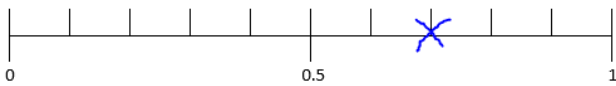


Highfield Functional Skills Qualification in Mathematics at Level 1

PAPERCODE: FSQC111P

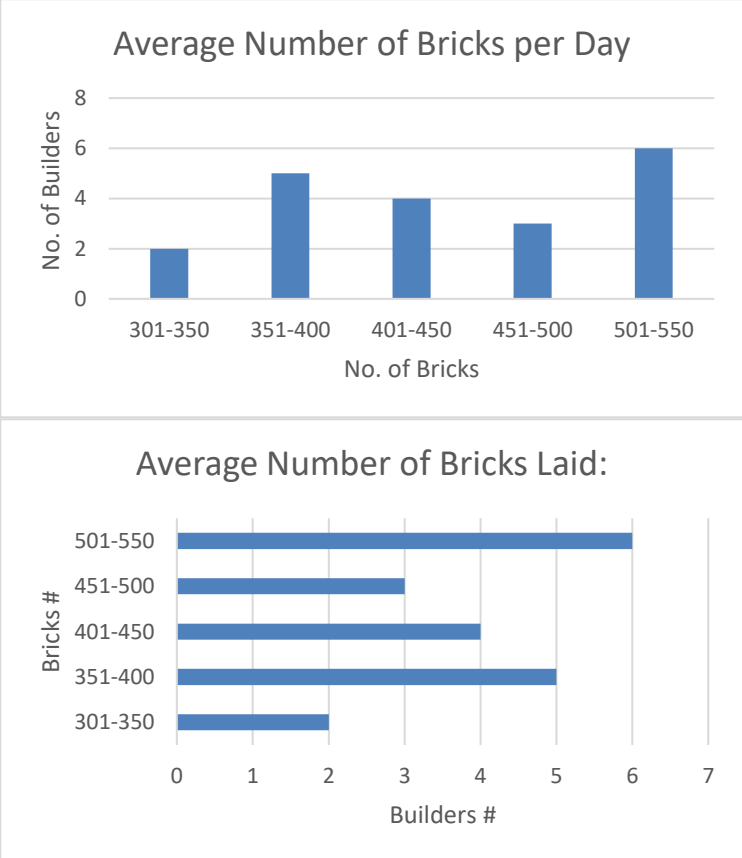
Question	Total marks	Subject content	Process	Marker annotation	Accepted answer AFT = allow follow through CAO = correct answer only OE = or equivalent	
<b>Underpinning Knowledge</b>						
1	1	25	Identify the correct net of a cube	1CA	CAO Net D identified only	
2	3			3CA	CAO 14.88 (miles)	
		<b>If the answer is incorrect revert to:</b>			<b>Alternative method (converts scale first):</b>	
		21	Method for interpreting scale (2cm:5km)	1a	CAO $9.6 \div 2 = 4.8$	CAO $5 \times 0.62 = 3.1$
		21	Method for converting finding distance in km	1b	AFT $4.8 \times 5 = 24$	AFT $9.62 \div 2 = 4.8$
	21	Convert distance to miles	1c	CAO $24 \times 0.62 = 14.88$ miles	CAO $4.8 \times 3.1 = 14.88$ miles	
3	2			2CA	CAO 	
		<b>If the answer is incorrect revert to:</b>				
		16	Calculate 14/20 as decimal	1a	CAO 0.7 (accept 7/10 if seen and no decimal conversion is given. Do not award for 7/10 if seen but incorrect decimal conversion is also given)	
	16	Mark their calculation on the scale	1b	AFT Their calculation correctly marked on the scale		

