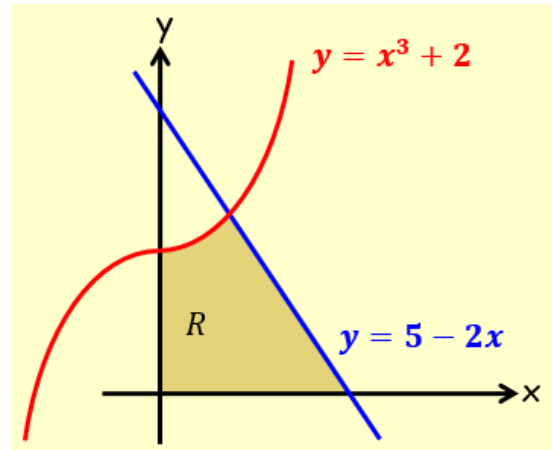


## 5C Composite Volumes of Revolution

$$\text{Cylinder} = \pi r^2 h$$

$$\text{Cone} = \frac{1}{3} \pi r^2 h$$

1. The region R is bounded by the curve with equation  $y = x^3 + 2$ , the line  $y = 5 - 2x$ , and the x and y axes.
  - a) Verify that the coordinates of A are (1,3)



- b) A solid is created by rotating the region  $360^\circ$  about the x-axis. Find the volume of this solid

2. The diagram shows the region R bounded by the curves with equations:

$$y = \sqrt{x} \text{ and } y = \frac{1}{8x} \text{ and the line } x = 1.$$

The region is rotated through  $360^\circ$  about the x-axis.

Find the exact volume of the solid generated.

