

1	$120\,000 \times 1.05$ or $126\,000$	M1	oe eg $120\,000 + 0.05 \times 120\,000$ may be implied by eg $144\,000$
	$120\,000 \times 1.05^4$ or $\frac{583\,443}{4}$	M1dep	oe eg their $126\,000 \times 1.05$ or $132\,300$ and their $132\,300 \times 1.05$ or $138\,915$ and their $138\,915 \times 1.05$
	$145\,860(.75)$ or $145\,860.8(0)$ or $145\,861$ or $145\,900$ or $146\,000$	A1	if no value given implied by M2 seen and $150\,000$
	$150\,000$	B1ft	ft any answer seen with $> 2sf$ condone $150\,000.00$
	Additional Guidance		
	$126\,000 \times 1.05^3$	M1M1	
	Answer only $145\,860(.75)$ or $145\,860.8(0)$ or $145\,861$ or $145\,900$ or $146\,000$	M1M1A1B0	
	Answer only $150\,000$	Zero	
	For year on year working allow rounding/truncation if method shown for up to M2A0B1ft eg $126\,000 \times 1.05 = 132\,000$ and $132\,000 \times 1.05 = 138\,000$ and $138\,000 \times 1.05 = 144\,900$ Answer $140\,000$	M1 M1A0B1ft	
	$120\,000$, $126\,000$, $132\,000$, $138\,000$, $144\,000$ with no method shown does not imply truncation, this is just adding on $6\,000$ each year	M1M0A0	
	$120\,000 + 4 \times 0.05 \times 120\,000$ or $120\,000 + 0.2 \times 120\,000$ implies M1	M1M0A0	
	Misreads can score up to M2A0B1ft		
	Treat calculating 5 years as a misread but otherwise the wrong number of years eg $120\,000 \times 1.05^2$ will score a maximum of M1M0A0B1ft		

Q	Answer	Mark	Comments
2	Alternative method 1		
	$2496.96 \div 2448$ or 1.02	M1	implied by correct value for 2, 3 or 4 years
	$2496.96 \times (\text{their } 1.02)^3$ or $2448 \times (\text{their } 1.02)^4$ or $2649.79\dots$	M1dep	oe eg full year by year method shown
	2649.77 or 2649.78 or 2649.79 or $2649.8(0)$	A1	accept $2650(.00)$ with M2 awarded SC2 2702.78 or 2702.79 or $2702.8(0)$
	Alternative method 2		
	$(2496.96 - 2448) \div 2448$ or $48.96 \div 2448$ or 0.02 or 2%	M1	
	$2496.96 \times (1 + \frac{\text{their } 2}{100})^3$ or $2448 \times (1 + \frac{\text{their } 2}{100})^4$ or $2649.79\dots$	M1dep	oe eg full year by year method shown
	2649.77 or 2649.78 or 2649.79 or $2649.8(0)$	A1	accept $2650(.00)$ with M2 awarded SC2 2702.78 or 2702.79 or $2702.8(0)$
	Additional Guidance		
	Calculated by year, the amounts would be: 2 years 2546.89 or 2546.90 3 years 2597.82 or 2597.83 or 2597.84		
	Condone 2650.0		M1M1A1
	2546.89 , 2597.83 , 2649.78 , 2702.77 do not award A mark if further work seen after correct answer		M1M1A0
	$\frac{48.96}{2496.96} \times 100 = 2\%$ is incorrect working		M0M0A0

Q	Answer	Mark	Comments
3	Alternative method 1		
	$560 \div 500$ or 1.12	M1	oe
	$\sqrt[3]{\text{their } 1.12}$ or [1.038, 1.0385] or [3.8, 3.85]	M1dep	may be implied eg $\frac{r}{100} = [0.038, 0.0385]$
	3.9	A1	
	Alternative method 2		
	Trial of the form $500 \times x^3$ with $1 < x \leq 1.1$ and correct evaluation	M1	allow correct evaluation truncated or rounded to nearest integer or better allow working year by year value of x used must be seen
	Two trials of the form $500 \times x^3$ each with $1 < x \leq 1.1$ and correct evaluations, one with answer < 560 and one with answer > 560	M1dep	allow correct evaluations truncated or rounded to nearest integer or better allow working year by year values of x used must be seen
	3.9	A1	

3 cont	Additional Guidance																												
	Up to M2 may be awarded for correct work with no answer or incorrect answer, even if this is seen amongst multiple attempts																												
	<table><tr><td>1.01</td><td>515.1505</td></tr><tr><td>1.02</td><td>530.604</td></tr><tr><td>1.03</td><td>546.3635</td></tr><tr><td>1.038</td><td>559.193436</td></tr></table>	1.01	515.1505	1.02	530.604	1.03	546.3635	1.038	559.193436	<table><tr><td>1.0385</td><td>560.0019083</td></tr><tr><td>1.039</td><td>560.8111595</td></tr><tr><td>1.04</td><td>562.432</td></tr><tr><td>1.05</td><td>578.8125</td></tr><tr><td>1.06</td><td>595.508</td></tr><tr><td>1.07</td><td>612.5215</td></tr><tr><td>1.08</td><td>629.856</td></tr><tr><td>1.09</td><td>647.5145</td></tr><tr><td>1.1</td><td>665.5</td></tr></table>	1.0385	560.0019083	1.039	560.8111595	1.04	562.432	1.05	578.8125	1.06	595.508	1.07	612.5215	1.08	629.856	1.09	647.5145	1.1	665.5	
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eg of accepted values For 578.8125 allow 578, 579, 578.8, 578.81, 578.812, 578.813																													
Alt 2 example of working year by year (allow intermediate values to be truncated or rounded to the nearest penny, also allow if given to the next penny) $500 \times 1.035 = 517.5$ $517.5 \times 1.035 = 535.6125$ (allow 535.61 or 535.62) $535.61 \times 1.035 = 554.35635$																													
Incorrect trials and evaluations can be ignored																													
3.9 from incorrect working eg $560 - 500 = 60$ $\sqrt[3]{60} = 3.9$		M0M0A0																											
Wrong answer (eg 4) with no correct method seen		M0M0A0																											
Apply the scheme that favours the student eg 500×1.038^3 scores M1M1 using Alt 1																													
$\frac{560 - 500}{500}$ with no further correct work		M0M0																											