4	1	8	Correctly orders fractions	1CA	CAO $\frac{1}{4} \quad \frac{5}{16} \quad \frac{3}{8} \quad \frac{1}{2}$ Accept 0.25, 0.3125, 0.375, 0.5								
5	3	23	Uses correct method to calculate volume	1a	CAO 8.58 x 8.35 x 12.13								
		23	Calculates the volume of the cuboid	1b	AFT 869.02959 <i>Accept any appropriate rounding, e.g. 869 or 869.03</i>								
		23	Uses the correct units	1c	CAO cm <sup>3</sup>								
6	1	17	Calculate using the ratio	1CA	CAO £88								
<b>Problem-Solving</b>													
7	5	5	Calculate taxi journey time	1a	CAO 0.4 (16÷40)								
		20	Convert (0.4) into time	1b	AFT 60 x 0.4 = 24 (minutes)								
		20 20 20	Represent the following data in a table:  1. time to leave home 2. arrival time at Lonscaster  3. arrival time at airport	1c 1d 1e	CAO Example answers below – OE <table border="1"> <thead> <tr> <th>Time</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>11.41 (or earlier*)</td> <td>Leave home (taxi to station)</td> </tr> <tr> <td>12.05 (or earlier*)</td> <td>Arrive at Lonscaster</td> </tr> <tr> <td>12.05</td> <td>Depart from Lonscaster</td> </tr> <tr> <td>13.10</td> <td>Arrive at Highfield Airport Station</td> </tr> </tbody> </table> <i>*Times can be a little earlier, as candidate may factor in time to get from the taxi to the train</i>	Time	Action	11.41 (or earlier*)	Leave home (taxi to station)	12.05 (or earlier*)	Arrive at Lonscaster	12.05	Depart from Lonscaster
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11.41 (or earlier*)	Leave home (taxi to station)												
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12.05	Depart from Lonscaster												
13.10	Arrive at Highfield Airport Station												
8	2	29	Method for calculating mean	1a	CAO (25 + 28 + 26 + 29 + 32 + 35 + 31) ÷ 7								
		29	Finds correct answer and states whether travel agent was correct	1b	CAO = 29.43(°) <i>accept appropriate rounding e.g. 29 / 29.4</i>								

9	6			6CA	<b>CAO</b> <b>£5.89</b> <i>If the learner accurately follows all the below steps but forgets to apply this to 2 people, they should be awarded 5 out of 6 marks.</i>	
		<b>If the answer is incorrect revert to:</b>				
		9	Calculate discounted price per person at Water World	1a	CAO $(36 \div 3) \times 2 = \text{€}24$	Alternative method: Calculate total cost for two people without discount at Water World CAO $36 \times 2 = 72$
		19	Calculate discounted price per person at Water Kingdom	1b	CAO $39 \times 0.7 = \text{€}27.30$	Alternative method: Calculate total cost for two people without discount at Water Kingdom CAO $39 \times 2 = 78$
		11	Calculate total cost for 2 people at each park	1c	AFT $(\text{€}24) \times 2 = (\text{€}48)$  $(\text{€}27.30) \times 2 = \text{€}54.60$	Alternative method: AFT Calculate discounted price for two people at Water World $(72) \div 3 \times 2 = (\text{€}48)$ Calculate discounted price for two people at Water Kingdom $(78) \times 0.7 = (\text{€}54.60)$
		20	Method for converting both prices to £	1d	AFT $\text{€}48 \div 1.12$ $\text{€}54.60 \div 1.12$	
		12	Calculate the total costs in £ rounded to 2 decimal places	1e	AFT Water World = £42.86 Water Kingdom = £48.75	
		11	Calculate correct difference	1f	CAO $\text{£}48.75 - \text{£}42.86 = \text{£}5.89$	
10	4	31	Work out the likelihood of winning with Josh as a fraction	1a	CAO $2/40$ or $1/20$	
		31	Work out the likelihood of winning with Josh, Raj and Petrina as a fraction	1b	CAO $4/40$ or $1/10$	

