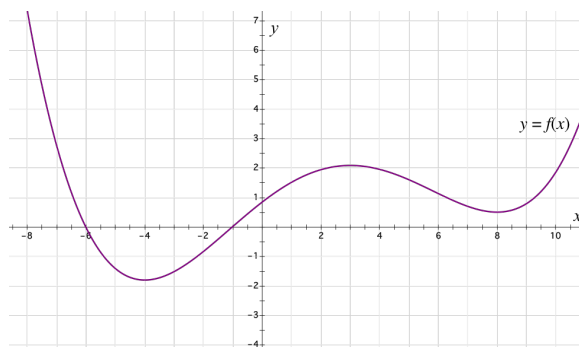


## Post-Video Questions Preview

Here are some questions you'll be asked after you finish watching the videos. Please read through these before watching the videos.

The graph of the function  $f$  is shown below.



**Problem 1** For these questions, refer to the graph above.

- |   |   |
|---|---|
| (a) On the interval $[-6, -4]$ , is $f'(x)$ : | (b) On the interval $[-4, -2]$ , is $f'(x)$ : |
| • $< 0$                                       | • $< 0$                                       |
| • $= 0$                                       | • $= 0$                                       |
| • $> 0$ , or                                  | • $> 0$ , or                                  |
| • more than one of the above                  | • more than one of the above                  |
| (c) On the interval $[0, 2]$ , is $f'(x)$ :   | (d) On the interval $[2, 4]$ , is $f'(x)$ :   |
| • $< 0$                                       | • $< 0$                                       |
| • $= 0$                                       | • $= 0$                                       |
| • $> 0$ , or                                  | • $> 0$ , or                                  |
| • more than one of the above                  | • more than one of the above                  |

**Problem 2** For these questions, refer to the graph above.

Learning outcomes:  
Author(s):

Post-Video Questions Preview

- (a) On the interval  $[-6, -4]$ , is  $f'(x)$ :
- increasing
  - decreasing, or
  - more than one of the above
- (b) On the interval  $[-4, -2]$ , is  $f'(x)$ :
- increasing
  - decreasing, or
  - more than one of the above
- (c) On the interval  $[0, 2]$ , is  $f'(x)$ :
- increasing
  - decreasing, or
  - more than one of the above
- (d) On the interval  $[2, 4]$ , is  $f'(x)$ :
- increasing
  - decreasing, or
  - more than one of the above

**Problem 3** For how many values of  $x$  in the interval  $[-8, 10]$  does  $f'(x) = 0$ ?

**Problem 4** From following expressions, identify the smallest and largest according to the numerical value they represent:

- $f'(8)$
- $\frac{f(8 + \Delta x) - f(8)}{\Delta x}$  for  $\Delta x > 0$
- $f(-6)$
- $f'(-6)$