Volumes of revolution

Answers

Further Maths topic practice

This topic online

Q	Answer	Marks
1	$206\pi/15$	4
2	30π	3
3	$96\pi/5$	5
4	6π	4
5	**a)** $x = 0$ and $x = 3$ **b)** $\frac{108\pi}{5}$	6
6	32π	6
7	**a)** $x = 1$ and $x = 6$ **b)** $\frac{125\pi}{3}$	7
8	**a)** 8π **b)** $\frac{128\pi}{5}$	7
9	**a)** shown **b)** $162\pi = 509$ cm^3 (3 s.f.) **c)** 5.64 cm **d)** For example: a real bowl is not exactly this curve, or the curve may not describe the inside surface	7
10	**a)** shown **b)** 59.4 g **c)** Real mass 62 g is close to 59.4 g (about 4% more): a reasonable model; the difference could come from the density or a fixing	7
11	**a)** (0, 0) and (2, 4) **b)** $\frac{64\pi}{15}$ **c)** $\frac{8\pi}{3}$	9
12	**a)** shown **b)** $\frac{239\pi}{2}$ cm^3 **c)** 863 g (3 s.f.) **d)** $\frac{49\pi}{2} = 77.0$ cm^3	9

Full worked solutions, written out by hand, are on the solutions sheet for this topic.

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