

1. Answer the following for the function  $f(x) = \frac{1}{x^2}$ .

(a) Find any vertical or horizontal asymptotes.

(b) Where is  $f$  increasing/decreasing?

(c) Find all local max/min.

(d) Where is  $f$  concave up/down?

(e) Find all inflection points.

(f) Graph  $f(x)$ .

2. Answer the following for the function  $f(x) = \frac{x^2 - x - 2}{x - 3}$ .

(a) Find any vertical or horizontal asymptotes.

(b) Where is  $f$  increasing/decreasing?

(c) Find all local max/min.

(d) Where is  $f$  concave up/down?

(e) Find all inflection points.

(f) Graph  $f(x)$ .

3. Answer the following for the function  $f(x) = \frac{x^2 - x - 2}{x - 3}$ .

(a) Find any vertical or horizontal asymptotes.

(b) Where is  $f$  increasing/decreasing?

(c) Find all local max/min.

(d) Where is  $f$  concave up/down?

(e) Find all inflection points.

(f) Graph  $f(x)$ .