Highfield Functional Skills Qualification in Mathematics at Level 1 PAPERCODE: FSQC111P_MS

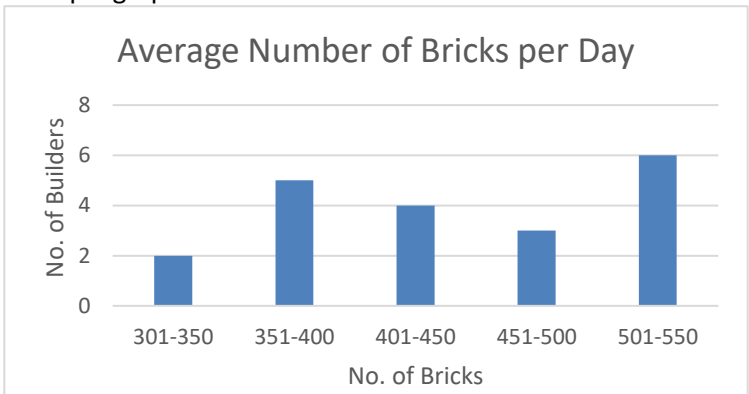
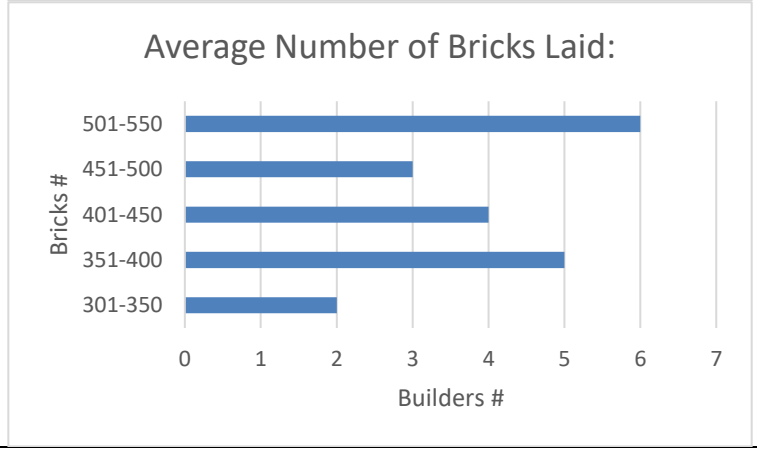
Question	Total marks	Subject content	Process	Marker annotation	Accepted answer AFT = allow follow through CAO = correct answer only OE = or equivalent	
Underpinning Knowledge						
1 (Q10 on-screen)	**1**	**25**	Identify the correct net of a cube	**1CA**	**CAO** **Net D identified only**	
2 (Q11 on-screen)	**3**			**3CA**	**CAO** **14.88 (miles)**	
		If the answer is incorrect revert to:				**Alternative method *(converts scale first)*:**
		21	Method for interpreting scale (2cm:5km)	**1a**	CAO 9.6 ÷ 2 = 4.8	CAO 5 x 0.62 = 3.1
		21	Method for converting finding distance in km	**1b**	AFT 4.8 x 5 = 24	AFT 9.62 ÷ 2 = 4.8
		21	Convert distance to miles	**1c**	CAO 24 x 0.62 = 14.88 miles	CAO 4.8 x 3.1 = 14.88 miles
3 (Q12 on-screen)	**2**			**2CA**	**CAO** 	
		If the answer is incorrect revert to:				
		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 (Q13 on-screen)	**1**	**8**	Correctly orders fractions	**1CA**	**CAO** $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{1}{2}$ **Accept 0.25, 0.3125, 0.375, 0.5**
5 (Q14 on-screen)	**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 *Accept any appropriate rounding, e.g. 869 or 869.03*
		23	Uses the correct units	**1c**	CAO cm^3
6 (Q15 on-screen)	**1**	**17**	Calculate using the ratio	**1CA**	CAO £88
Problem-Solving					
7 (Q16 on-screen)	**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 Loncaster 3. arrival time at airport	**1c** **1d** **1e**	**CAO** **Example answers below – OE** **Time** / **Action** **11.41 (or earlier*)** / **Leave home (taxi to station)** **12.05 (or earlier*)** / **Arrive at Loncaster** **12.05** / **Depart from Loncaster** **13.10** / **Arrive at Highfield Airport Station** **Times can be a little earlier, as candidate may factor in time to get from the taxi to the train*
8 (Q17 on-screen)	**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(°)** *accept appropriate rounding e.g. 29 / 29.4*

