Q1 $\int \sqrt{x} \, \sin \sqrt{x} \, dx$

Q2 Set up the integral (do not evaluate) to find the volume of the solid generated if the region bounded by the curves $y = 1 - x^2$, $x - axis$ is rotating about $x = 1$, by using cylindrical shells method.

Q3 Find the volume of the solid generated if the region bounded by the curves $y = \ln x$, $x - axis$ from $x = 1$ to $x = e^2$ is rotating about $y - axis$

Q1 $\int \sqrt{x} \, \cos \sqrt{x} \, dx$

Q2 Set up the integral (do not evaluate) to find the volume of the solid generated if the region bounded by the curves $y = x^2 - 1$, $x - axis$ is rotating about $x = 2$, by using cylindrical shells method.

Q3 Find the volume of the solid generated if the region bounded by the curves $y = \ln x$, $x - axis$ from $x = 1$ to $x = e^3$ is rotating about $y - axis$

Q1 $\int e^{2x} \sin x \, dx$

Q2 Set up the integral (do not evaluate) to find the volume of the solid generated if the region bounded by the curves $y = 2 - x^2$, $x - axis$ is rotating about $x = 3$, by using cylindrical shells method.

Q3 Find the volume of the solid generated if the region bounded by the curves $y = \sin x$, $x - axis$ from $x = 0$ to $x = \pi$ is rotating about $y - axis$

Q1 $\int \sqrt{x} \, \cosh \sqrt{x} \, dx$

Q2 Set up the integral (do not evaluate) to find the volume of the solid generated if the region bounded by the curves $y = x^2 - 2$, $x - axis$ is rotating about $x = 2$, by using cylindrical shells method.

Q3 Find the volume of the solid generated if the region bounded by the curves $y = e^x$, $x - axis$ from $x = 0$ to $x = 2$ is rotating about $y - axis$

Q1 $\int \sqrt{x} \, \sinh \sqrt{x} \, dx$

Q2 Set up the integral (do not evaluate) to find the volume of the solid generated if the region bounded by the curves $y = 2 - x^2$, $x - axis$ is rotating about $x = 2$, by using cylindrical shells method.

Q3 Find the volume of the solid generated if the region bounded by the curves $y = e^x$, $x - axis$ from $x = 0$ to $x = 3$ is rotating about $y - axis$

$\underline{Q1}$ $e^x \sin 3x \, dx$

$\underline{Q2}$ Set up the integral (do not evaluate) to find the volume of the solid generated if the region bounded by the curves $y = 4 - x^2$, $x - axis$ is rotating about $x = 3$, by using cylindrical shells method.

$\underline{Q3}$ Find the volume of the solid generated if the region bounded by the curves $y = \cos x$, $x - axis$ from $x = 0$ to $x = \dfrac{\pi}{2}$ is rotating about $y - axis$