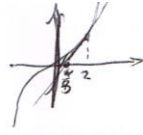


2.54
105



พื้นที่ shaded!

$$y = 3x^2$$

$$y'(2) = 12$$

$$(2, 8)$$

$$y = 12x - 16$$

$$\int_{\frac{4}{3}}^2 x^2 dx + \int_{\frac{4}{3}}^2 [x^3 - (12x - 16)] dx = \left. \frac{x^3}{3} \right|_{\frac{4}{3}}^2 + \left. \frac{x^4}{4} - 6x^2 + 16x \right|_{\frac{4}{3}}^2 =$$

$$\frac{1}{3} \left(\frac{8}{3} \right)^3 + \left(\frac{16}{4} - 24 + 32 \right) - \left(\frac{1}{3} \cdot \left(\frac{4}{3} \right)^3 - 6 \cdot \left(\frac{4}{3} \right)^2 + 16 \cdot \frac{4}{3} \right) =$$

$$12 + \frac{96}{9} - \frac{64}{3} = \frac{44}{3}$$