Bestsize Cans — Rubric

	points	section points
Shows correct reasoning and calculations such as:		
The volume of the can is $\pi r^2 h = 200$		
The surface area of the can is $A = 2\pi r^2 + 2\pi rh$	1	
Substitutes for h	1	
$A = 2\pi r^2 + 2\pi r200/\pi r^2 = 2\pi r^2 + 400/r$	2	
May try different values of r		
May draw a graph or calculate.		
May state that r = 1 is not a sensible value for the radius of the can.		
From these values it appears that the minimum surface area is when the radius is about 3 cm	1	
and the height is about 7 cm.	1	
May try further values of r such as:		
May summarize from these further calculations: the minimum surface area has approximate radius 3 cm and height about 7 cm.	2	
		10
Total Points		**10**

Values of r	2	3	4	5
Values of A	224.9	190.4	201.1	235.6

(2 points)

Values of r	2.5	3	3.5	3.2
Values of A	199.5	190.4	191.3	189.0