Solutions

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

2.1

- Decreasing — $g'(x) = f(x) < 0$

2.2

- A local maximum

2.3

- Concave up — $g''(x) = f'(x) > 0$

3.1 B

- f changes $-$ to $+$, so g' changes sign the same way and g has a local minimum

3.2

(a)

- g increases on $(0, 3)$ where $f > 0$

(b)

- At $x = 3$, because f (which is g') changes from positive to negative there

3.3

- Concave up — $g''(x) = f'(x) > 0$ since f is increasing