Question Number	Scheme	Notes	Marks
1(a)	$h = 0.5$	Correct strip width	B1
	$A \approx \frac{1}{2}\times\frac{1}{2}\{6.792+5.113+2(6.298+5.858+5.466)\}$ Correct application of the trapezium rule with their *h*		M1
	= 11.79	Cao	A1
			(3)
(b)(i)	$A \approx 2\times"11.79"$	Multiplies their answer to (a) by 2	M1
	= 23.58	Correct answer or correct ft	A1ft
(b)(ii)	$A \approx "11.79"+6$	Adds 6 to their answer to (a)	M1
	= 17.79	Correct answer or correct ft	A1ft
			(4)
			Total 7

Notes:

(a)

B1: Correct value for *h* stated or implied by $\frac{1}{4}\{...\}$

M1: Attempts the trapezium rule with their *h*. Must include the $\frac{1}{2}\times"h"$ but this may be implied by any multiple of the bracket if *h* is not identified separately. Must have the correct inner bracket structure, though allow if all that is wrong is a miscopy of numerals. May be written as separate trapezia.

Bracketing error $\frac{1}{4}(6.792+5.113)+2(6.298+5.858+5.466)$ is M0 unless recovered by their answer.

A1: cao 11.79. Must be to 2 d.p. (Note the actual value is 11.78 to 2 d.p. and score no marks if just this is seen)

(b)(i)

M1: For twice their answer to (a), allowing for rounding. No need to carry out the doubling, sight of 2 $2\times"\text{their }(a)"$ is sufficient.

A1ft: For 23.58 or awrt 23.57 following a correct part (a) rounded or truncated to 11.78 (if they use more than 2d.p. then 23.5745 is the value they should get) **or** follow through their answer to (a) using the same principle. May be given to more than 2 d.p. and isw. (Allow answer to less than 2d.p. if just trailing zeros are omitted.)

Note: accurate answer is 23.56 to 2 d.p., which is M0A0 if no method is shown.

(ii)

M1: For 6+ their (a) stated or implied (but see note). The 6 need not be simplified if evaluated from an integral (but the integral and substitution must be correct giving an evaluation that simplifies to 6).

A1ft: 17.79 or follow through their answer to (a) + 6 evaluated. May be given to more than 2 d.p. and isw

Note: accurate answer is 17.78 to 2 d.p., which is M0A0 if no method is shown.

Note: Repeated trapezium rule is M0 in (b).