A	The curve $y = x^3$ and the line $y = 2 - x$ meet at the point $(1,1)$. The region R is bounded by the curve $y = x^3$, the line $y = 2 - x$ and the x-axis. Find the exact volume of the solid formed when R is rotated $360°$ about the x-axis. $\dfrac{10}{21}\pi$	**B**	The region R is bounded by the curve $y = 2\sqrt{x}$ and the line $y = x$. Find the exact volume of the solid formed when the region R is rotated 2π radians about the x-axis. $\dfrac{32}{3}\pi$
C	The region R is formed between the circle $x^2 + y^2 = 25$, the line $y = \dfrac{4}{3}x$ and the positive y-axis. Find the exact volume of the solid formed when the region R is rotated 2π radians about the y-axis. $\dfrac{50}{3}\pi$	**D**	The region R is bounded by the curve $y = \sqrt{x}$, the line $\dfrac{1}{2}x + y = 4$ and the positive y-axis. Find the exact volume of the solid formed when the region R is rotated $360°$ about the y-axis. $\dfrac{256}{15}\pi$
E	The region R is formed between the curves $y = x^2$ and $y = 3 - 2x^2$. Find the exact volume of the solid formed when the region R is rotated 2π radians about the y-axis. $\dfrac{3\pi}{2}$	**F**	The region R is formed between the curves $y^2 = x$ and $y = x^2$ and the x-axis. Find the exact volume of the solid formed when the region R is rotated 2π radians about the x-axis. $\dfrac{3}{10}\pi$

Crack the Code   Volumes of Revolution

Calculate exact answers for each volume. To get the three-digit code, add together your answers then round your total to the nearest integer. 147