Question	Scheme	Marks	AOs
6 (a)	Translates problem into maths $12\,000 = 2600 + 9d \Rightarrow d = (1044.4)$	M1	3.1b
	Uses the AP model to find $2600 + "d"$	M1	3.4
	3 644 or 3 645 (batteries in Year 2)	A1	1.1b
		(3)	
(b)	Translates problem into maths $12\,000 = 2600 \times r^9 \Rightarrow r = (1.185)$	M1	3.1b
	Uses the GP model to find $2600 \times "r"$	M1	3.4
	awrt 3 080 (batteries in Year 2)	A1	1.1b
		(3)	
(c)	Correct attempt at one sum Either $\frac{10}{2}\{2 \times 2600 + 9 \times "1044"\}$ or $\frac{2600\left("1.185"^{10} - 1\right)}{"1.185" - 1}$	M1	1.1b
	Attempts both sums and subtracts either way around $\frac{10}{2}\{2 \times 2600 + 9 \times "1044"\} - \frac{2600\left("1.185"^{10} - 1\right)}{"1.185" - 1} = \ldots$	dM1	3.1a
	Accept 10 200 or 10 300 batteries	A1	1.1b
		(3)	
			(9 marks)

Notes:

(a)

M1: Attempts to use the AP model $12000 = 2600 + 9d$ to find a value for d

M1: Finds the number of batteries produced in year 2 by adding their value of d to 2600

A1: Calculates 3 644 or 3 645 (batteries in Year 2)

(b)

M1: Attempts to use the GP model $12000 = 2600r^9$ to find a value for r

M1: Finds the number of batteries produced in year 2 by multiplying their value of r by 2600

A1: Calculates awrt 3 080 (batteries in Year 2)

(c)

M1: Correct attempt at one of the sums using a correct equation and their values of d or r

Also accept $\frac{n}{2}\{a + l\} = \frac{10}{2}\{2600 + 12000\} = (73000)$

dM1: Correct attempt at the difference between both sums using correct equations and their values of d or r

A1: Accept 10 200 or 10 300 batteries depending upon accuracy used in (b)