

The Second Derivative: More Practice

1. The plot in Fig. 1 shows the derivative of a function. Which of the following pairs are larger?
- (a) $f'(1)$ or $f'(2)$?
 - (b) $f''(1)$ or $f''(2)$?
 - (c) $f(1)$ or $f(2)$?
 - (d) $f'(2)$ or $f'(4)$?
 - (e) $f''(2)$ or $f''(4)$?

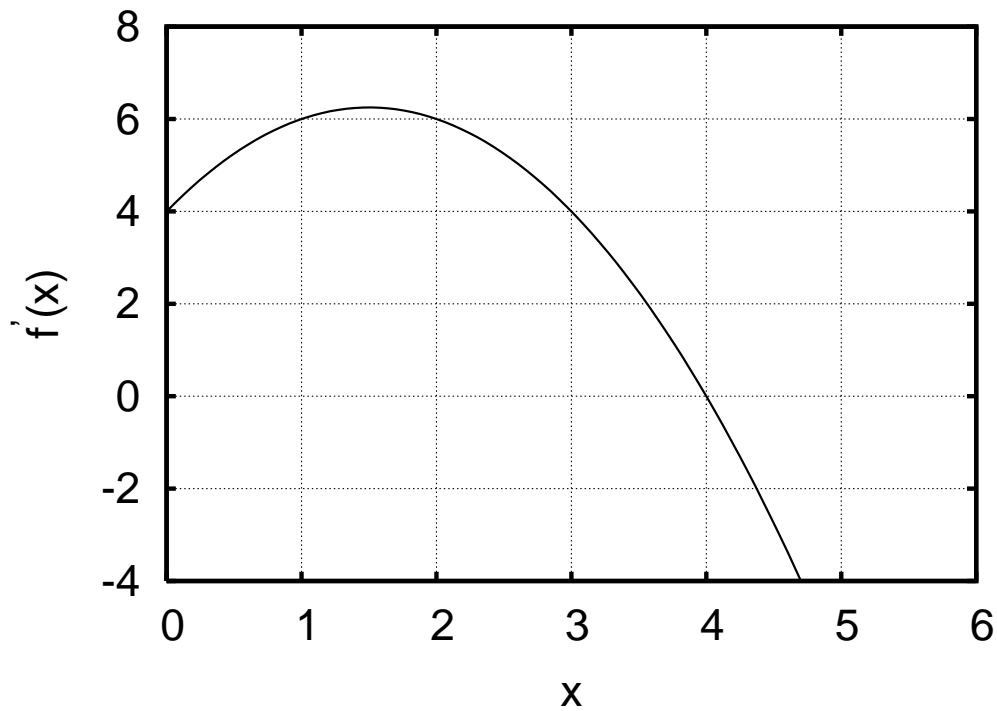


Figure 1: A plot of $f'(x)$.

2. There is a problem on the other side of this page.

3. A function (not its derivative) is plotted in Fig. 2.

- (a) For what values of x is $f(x)$ positive?
- (b) For what values of x is $f(x)$ negative?
- (c) For what values of x is $f'(x)$ positive?
- (d) For what values of x is $f'(x)$ negative?
- (e) For what values of x is $f''(x)$ positive?
- (f) For what values of x is $f''(x)$ negative?

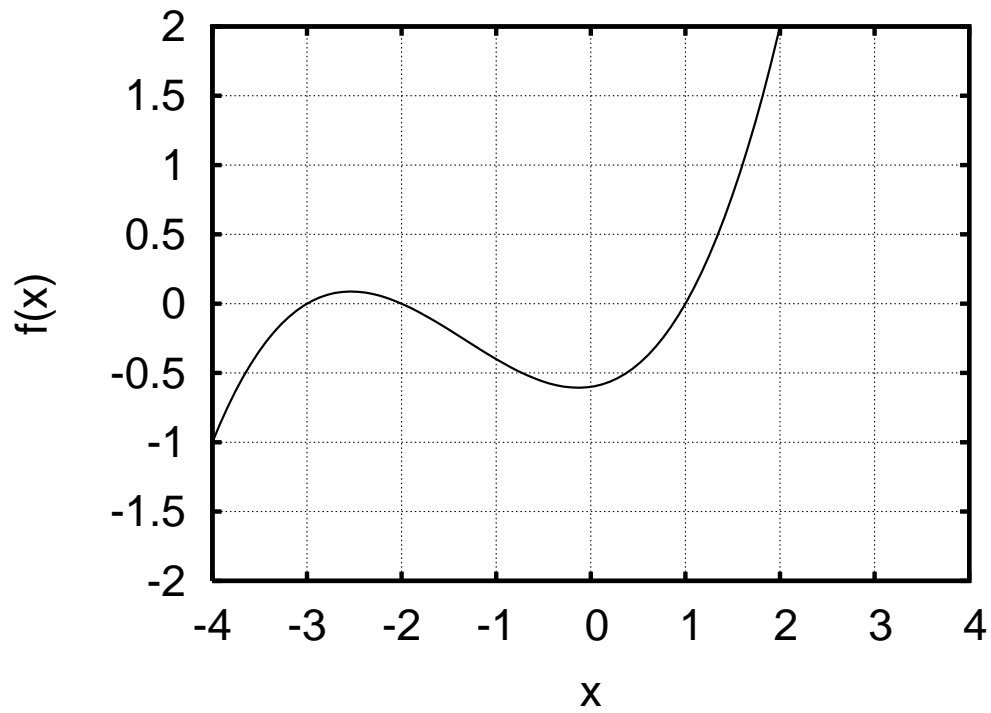


Figure 2: A plot of a function $f(x)$.