

## Solutions

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

### 2.1

- write the relation connecting the quantities

### 2.2

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

### 2.3

- the derivative of the relation with respect to  $t$

### 3.1 B

### 3.2 B

### 3.3

(a)

- $\frac{dV}{dt} = 3s^2 \frac{ds}{dt}$

(b)

- $\frac{ds}{dt}$

(c)

- $\frac{dV}{dt} = 3s^2 \frac{ds}{dt}$