		<b>16</b>	Convert fraction to decimal	<b>1c</b>	$1/20 = 0.05$
		<b>16</b>	Convert fraction to decimal	<b>1d</b>	$1/10 = 0.1$
<b>11</b>	<b>4</b>			<b>4CA</b>	<b>CAO</b> <b>36 panels</b>
<b>If the answer is incorrect revert to:</b>					
		<b>22</b>	Method for working out dimensions of the safety fence	<b>1a</b>	CAO length: $20 + 4$ or 24m seen and width: $15.2 + 4$ or 19.2m seen
		<b>11</b>	Calculate the panels required for length(s)	<b>1b</b>	AFT $(24) \div 2.4 = (10)$ OR $(48) \div 2.4 = (20)$
		<b>11</b>	Calculate the panels required for width(s)	<b>1c</b>	AFT $(19.2) \div 2.4 = (8)$ OR $(38.4) \div 2.4 = (16)$
		<b>22</b>	Method to find the total number of panels required for the perimeter	<b>1d</b>	AFT $(10) + (8) + (10) + (8) = (36)$ OR $(20) + (16) = (36)$
<b>12a</b>	<b>7</b>	<b>20</b>	Converts mm to m	<b>1a</b>	CAO $120(\text{mm}) \div 1000 = 0.12(\text{m})$ OR 0.12m seen
		<b>23</b>	Method for calculating volume	<b>1b</b>	AFT $0.12 \times 20 \times 15.2$
		<b>23</b>	Finds correct volume	<b>1c</b>	AFT $= 36.48(\text{m}^3)$
		<b>11</b>	Method for calculating cost	<b>1d</b>	AFT $36.48 \times 85$
		<b>11</b>	Finds total cost	<b>1e</b>	CAO $(\text{£})3,100.80$

<b>12b</b>		<b>14</b>	Method for calculating % increase	<b>1f</b>	AFT <i>from Q12a</i> 3100.8 x 1.05 <i>OR equivalent method used</i>												
		<b>14</b>	Finds total cost including delivery	<b>1g</b>	CAO = (£)3,255.84												
<b>13a</b>	<b>6</b>	<b>28</b>	Accurate grouping of data	<b>1a</b>	CAO ( <i>no overlapping</i> ) All 3 missing groups are completed correctly <table border="1" data-bbox="1173 352 1431 576"> <thead> <tr> <th>Number of bricks</th> </tr> </thead> <tbody> <tr> <td>301-350</td> </tr> <tr> <td>351-400</td> </tr> <tr> <td><b>401-450</b></td> </tr> <tr> <td><b>451-500</b></td> </tr> <tr> <td><b>501-550</b></td> </tr> </tbody> </table>	Number of bricks	301-350	351-400	<b>401-450</b>	<b>451-500</b>	<b>501-550</b>						
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<b>28</b>	Represent total or frequency of grouped data in table	<b>1b</b>	CAO All 6 values (including total) are complete correctly <table border="1" data-bbox="1173 663 1619 927"> <thead> <tr> <th>Number of bricks</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>301-350</td> <td><b>2</b></td> </tr> <tr> <td>351-400</td> <td><b>5</b></td> </tr> <tr> <td>401-450</td> <td><b>4</b></td> </tr> <tr> <td>451-500</td> <td><b>3</b></td> </tr> <tr> <td>501-550</td> <td><b>6</b></td> </tr> <tr> <td>Total</td> <td><b>20</b></td> </tr> </tbody> </table>	Number of bricks	Frequency	301-350	<b>2</b>	351-400	<b>5</b>	401-450	<b>4</b>	451-500	<b>3</b>	501-550	<b>6</b>	Total	<b>20</b>
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<b>13b</b>	<b>28</b>	Chooses/uses a suitable graph	<b>1c</b>	<p>Example graphs for marks <b>1c-1f</b> below</p> 
	<b>28</b>	Use suitable scale and labels on x axis	<b>1d</b>	CAO <i>(see example graphs above)</i>
	<b>28</b>	Use suitable scale and labels on y axis	<b>1e</b>	CAO <i>(see example graphs above)</i>
	<b>28</b>	<u>Plot data</u> accurately for ALL groups	<b>1f</b>	AFT <i>(see example graphs above)</i>