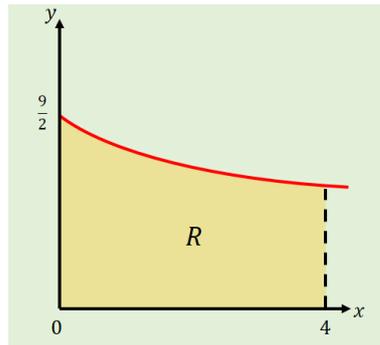


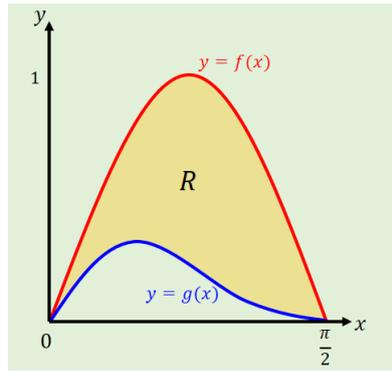
11H Part 1 Integrating to Find Areas



1. The diagram shows part of the curve:

$$y = \frac{9}{\sqrt{4 + 3x}}$$

The region R is bounded by the curve, the x-axis, and the lines $x = 0$ and $x = 4$, and shown. Use integration to find the area of R .



2. The diagram shows part of the curves $y = f(x)$ and $y = g(x)$, where:

$$f(x) = \sin 2x$$

$$g(x) = \sin x \cos^2 x$$

$$0 \leq x \leq \frac{\pi}{2}$$

The region R is bounded by the two curves. Use integration to find the area of R .