

# 04 – Graphing Rational Functions

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1. Graph  $f(x) = \frac{3x}{x^2 - x - 6}$ .

(a) Find the  $y$ -intercept.

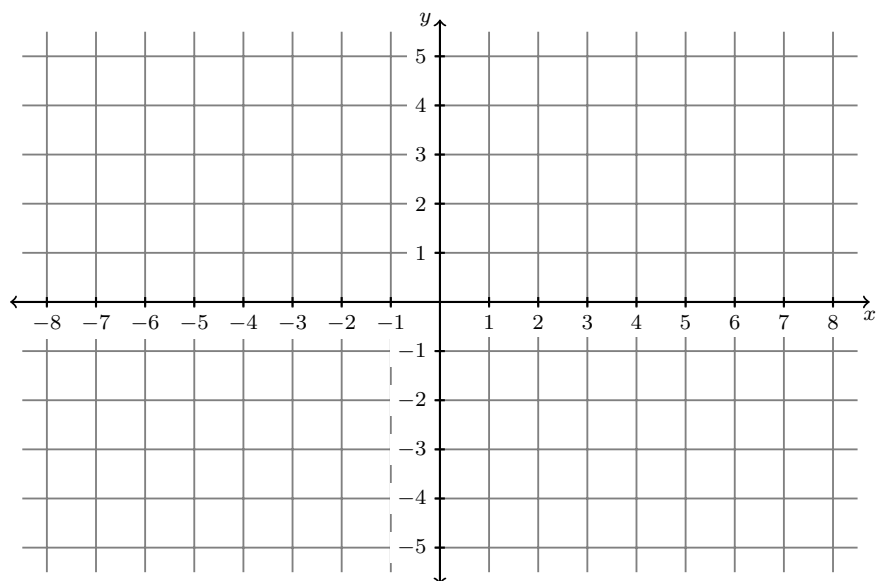
(c) Find the horizontal asymptotes.

(b) Find the  $x$ -intercepts.

(d) Find the vertical asymptotes.

(e) Plot points in each interval between  $x$ -intercepts and vertical asymptotes.

(f) Sketch the graph.



2. Graph  $f(x) = \frac{3x^2 + 3x - 6}{-2x^2 + 4x + 16}$ .

(a) Find the  $y$ -intercept.

(c) Find the horizontal asymptotes.

(b) Find the  $x$ -intercepts.

(d) Find the vertical asymptotes.

(e) Plot points in each interval between  $x$ -intercepts and vertical asymptotes.

(f) Sketch the graph.

