Solutions

Each answer shows the steps, then the **result**.

2.1

- write the relation; differentiate with respect to t; substitute; solve for the unknown rate

2.2

- $\dfrac{dA}{dt} = 2\pi(3)(2) = 12\pi \text{ cm}^2/\text{s}$

2.3

- cm^2/s

3.1 B

3.2 B

3.3

(a)

- $\dfrac{dA}{dt} = 2\pi r \dfrac{dr}{dt}$

(b)

- $2\pi(3)(2)$

(c)

- $12\pi \text{ cm}^2/\text{s}$