2. $f'(x) = -2x + 3$

$-2x + 3 > 0 \iff -2x > -3 \iff x < \dfrac{3}{2}$

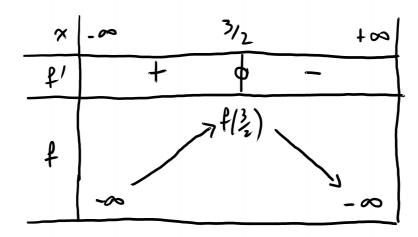| x	$-\infty$		$3/2$		$+\infty$
f'		$+$	ϕ	$-$	
f					

$$\lim_{x \to -\infty} f(x) = \lim_{x \to -\infty} (-x^2) = -\infty$$

$$f\left(\tfrac{3}{2}\right) = 2\left(\tfrac{3}{2}\right)^2 - 8\left(\tfrac{3}{2}\right) - 3 = 2 \times \frac{9}{4} - \frac{24}{2} - 3 =$$

$$= \frac{9}{2} - \frac{24}{2} - 3 = \frac{9 - 24 - 6}{2} = -\frac{21}{2} = -10,5$$

$$\lim_{x \to +\infty} f(x) = \lim_{x \to +\infty} (-x^2) = -\infty$$