$\rm BECA$ / Huson / Unit 11: Calculus 4 April 2023

Name:

11.4 Quiz: Derivatives

Use your own notebook, but no calculators or computers

Find the derivative of each polynomial function

1.
$$f(x) = x^3 + 4x^2$$

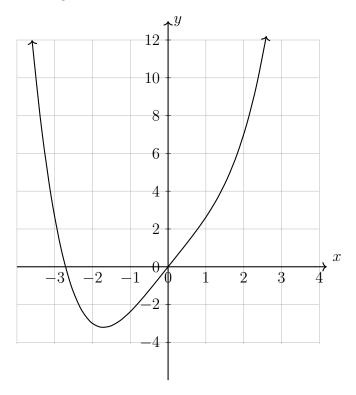
2.
$$f(x) = x^5 - 3x^4 + 2x^2$$

Evaluate the function and its derivative at a given point

- 3. Given $f(x) = 2x^3 5x^2$
 - (a) Find f(1)

(b) Find f'(1)

4. The graph shows the polynomial function $f(x) = 2x^4 + 5x$. Mark the portion of the function that is increasing.



5. A function is defined over the domain $-1 \le x \le 4$. The function, its derivative, and graph are given as:

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

$$\frac{dy}{dx} = -2x + 3$$

- (a) Find $\frac{dy}{dx}\Big|_{x=1}$
- (b) Mark the portion of the function that is increasing.

