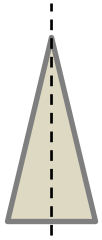
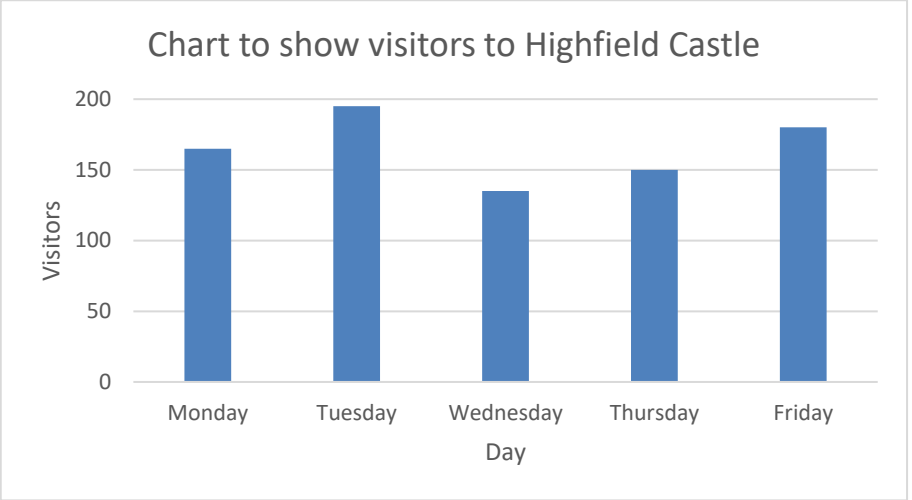
Highfield Functional Skills Qualification in Mathematics at Level 1 PAPERCODE: FSQC110P_MS

Question	Total marks	Content Ref	Process	Marker annotation	Accepted answer AFT = allow follow through CAO = correct answer only OE = or equivalent
Underpinning Knowledge					
1 (Q10 On-screen)	**1**	**5**	Correct substitution into formulae	**1CA**	**CAO** **5.8**
2 (Q11 On-screen)	**1**	**3**	Correct division	**1CA**	**CAO** **7.835**
3 (Q12 On-screen)	**2**			**2CA**	**CAO** **35 (miles)**
		If answer incorrect revert to:			
		21	Interpretation of scale	**1a**	**CAO** (10 ÷ 2 =) 5 x 7
		21	Correct distance	**1b**	**CAO** 35 (miles)
4 (Q13 On-screen)	**1**	**24**	Only 1 correct line drawn	**1CA**	**CAO**  ***(allow reasonable tolerance with the accuracy of lines)***

5 (Q14 On-screen)	**2**			**2CA**	**CAO** **630(km)**
	If answer incorrect revert to:				
		9	Method to calculate three quarters	**1a**	1080 ÷ 12 x 7 OE
		9	Three quarters calculated	**1b**	**CAO** 630(km)
6 (Q15 On-screen)	**1**	**11**	Correct division of decimals	**1CA**	**CAO** **0.3**
7 (Q16 On-screen)	**3**			**3CA**	**CAO** **250,000**
	If answer incorrect revert to:				
		1	Interprets large number correctly	**1a**	**CAO** 600,000
		17	One share calculated	**1b**	**AFT** (600,000) ÷ 12 = 50,000
		17	Billy's share calculated	**1c**	**CAO** (50,000 x 5) = 250,000
Problem Solving					
8 (Q17 On-screen)	**5**			**5CA**	**CAO** **616 (m)**
	If answer incorrect revert to:				
		20a	Converts km to m	**1a**	**CAO** 0.124(km) = 124(m) *(can be implicit)*
		22b	Identifies missing lengths of main section	**1b**	**AFT** (124) + 6 = 130
		22b	Method to calculate perimeter	**1c**	**AFT** Turrets: 12 + 12 + 6 + 6 = 36 x 3 = 108 Short walls: 124 x 2 = 248 Long walls: (130) x 2 = 260
		22b	Calculates total distance walked	**1d**	**AFT** 108 + 248 + (260)
		22b	Correct answer	**1e**	**CAO** 616 (m)

