

Question	Scheme	Marks	AOs
9	$\int_k^9 \frac{6}{\sqrt{x}} dx = \left[ax^{\frac{1}{2}} \right]_k^9 = 20 \Rightarrow 36 - 12\sqrt{k} = 20$	M1 A1	1.1b 1.1b
	Correct method of solving Eg. $36 - 12\sqrt{k} = 20 \Rightarrow k =$	dM1	3.1a
	$\Rightarrow k = \frac{16}{9} \text{ oe}$	A1	1.1b
		(4)	

(4 marks)

Notes:

M1: For setting $\left[ax^{\frac{1}{2}} \right]_k^9 = 20$

A1: A correct equation involving p Eg. $36 - 12\sqrt{k} = 20$

dM1: For a whole strategy to find k . In the scheme it is awarded for setting $\left[ax^{\frac{1}{2}} \right]_k^9 = 20$, using both

limits and proceeding using correct index work to find k . It cannot be scored if $k^{\frac{1}{2}} < 0$

A1: $k = \frac{16}{9}$