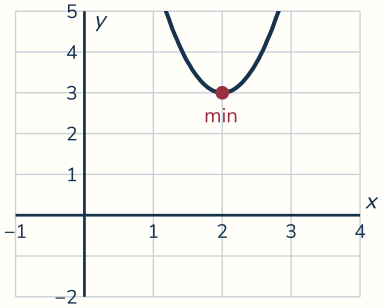
Using derivatives — Stationary points

Name: _____ Date: _____

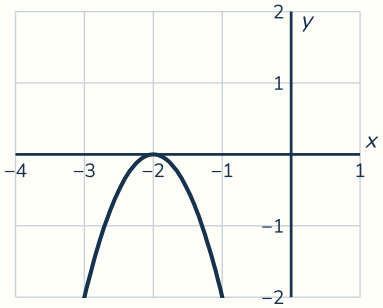
Find where f'(x) = 0 and say if each point is a maximum or a minimum.

1 $f(x) = 3x^2 - 12x + 15$

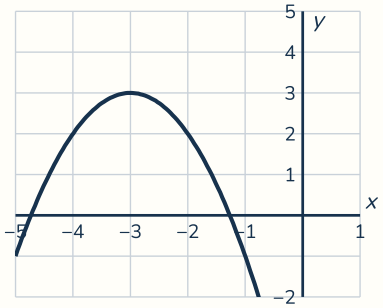
$f'(x) = 6x - 12 = 0$
$x = 2, f(2) = 3$
$f''(x) = 6 > 0$, so a minimum



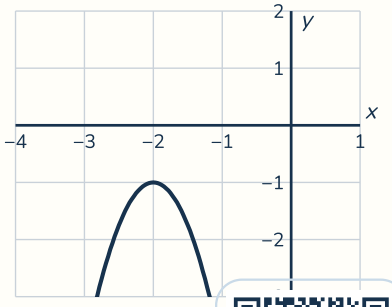
2 $f(x) = -2x^2 - 8x - 8$



3 $f(x) = -x^2 - 6x - 6$



4 $f(x) = -3x^2 - 12x - 13$



Using derivatives · Stationary points — Answer key

1. $f(x) = 3x^2 - 12x + 15$; stationary points → minimum $(2, 3)$

2. $f(x) = -2x^2 - 8x - 8$; stationary points → maximum $(-2, 0)$

3. $f(x) = -x^2 - 6x - 6$; stationary points → maximum $(-3, 3)$

4. $f(x) = -3x^2 - 12x - 13$; stationary points → maximum $(-2, -1)$