



Simple and Compound Interest

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1	9	\$674.92, 674.9(0) or 675	3	M2 $600 \times (1 + (4/100))^3$ or better oe or M1 600×1.04^2 oe
2	10	216.32 cao	2	M1 $200 \times (1 + (4/100))^2$ oe
3	9	127.31 cao	3	M1 for 120×1.03^2 A1 for 127.308 If M0 award SC2 for 7.31 or 247.31
4	6	882	2	M1 $800 \times 1.05 \times 1.05$
5	10	843.75	3	M2 for $\frac{750 \times 5 \times 2.5}{100} + 750$ oe or M1 for $\frac{750 \times 5 \times 2.5}{100}$ oe or SC2 for answer 93.75
6	2	120	2	M1 for $\frac{750 \times 2 \times 8}{100}$ oe seen or SC1 870 as final answer
7	11	17.05 cao www	4	M1 for $280 \times (1 + \frac{3}{100})^2$ oe M1 subtracting 280 from $280(1 + \frac{k}{100})^2$ any k A1 for 17.052 or SC2 297.05 on answer line
8	8	543.19	3	M2 for 500×1.028^3 oe or long method or M1 for 500×1.028^n , $n = 2$ or 4
9	1	96	2	M1 for $\frac{600 \times 2 \times 8}{100}$ oe If zero SC1 696
10	14	454.27 cao final answer	3	M1 for $420 \times (1 + \frac{4}{100})^2$ oe and A1 for 454 or 454.2 to 454.3 or SC2 for answer 34.27 or SC1 for answer 34.2 to 34.3

11	13	6632.55 cao final answer	3	M2 for $6250 \times \left(1 + \frac{2}{100}\right)^3$ oe or M1 for $6250 \times \left(1 + \frac{2}{100}\right)^2$ oe SC2 for answer 382.55 final answer
12	8	134	3	M2 for $\frac{20.1 \times 100}{3 \times 5}$ oe or M1 for $\frac{x \times 3 \times 5}{100} = 20.1$ or $3\% = 4.02$ oe
13	7	2.5[0] or 2.501... nfw	3	M2 for $2.1 \times \left(1 + \frac{6}{100}\right)^3$ oe or M1 for $2.1 \times \left(1 + \frac{6}{100}\right)^n$ oe where $n \geq 2$ or for figs $21 \times \left(1 + \frac{6}{100}\right)^3$ oe
14	17	[0.]08	4	M3 for $200 \times \left(1 + \frac{2}{100}\right)^2 - 200 - \frac{200 \times 2 \times 2}{100}$ oe or M1 for $200 \times \left(1 + \frac{2}{100}\right)^2$ and M1 for $\frac{200 \times 2 \times 2}{100} [+200]$
15	10	13891.5[0]	3	M2 for $12000 \times \left(1 + \frac{5}{100}\right)^3$ oe or M1 for $12000 \times \left(1 + \frac{5}{100}\right)^n$ oe $n \geq 2$
16	16	1597 cao	4	B3 for 1597.39.. or 1597.3[9...] or 1597.4 or 6597 or B2 for 6597.3[9...] or 6597.4 or B1 for $5000 \left(1 + \frac{2}{100}\right)^{14}$ If B1 scored or B0 scored and an attempt at compound interest is shown SC1 for <i>their</i> 6597[...] – 5000 evaluated correctly provided answer positive and SC1 for <i>their</i> final answer rounded correctly to nearest \$ from their more accurate answer

17	16	198	4	B3 for 197.7.... or answer 198.00 or M2 for $1800 \times \left(1 + \frac{1.5}{100}\right)^7 - 1800$ or B2 for answer 1998 or M1 for $1800 \times \left(1 + \frac{1.5}{100}\right)^7$ If B0 then B1 for seeing their answer in decimal form correctly written to the nearest integer
18	24	1.96 cao	5	M4 for $\left(\left(\sqrt[3]{\frac{2500 \times 1.6 \times 3}{100} + 2000}\right) - 1\right) \times 100$ oe or 1.96... or [0].0196... or 101.96... or 1.0196... or M3 for $\sqrt[3]{\frac{2500 \times 1.6 \times 3}{100} + 2000}$ or B2 for [SI =] 120 or [CI total =] 2120 or M1 for $\frac{2500 \times 3 \times 1.6}{100}$ and M1 for $2000 \times (k)^3$
19	8	3826 or 3826.38	2	M1 for $8000 \times \left(1 - \frac{10}{100}\right)^7$ oe
20	12	44 300 cao	3	M1 for $50\,000 \times (0.97)^4$ oe and B1 for 44260 or better or SC1 for correct method for 3% increase with final answer of 56300
21	19 (a)	7.74 or 7.738 to 7.739 [billion]	2	M1 for $7.23 \times \left(1 + \frac{1.14}{100}\right)^6$
	(b)	2042	2	B1 for 28 or 28.6... or 29 or answer 2043
22	19 (a)	57 122	2	M1 for $20\,000 \times \left(1 + \frac{30}{100}\right)^4$ oe
	(b)	15	2	M1 for two substitutions greater than 4 e.g. $20\,000 \times \left(1 + \frac{30}{100}\right)^k$ where $k > 4$
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