

Growth and Decay - Topic test 3 - Foundation tier - Mark scheme

Q	Answer	Mark	Comments
1	5^8	B1	
2	64	B1	
3	$3^4 = 81$ $5^3 = 125$ $2^6 = 64$ $6^2 = 36$	M2	Allow one error B1 for two correct
	$6^2 \quad 2^6 \quad 3^4 \quad 5^3$	A1	
4(a)	(4, -2)	B1	
4(b)	Plots at the correct place	B1	
5	280×0.24	M1	
	67.20	A1	Do not allow 67.2
5 Alt 1	$1\% \text{ of } 280 = 2.80$ 2.80×24	M1	
	67.20	A1	Do not allow 67.2
5 Alt 2	$1\% \text{ of } 280 = 2.80$ $4\% = 11.2$ $10\% = 28$ $20\% = 56$ $56 + 11.2$	M1	
	67.20	A1	Do not allow 67.2
6	36×0.8	M1	B1 for 1 correct

	28.80	A1	Do not allow 28.8
6 Alt 1	36 x 0.2 = 7.2 36 - 7.2	M1	B1 for 1 correct
	28.80	A1	Do not allow 28.8
6 Alt 2	10% of 36 = 3.6 20% of 36 = 7.2 36 - 7.2	M1	B1 for 1 correct
	28.80	A1	Do not allow 28.8
6 Alt 3	1% of 36 = 0.36 0.36 x 80 36 - 7.2	M1	B1 for 1 correct
	28.80	A1	Do not allow 28.8
6 Alt 4	1% of 36 = 0.36 0.36 x 20 = 7.2 36 - 7.2	M1	B1 for 1 correct
	28.80	A1	Do not allow 28.8
7	5	B1	
8a	16 and 64	B2	B1 for 1 correct
8b	x and y axes drawn and labelled correctly	B1	
	Points from the table plotted correctly	B1	Ft their values
	Points joined with a smooth curve	B1	
9	Showing $x - 2 = 3$	B1	
	5	B1	
10	5 000 x 1.03 ⁸	M1	
	6 333.85 (- 5000)	M1	

	1 333.85	A1	
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11	Circled $12\,495 \times 0.88^5$	A1	
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12	One attempt to find interest rate e.g. $4\,500 \times 1.02^{10} = 5485.47$	M1	1% = 4970.80 2% = 5485.47 3% = 6047.62
	One or more attempts to improve result	M1	
	3%	A1	