9 (Q18 on-screen)	**6**			**6CA**	**CAO** **£5.89** *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.*	
		If the answer is incorrect revert to:				**Alternative method:**
		9	Calculate discounted price per person at Water World	**1a**	CAO (36 ÷ 3) x 2 = €24	Calculate total cost for two people without discount at Water World CAO 36 x 2 = 72
		19	Calculate discounted price per person at Water Kingdom	**1b**	CAO 39 x 0.7 = €27.30	Calculate total cost for two people without discount at Water Kingdom CAO 39 x 2 = 78
		11	Calculate total cost for 2 people at each park	**1c**	AFT (€24) x 2 = (€48) (€27.30) x 2 = €54.60	AFT Calculate discounted price for two people at Water World (72) ÷ 3 x 2 = (€48) Calculate discounted price for two people at Water Kingdom (78) x 0.7 = (€54.60)
		20	Method for converting both prices to £	**1d**	AFT €48 ÷ 1.12 €54.60 ÷ 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 £48.75 - £42.86 = £5.89	
10 (Q19 on-screen)	**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	
		16	Converts fraction to decimal	**1c**	1/20 = 0.05	
		16	Converts fraction to decimal	**1d**	1/10 = 0.1	

11 (Q20 on-screen)	**4**			**4CA**	**CAO** **36 (panels)**
		If the answer is incorrect revert to:			
		22	Method for working out dimensions of the safety fence	**1a**	CAO length: 20 + 4 or 24m seen and width: 15.2 + 4 or 19.2m seen
		11	Calculate the panels required for length(s)	**1b**	AFT (24) ÷ 2.4 = (10) OR (48) ÷ 2.4 = (20)
		11	Calculate the panels required for width(s)	**1c**	AFT (19.2) ÷ 2.4 = (8) OR (38.4) ÷ 2.4 = (16)
		22	Method to find the total number of panels required for the perimeter	**1d**	AFT (10) + (8) + (10) + (8) = (36) OR (20) + (16) = (36)
12a (Q21 on-screen)	**7**	**20**	Converts mm to m	**1a**	CAO 120(mm) ÷ 1000 = 0.12(m) OR 0.12m seen
		23	Method for calculating volume	**1b**	AFT (0.12) x 20 x 15.2
		23	Finds correct volume	**1c**	AFT = 36.48(m^3)
		11	Method for calculating cost	**1d**	AFT (36.48) x 85
		11	Finds total cost	**1e**	**CAO** **(£)3,100.80**
12b (Q22 on-screen)		**14**	Method for calculating % increase	**1f**	AFT *from Q12a* (3100.8) x 1.05 *OR equivalent method used*
		14	Finds total cost including delivery	**1g**	**CAO** **= (£)3,255.84**

<table>
<tr><td rowspan="2">13a
(Q23 on-screen)</td><td rowspan="2">6</td><td>28</td><td>Accurate grouping of data</td><td>1a</td><td>CAO (no overlapping)
All 3 missing groups are completed correctly
<table><tr><td>Number of bricks</td></tr><tr><td>301-350</td></tr><tr><td>351-400</td></tr><tr><td>401-450</td></tr><tr><td>451-500</td></tr><tr><td>501-550</td></tr></table></td></tr>
<tr><td>28</td><td>Represent total or frequency of grouped data in table</td><td>1b</td><td>CAO
All 6 values (including total) are complete correctly
<table><tr><td>Number of bricks</td><td>Frequency</td></tr><tr><td>301-350</td><td>2</td></tr><tr><td>351-400</td><td>5</td></tr><tr><td>401-450</td><td>4</td></tr><tr><td>451-500</td><td>3</td></tr><tr><td>501-550</td><td>6</td></tr><tr><td>Total</td><td>20</td></tr></table></td></tr>
</table>

13b (Q23 on-screen)		**28**	Chooses/uses a suitable graph	**1c**	Example graphs for marks **1c**-**1f** below  
		28	Use suitable scales on x and y axes	**1d**	CAO *(see example graphs above)*
		28	Use suitable labels on x and y axes and gives graph an appropriate title	**1e**	CAO *(see example graphs above)*
		28	Plots data accurately for ALL groups	**1f**	AFT *(see example graphs above)*