7. (9 points) A continuous, differentiable function defined for all \( x \) has all of the following properties:

- \( f'(x) = 0 \) at \( x = 0 \) and \( x = 3 \)
- \( f(3) = 0 \)
- \( f'(-1) = -2 \)
- \( f' \) is increasing for \( x < 2 \)
- \( f' \geq 0 \) for \( x > 0 \)
- \( \lim_{x \to -\infty} f(x) = \infty \)

(a) (3 points) Sketch a possible graph of \( f \)

(b) (2 points) How many zeroes does \( f \) have? Explain your reasoning.

(c) (2 points) What can you say about the location of the zeroes? Explain your reasoning.

(d) (2 points) Is it possible that \( f'(-2) = -1 \)? Explain your reasoning.