Highfield Functional Skills Qualification in Mathematics at Level 2 - MOCK

PAPERCODE: FSQC209_MS

Question	Total marks	Subject content	Process	Marker annotation	Accepted answer AFT = allow follow through CAO = correct answer only
1 (Q8 On-screen)	**1**	**5**	Calculate 23% percentage of the amount given	**1CA**	**CAO** 135.93
2 (Q9 On-screen)	**2**			**2CA**	**CAO** **17.89%**
		If the answer is incorrect revert to:			
		5	Method to calculate percent	**1a**	68 ÷ 380 OE
		5	Correct answer	**1b**	CAO 17.89(%) accept appropriate rounding e.g. 18%, 17.9%, etc.
3 (Q10 On-screen)	**1**	**2**	Use a suitable strategy to check the answer to previous question	**1CA**	**CAO** Suitable checking strategy used and accurately applied E.g. 380 ÷ 100 x 18 = 68.4
4 (Q11 On-screen)	**2**			**2CA**	**CAO** **31.4**
		16	Uses the correct method to calculate circumference of circle	**1a**	2 x 3.14 x 5 *(allow any correct pi values)*
		16	Finds the correct answer	**1b**	CAO 31.4
5 (Q12 On-screen)	**2**			**2CA**	**CAO** **390**
		If the answer is incorrect revert to:			
		23	Identifies the two middle values	**1a**	CAO 345 and 435
		23	Calculates the median	**1b**	CAO 390

6 (Q13 On-screen)	**1**	**19**	Use coordinates to specify position	**1a**	**CAO** -3, -6
7 (Q14 On-screen)	**1**	**12**	Follow the order of precedence to find value of n	**1CA**	**CAO** 2278
8 (Q15 On-screen)	**2**			**2CA**	**CAO** **6.58 (mph)**
		If the answer is incorrect revert to:			
		15	Method for calculating speed	**1a**	15.8 ÷ 2.4
		15	Accurately calculate the speed	**1b**	CAO 6.58 (mph)
9 (Q16 On-screen)	**2**			**2CA**	**CAO** $\frac{\mathbf{2}}{\mathbf{7}}$
		If the answer is incorrect revert to:			
		8	Express 18 out of 63 as a fraction	**1a**	CAO $\frac{18}{63}$
		8	Simplify their identified fraction	**1b**	AFT Correct simplification of their fraction $(\frac{2}{7})$

<table>
<tr><td rowspan="6">10
(Q17 On-screen)</td><td rowspan="6">5</td><td></td><td></td><td>5CA</td><td>CAO
3 correct values in table (120, 457 and 556) and 74% or appropriately rounded percentage</td></tr>
<tr><td colspan="4">If the answer is incorrect revert to:</td></tr>
<tr><td>2</td><td>Calculate two cells correctly</td><td>1a</td><td>CAO
Two cells correct
<table><tr><th></th><th>Use contactless payments</th><th>Do not use contactless payments</th><th>Total</th></tr><tr><td>Aged 30 and under</td><td>951</td><td>446</td><td>1397</td></tr><tr><td>Aged over 30 years</td><td>337</td><td>120</td><td>457</td></tr><tr><td>Total</td><td>1288</td><td>566</td><td>1854</td></tr></table></td></tr>
<tr><td>2</td><td>Calculate all three cells correctly</td><td>1b</td><td>CAO
All three cells correct
<table><tr><th></th><th>Use contactless payments</th><th>Do not use contactless payments</th><th>Total</th></tr><tr><td>Aged 30 and under</td><td>951</td><td>446</td><td>1397</td></tr><tr><td>Aged over 30 years</td><td>337</td><td>120</td><td>457</td></tr><tr><td>Total</td><td>1288</td><td>566</td><td>1854</td></tr></table></td></tr>
<tr><td>26</td><td>Selects the correct figures from the table</td><td>1c</td><td>AFT
337 ÷ (457)</td></tr>
<tr><td>26</td><td>Calculates the probability</td><td>1d</td><td>AFT
(0.737) OE
Accept correct rounding</td></tr>
<tr><td>27</td><td>Converts decimal to percentage</td><td>1e</td><td>AFT
74% accept appropriate rounding e.g. 73.7%</td></tr>
</table>

11 (Q18 On-screen)	**6**			**6CA**	**CAO** **31 minutes**
		If the answer is incorrect revert to:			
		2	Calculates the total frequency	**1a**	CAO 44
		24	Calculates the mid-range	**1b**	CAO 5 15 25 35 45 55
		24	Calculates the mid-range x frequency	**1c**	AFT 30 120 50 525 405 220
		24	Addition of mid-range x frequency	**1d**	CAO 1350
		24	Divides their total by the frequency	**1e**	AFT (1350) ÷ 44
		24	Calculate the mean, rounded to the nearest whole minute	**1f**	CAO 31 minutes

