

(a) point of intersection (10328319, 2401108)

$$A = \int_0^{10328319} (g(x) - f(x)) dx + \int_{10328319}^2 (f(x) - g(x)) dx$$

$$\approx 2004$$

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(b)  $V = \int_{10328319}^2 (f(x) - g(x))^2 dx \approx 1283$

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(c)  $h = f(x) - g(x)$

$$\frac{dh}{dx} = f'(x) - g'(x)$$

$$\left. \frac{dh}{dx} \right|_{x=18} = f'(1.8) - g'(1.8) \approx -3812$$











































