

Question	Scheme	Marks	AOs
8(a)(i)	$150 + 29 \times 10 = \dots$	M1	3.4
	$= 440$	A1	1.1b
	$S_{30} = \frac{1}{2}(30)(2 \times 150 + 29 \times 10) = \dots$ or $S_{30} = \frac{1}{2}(30)(150 + "440") = \dots$	M1	3.4
	$= 8850$	A1	1.1b
		(4)	
(b)	$\frac{1}{2}(52)(2 \times 150 + 51d) = 15000 \Rightarrow d = \dots$	M1	3.1b
	$d = 5.42\dots$ so the minimum value of d is 6	A1	3.2a
		(2)	
(c)	E.g. The increase in the number of candles sold each week is unlikely to be a constant	B1	3.5b
		(1)	

(7 marks)

Notes

(a)(i)

M1: Uses the model and a correct term formula to find the required value

A1: For 440

(ii)

M1: Uses the model and a correct sum formula to find the required value

A1: For 8850

(b)

M1: Correct strategy to find the value of d . Requires the use of a correct sum formula with $n = 52$, $a = 150$, sets = 15 000 and solves for d . Allow use of e.g. "> 15 000" rather than "= 15 000"

A1: Interprets the value of d correctly and gives the answer 6 only

(c)

B1: See scheme