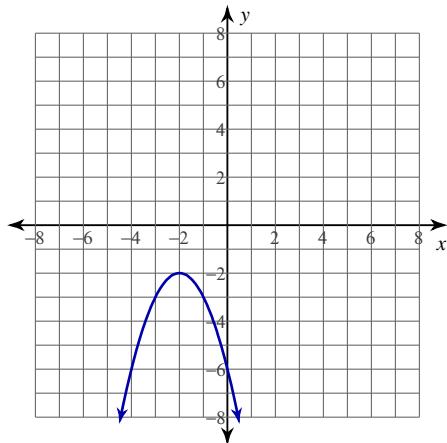


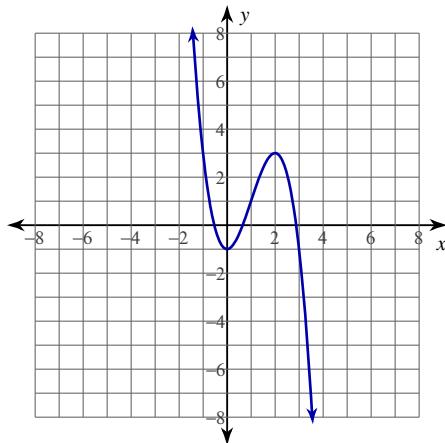
Horizontal Tangents

For each problem, find the points where the tangent line to the function is horizontal.

1) $y = -x^2 - 4x - 6$



2) $y = -x^3 + 3x^2 - 1$



3) $y = -x^3 + x^2 - 2$

4) $y = \frac{1}{x^2 - 1}$

For each problem, find the points where the tangent line to the function is horizontal. Indicate if no horizontal tangent line exists.

5) $y = x^3 - 2x^2 + 2$

6) $y = -x^3 + \frac{9x^2}{2} - 12x - 3$

7) $y = -\frac{2}{x - 3}$

8) $y = -\frac{1}{x^2 + 1}$

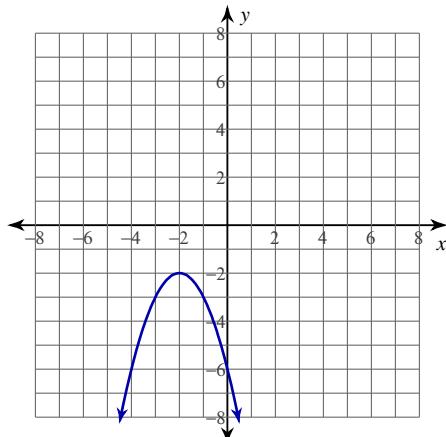
9) $y = (-2x + 4)^{\frac{1}{2}}$

10) $y = -\csc(x); [-\pi, \pi]$

Horizontal Tangents

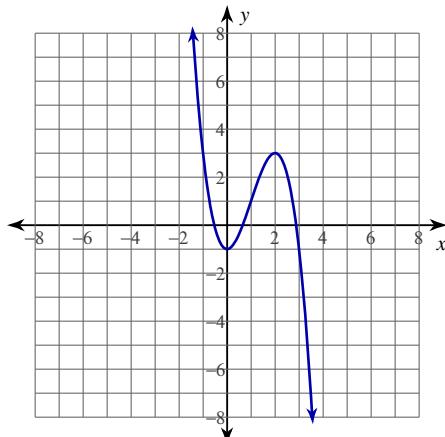
For each problem, find the points where the tangent line to the function is horizontal.

1) $y = -x^2 - 4x - 6$



(-2, -2)

2) $y = -x^3 + 3x^2 - 1$



(0, -1), (2, 3)

3) $y = -x^3 + x^2 - 2$

(0, -2), $\left(\frac{2}{3}, -\frac{50}{27}\right)$

4) $y = \frac{1}{x^2 - 1}$

(0, -1)

For each problem, find the points where the tangent line to the function is horizontal. Indicate if no horizontal tangent line exists.

5) $y = x^3 - 2x^2 + 2$

(0, 2), $\left(\frac{4}{3}, \frac{22}{27}\right)$

6) $y = -x^3 + \frac{9x^2}{2} - 12x - 3$

No horizontal tangent line exists.

7) $y = -\frac{2}{x-3}$

No horizontal tangent line exists.

8) $y = -\frac{1}{x^2 + 1}$

(0, -1)

9) $y = (-2x + 4)^{\frac{1}{2}}$

No horizontal tangent line exists.

10) $y = -\csc(x); [-\pi, \pi]$

\left(-\frac{\pi}{2}, 1\right), \left(\frac{\pi}{2}, -1\right)