12 (Q19 On-screen)	**6**			**6CA**	**CAO** **B and (£)40.50 or (£)1540.50 seen + correct calculations for A & C**
		If the answer is incorrect revert to:			
		3	Method for calculating option A	**1a**	(0.08 x 182) x 3
		3	Total cost for option A	**1b**	CAO (£)43.68 OR (£)1543.68
		13	Method for calculating option B	**1c**	(100 + 2.7) ÷ 100 1500 x 0.027
		13	Total cost for option B	**1d**	CAO (£)1540.50 OR (£)40.50
		6	Total cost for option C	**1e**	CAO (1500 x 0.005) x 6 AND (£)45 OR (£)1545 seen
		6	Cheapest options calculated	**1f**	CAO B and (£)40.50 OR (£)1540.50 + correct calculations for A & C seen

13 (Q20 On-screen)	**5**			**5CA**	CAO 18 (.18)%	
		If the answer is incorrect revert to:				**Alternative method:**
		25	Method to find mean of 2017	**1a**	(900,000 + 750,000 + 550,000 + 550,000) ÷ 4	(900,000 + 750,000 + 550,000 + 550,000) ÷ 4 = 687,500
		25	Method to find mean of 2018	**1b**	(950,000 + 850,000 + 600,000 +850,000) ÷ 4	Calculates differences between 2017 and 2018 figures: 50,000 100,000 50,000 300,000 (=500,000)
		25	Both mean values correct	**1c**	CAO 687,500 AND 812,500	Divides by 4 (500,000) ÷ 4 = 125,000
		5	Method to find % increase	**1d**	AFT (812,500) – (687,500) = (125,000) (125,000) ÷ (687,500) = (0.18 x 100)	
		13	Correct value	**1e**	**CAO** 18(.18)% *(accept suitable rounding)*	
14 (Q21 On-screen)	**6**			**6CA**	**CAO** **(£)345.32**	
		If the answer is incorrect revert to:				
		10	Calculation of wage use hourly rate (Monday - Friday)	**1a**	CAO (7.5 x 5) x 8.90 OR 333.75	
		4	Convert Saturday rate	**1b**	CAO 4 x 1.25 OR 44.50	
		10	Calculates the wage for the Sunday hours	**1c**	CAO (3 x 2) x 8.90 OR 53.40	
		10	Total wages before tax for all 7 days	**1d**	AFT (431.65)	
		13	Method to calculate 20% tax deduction	**1e**	AFT (431.65) ÷ 100 x 20 = 86.33 (431.65) – 86.33	
		13	Finds correct answer	**1f**	CAO (345.32)	

15 (Q22 On-screen)	**5**			**5CA**	**CAO** **2137** ***(accept 2135-2139 for different variations of pi, if all methods are correct)***
		If the answer is incorrect revert to:			
		16	Correct formula for the area of a circle	**1a**	CAO $\pi \times 5.5^2$ or 3.14 x 30.25
		16	Calculate the area of the circle	**1b**	CAO 94.985 *(accept answers based on different variations of pi, e.g. 95.0455, 95.0330975, etc.)*
		10	Calculate the number of red flowers	**1c**	AFT (94.985) x 30
		11	Method for calculating the number of red flowers	**1d**	AFT (2849.55) ÷ 4 x 3
		11	Finds the correct number of red flowers	**1e**	CAO 2137 *(accept 2135-2139 for different variations of pi, if all methods are correct)*
16a (Q23 On-screen)	**6**			**6CA**	**CAO** **3 correct volumes, Box A** **Trolley and 29.8kg**
		If the answer is incorrect revert to:			
		14	Converts the height to cm or the width/length to m	**1a**	CAO 100cm 80cm 90cm OE
		17	Calculates the volume of at least 1 box correctly	**1b**	CAO A = 100,000(cm^3) OR 0.1(m^3) B = 84,000(cm^3) OR 0.0840(m^3) C = 95,760(cm^3) OR 0.0957.6(m^3)
		17	Calculates the volume for all 3 boxes correctly	**1c**	CAO A = 100,000(cm^3) OR 0.1(m^3) B = 84,000(cm^3) OR 0.0840(m^3) C = 95,760(cm^3) OR 0.0957.6(m^3)
		17	Finds the box with the largest volume	**1d**	CAO (Box A)
16b (Q24 On-screen)		**10**	Method for calculating total possible weight	**1e**	8 x 3.1 + 5 = 29.8 OE
		10	Calculates the heaviest box and makes correct selection	**1f**	CAO Trolley, heaviest box is B, total max weight of 29.8Kg OE