

Highfield Functional Skills Qualification in Mathematics at Level 1

Practice Paper 1

Skills Standard	Marks available	%
Representing	14	35
Analysing	13	32.5
Interpreting	13	32.5

Total marks	40
Pass mark	<b>27</b>

Level 1 Mapping Grid		Coverage and Range																																	
	a	b				c			d	e	f	g						h	i		j			k		l		m		n					
	whole	negative	add	subtract	multiply	divide	fractions	decimals	percentages	add	subtract	ratio	formulae	money	time	length	weight	capacity	temperature	convert measure	area	perimeter	diagrams	models	shapes	tables	diagrams	charts	graphs	collect & record	organise & represent	mean	range	Likely outcome	
1a	X		X		X			X						X		X					X						X								
1b	X		X	X				X						X													X					X			
1c						X		X																											
1d																													X	X					
1e	X						X	X																		X									

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1f							X																													
1g	X			X					X					X																						
1h	X		X	X					X					X																						
2a			X																								X									
2b			X			X				X			X		X																					
2c					X											X				X			X	X												
2d		X	X			X									X					X																
2e	X				X	X							X	X	X																					
	6	1	6	3	3	4	2	1	5	1	0	0	2	5	3	2	0	0	1	1	1	0	1	1	0	3	1	0	1	1	0	1	0	0		

Marks should be awarded positively. Answers within the mark scheme are not the only answers, each mark may have alternative answers which are not in the mark scheme. This does not mean they are not correct.

Mark Scheme: Practice Paper 1					
Question	Maximum marks per question	Skills Standard	Mark breakdown	Accepted answer AFT = allow follow through CAO = correct answer only (£) = sign not required for mark £ = sign is required for mark.	
1a	3	I6	3	<b>CAO – Properties B and C only</b> <i>Must be supported by correct supporting explanation providing evidence of working out garden size.</i> <b>i.e. B and C have gardens over 30m<sup>2</sup>, have good sized living areas and are within budget.</b>	
		<b>If answer is incorrect or no supporting explanation given revert to:</b>			
		R1	1	CAO - identifies that Property A is unsuitable <i>Assumed if only properties B and C are considered</i>	
		A4	1	CAO – Calculates garden of Property B 35.84m <sup>2</sup> or estimation 6 x 6 = 36m <sup>2</sup>	
		I6	1	CAO – Calculates garden of Property C 35.28m <sup>2</sup> or estimation 7 x 5 = 35m <sup>2</sup>	
1b	4	I6	4	<b>CAO</b> <b>Price given with supporting calculations - minimum (£)77,000 and maximum (£)79,500</b>	
		<b>If answer is incorrect or no supporting calculations given revert to:</b>			
		R2	1	CAO Method for calculating the percentage of the profit 40% of (£)55000 OR (£)22000	
		R3	1	AFT - Calculates minimum sale price: (£)55000 + (percentage profit) = (£)77000)	
		A4	1	Method for calculating mean price of properties already sold: (£)79500 OR (£)75000 + (£)80000 + (£) 83500 = (£)238500 ÷ 3	
		I6	1	AFT – correct answer (sensible price) based on their calculations	
1c	1	A5	1	AFT Suitable checking method for at least ONE element of 1b	
1d	2	R2	1	CAO - Best month = October as it has the highest mean price	
		I6	1	CAO - Worst month = March as it has the lowest mean price	

1e	4	16	4	<b>CAO</b> <b>Company B with supporting calculations</b> <b>e.g. No, Company B has a better selling percentage by 3.84% or has the highest selling percentage of 53.84%</b>
		<b>If answer is incorrect or no supporting calculations given revert to:</b>		
		R2	1	CAO – Calculates percentage/fraction of houses sold by Company A 50% or 1/2
		R3	1	CAO – Calculates percentage/fraction of houses sold by Company B 53.84% or 7/13
		A4	1	CAO – Calculates percentage/fraction of houses sold by Company C 51.72% or 15/29
		16	1	AFT – correct answer (choice of estate agent) based on their calculations
1f	1	A4	1	$75/150 = \frac{1}{2}$ <i>0 marks if the fraction is not simplified</i>
1g	2	16	2	<b>CAO £72 000</b>
		<b>If answer is incorrect revert to:</b>		
		R2	1	CAO calculates 10% 10% of (£)80 000 = (£)8 000
1h	3	16	3	<b>CAO</b> <b>Yes with supporting calculations</b> <b>e.g. Yes, I will have £155 spare or £355 (including emergency money)</b>
		<b>If answer is incorrect or no supporting calculations given revert to:</b>		
		R1	1	CAO - calculates percentage/amount to save 10% of 2000 = (£)200 OR 2000 – 10% = (£)1800
		A4	1	CAO – calculates essential costs (£)1645 OR (£)650 + (£)250 + (£)450 + (£)295
		16	1	AFT – correct answer based on their calculations

2a	3	I6	3	<b>CAO</b> Identifies <u>shortest</u> route: 45 miles
		If answer is incorrect revert to:		
		R1	1	Identifies <b>one</b> route from old house to new house passing by the estate agent
		A4	1	CAO – correctly calculates distance for at least <b>one</b> route passing by the estate agent $9+14+14+5+ 3 = 45$ miles OR $9+14+19+8 = 50$ miles
		I6	1	AFT – Identifies correct shortest route based on their calculations
2b	6	R1	1	Correctly substitutes distance (from 2a – even if incorrect) and average speed into the formula: $(45) \div 30$
		R2	1	AFT - calculates correct driving time (1.5)
		A4	1	CAO - converts (1.5) to time (1 hour 30 minutes)
		A4	1	Recognition of the 10 minutes stopping time at the estate agent.
		I6	1	AFT - adds on the stop at the estate agents (1 hour 30 mins) + 10 minutes = (1 hour 40mins)
		I6	1	AFT – gives correct time of arrival based on their calculations (3.10 pm/15:10)
2c	5	R1	1	All 3 items of furniture drawn on the diagram ( <i>even if not to scale</i> )
		R2	1	Draws on grid a rectangle to represent the bed to correct scale, rectangle 6 squares by 3 squares.
		A4	1	Draws on grid a square to represent the dressing table to correct scale, square 2 squares by 2 squares.
		I6	1	Draws on grid a rectangle to represent the wardrobe to correct scale, rectangle 5 squares by 1 square.
		I6	1	Furniture doesn't block the door access.
2d	3	I6	3	<b>CAO Identification of time:</b> <b>7.30pm or 19:30</b>
		If answer is incorrect revert to:		
		R1	1	Identification of the difference in temperature: -18°C to 2°C OR 20°C
		A4	1	AFT Correct calculation of how long need to wait: $(20^{\circ}\text{C}) \div 2$ (decreases every hour) = (10 hours)
		I6	1	AFT – Works out the correct time based on their calculations

2e	3	16	3	CAO £72 <i>2 marks if £ is not used</i>
		If answer is incorrect revert to:		
		A4	1	Correct substitution of the distance travelled x number of large items in the formula: 16 x 9 OR 144
		A4	1	AFT Calculation using the formula: (144) ÷ 2