b) $5^{6-2} = 5^4$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) $(7^2 \times 7^2 \times 7^2) = 7^{3\times2} = 7^6$</td>
<td></td>
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</tbody>
</table>

## Percentage Decrease

<table>
<thead>
<tr>
<th>Topics</th>
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</tr>
</thead>
<tbody>
<tr>
<td>$2500 \times 0.8 = £2,000$</td>
<td></td>
<td>Time</td>
<td>6:48am to 7am is 12 mins</td>
</tr>
<tr>
<td>Or</td>
<td></td>
<td></td>
<td>7am to 8am is 1 hour</td>
</tr>
<tr>
<td>10% = 250 and 20% = 500</td>
<td></td>
<td></td>
<td>8am to 8:15am is 15 mins</td>
</tr>
<tr>
<td>So $2500 - 500 = £2000$</td>
<td></td>
<td></td>
<td>In total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 hour and 27 minutes</td>
</tr>
</tbody>
</table>

## Ordering Decimals

<table>
<thead>
<tr>
<th>Topics</th>
<th>Answers</th>
<th>Topics</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.004, 0.045, 0.405, 0.45, 0.5, 4</td>
<td></td>
<td>Order of Operations</td>
<td>$a) 12 + 3 = 15$</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$b) 4 + 6 \times 2$</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$= 4 + 12$</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$= 16$</td>
</tr>
</tbody>
</table>

## Functional Money

<table>
<thead>
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<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults: $3 \times 12.50 = £37.50$</td>
<td></td>
<td>Multiplying and Dividing Fractions</td>
<td>$a) \frac{16}{20} - \frac{5}{20} = \frac{11}{20}$</td>
</tr>
<tr>
<td>Children: $5 \times 7.40 = £37$</td>
<td></td>
<td></td>
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<tr>
<td>Total Cost: $37.50 + 37 = £74.50$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change $80 - 74.5 = £5.50$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes I have enough and will get £5.50 change.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>$b) \frac{3}{12} = \frac{1}{4}$</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>$c) \frac{7}{8} \times \frac{5}{4} = \frac{35}{32} = 1 \frac{3}{32}$</td>
</tr>
</tbody>
</table>
## Algebra

<table>
<thead>
<tr>
<th>TOPICS</th>
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</tr>
</thead>
</table>
| Mid Point of Coordinates | X coordinates \(\frac{4 + 10}{2} = \frac{14}{2} = 7\)  
\(Y\) coordinates \(\frac{6 + 8}{2} = \frac{14}{2} = 7\)  
Midpoint - (7,7) |
| Solve 2 step equations | \(2x + 4 = 18\)  
\(2x = 14\)  
\(x = 7\) |
| Expand Single Brackets | a) \(3x + 12\)  
b) \(14x - 35\)  
c) \(x^2 + 8x\) |
| Simplify              | a) \(3a\)  
b) \(a + 9b\)  
c) \(9a - 7b\) |
| Factorise             | a) \(4(x + 5)\)  
b) \(4(3x + 7)\)  
c) \(3y(y + 4)\) |
| Plot a linear Graph   |         |
| Trial and Improvement | Value | Output | Big/Small |
|                       |       |        |          |
| a) Output 3 \(\times 7 = 21\)  
b) Input \(21 - 4 = 17\)  
c) Output \(7 \times 3 - 5 = 21 - 5 = 16\) |
## Shapes and Measures

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</thead>
<tbody>
<tr>
<td>Angles in a Triangle</td>
<td>67 + 67 = 134</td>
<td>Angles in a Quadrilateral</td>
<td>90 + 90 + 54 = 234</td>
</tr>
<tr>
<td></td>
<td>180 – 134 = 46°</td>
<td></td>
<td>360 – 234 = 126°</td>
</tr>
<tr>
<td></td>
<td>a = 46°</td>
<td></td>
<td>b = 126°</td>
</tr>
<tr>
<td>Identify Shapes</td>
<td></td>
<td>Types of Angle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cylinder</td>
<td></td>
<td>Sketch and label an angle less than 90 degrees.</td>
</tr>
<tr>
<td>Volume of a Cuboid</td>
<td>10 × 5 × 9 = 45 × 10</td>
<td></td>
<td>E.g.</td>
</tr>
<tr>
<td></td>
<td>= 450 cm³</td>
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<tr>
<td>Transformation - Rotation</td>
<td>Rotation 180 degrees</td>
<td></td>
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<tr>
<td></td>
<td>About the centre (0,0)</td>
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## PASSPORT TWO
### ANSWERS
#### Statistics

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<thead>
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<tbody>
<tr>
<td><strong>Bar Chart</strong></td>
<td></td>
<td><strong>Expected Probability</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$\frac{2}{5}$ of 150</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$\frac{150}{5} \times 2 = 30 \times 2 = 60$</td>
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<td></td>
<td></td>
<td></td>
<td>60 Games</td>
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<td><strong>Averages</strong></td>
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<td></td>
<td></td>
<td></td>
<td>1. Mean = $\frac{3+12+5+8+6+6}{6} = \frac{40}{6} = \frac{20}{3}$ or 6.7</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2. Median = 6</td>
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<td>3. Mode = 6</td>
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<td>4. Range = $12 - 3 = 9$</td>
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<tr>
<td>Colour</td>
<td>Frequency</td>
<td>Deg</td>
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<tr>
<td><strong>Yellow</strong></td>
<td>6</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td><strong>Green</strong></td>
<td>9</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td><strong>Blue</strong></td>
<td>5</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>360</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Deg per item = $\frac{360}{20} = 18^o$</td>
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<tr>
<td><strong>Pie Chart</strong></td>
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<td><strong>Mean from a Table</strong></td>
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<td>Letters Delivered</td>
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<td>0</td>
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<td>1</td>
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<td>3</td>
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<td></td>
<td><strong>Total</strong></td>
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<td></td>
<td>Mean = $\frac{41}{30} = 1.37$</td>
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<td></td>
<td><strong>Probability</strong></td>
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<tr>
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<td></td>
<td></td>
<td>$0.17 + 0.36 + 0.28 = 0.81$</td>
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<td></td>
<td></td>
<td>$1 - 0.81 = 0.19$</td>
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<td></td>
<td></td>
<td></td>
<td>Probability of yellow = 0.19</td>
</tr>
</tbody>
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