9 (Q18 On-screen)	**4**			**4CA**	**CAO** **Mean: 1.65 Range: 1.5**
		If answer incorrect revert to:			
		29	Correct method for mean	**1a**	method Addition of all weights (= 19.8)
		29	Finds correct mean	**1b**	**CAO** 19.8 ÷ 12 = 1.65
		29	Correct method for range	**1c**	method 2.4 – 0.9
		29	Finds correct range	**1d**	**CAO** 1.5
10 (Q19 On-screen)	**2**			**2CA**	**CAO** **1/3**
		If answer incorrect revert to:			
		31	Identification of number of possibilities	**1a**	**CAO** 4/12
		31	Expresses probability to its simplest form	**1b**	**CAO** 1/3

11 (Q20 On-screen)	**6**			**6CA**	**CAO** **Friday = 180 and chart with correct title, labels, axes and all values plotted**
		If answer incorrect revert to:			
		14	Method to find 20% of 150	**1a**	method 150 × 0.2 (= 30) OE
		14	Correct value for Friday	**1b**	**AFT** 150 + (30) = 180
		27	Chooses/uses a suitable graph	**1c**	**AFT** E.g. 
		27	Use suitable scale on x and y axes	**1d**	**CAO** E.g. Mon - Fri and **0 – 195** or a **broken line – 195** with equal intervals
		27	Use suitable graph title and labels on x and y axes	**1e**	**CAO** E.g. **Chart to show visitors to Highfield Castle, Day and Visitors**
		27	All values plotted correctly	**1f**	**CAO** 5 values plotted correctly (AFT for their Friday value from 1b)

12 (Q21 On-screen)	**6**			**6CA**	**CAO** **Yes and (£)970.42 or (£)29.58 under budget**
		If answer incorrect revert to:			
		11	Method to find cost of roofer	**1a**	84.50 × 3 (= 253.50)
		11	Method to find cost of apprentice	**1b**	4.75 × 9(hours) × 3 (= 128.25)
		11	Both totals correct	**1c**	**CAO** (£)253.50 **and** (£)128.25
		11	Total of costs of roofer, apprentice and materials	**1d**	**AFT** (253.50 + 128.25) + 426.93 (= 808.68)
		14	Method to find 20%	**1e**	**AFT** (808.68) × 1.2 OE (= 970.42)
		12	Correct decision with accurate figures	**1f**	**CAO** Yes **and** (£)970.42 or (£)29.58 under budget
13 (Q22 On-screen)	**5**			**5CA**	**CAO** **(£)20.97**
		20	Converting units	**1a**	**CAO** 0.5m = 50cm *('50cm' can be implicit if seen in 1b)*
		23	Method to calculate volume	**1b**	**AFT** 32 x 21 x (50) = 33,600
		1	Compares/divides appropriately	**1c**	**AFT** 100000 ÷ 33,600 = 2.98 OE
		12	Rounds appropriately to find number of containers	**1d**	**CAO** 3 (containers)
		11	Multiplies by cost to find correct answer	**1e**	**CAO** (3 x 6.99) = (£)20.97

14 (Q23 On-screen)	**6**			**6CA**	**CAO** **103,600 (panels)**	
		If answer incorrect revert to:				**Alternative method:**
		22	Method to calculate area of entire stadium	**1a**	**method** 190 x 175 = 33250	
		22	Method to calculate area of pitch	**1b**	**method** 105 x 70 = 7350	
		22	Calculates total area of the roof	**1c**	**AFT** 33250 – 7350 = 25900(m^2)	
		20	Converts units	**1e**	**CAO** 50(cm) ÷ 100 = 0.5m 0.5 x 0.5 = 0.25(m^2)	**CAO** 50 x 50 = 2500(cm^2)
		17	Method to calculate total number of panels required	**1d**	**AFT** (25900) ÷ (0.25)	**AFT** (25900) x 10000 = 259,000,000(cm^2) (259,000,000) ÷ (2500)
		11	Finds correct number of panels	**1f**	**CAO** 103,600 (panels)	