

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [5 points] Consider $f(x) = \frac{6(x+1)}{(x+3)(x-2)}$.

(a) Find the domain.

(b) Find the vertical asymptotes.

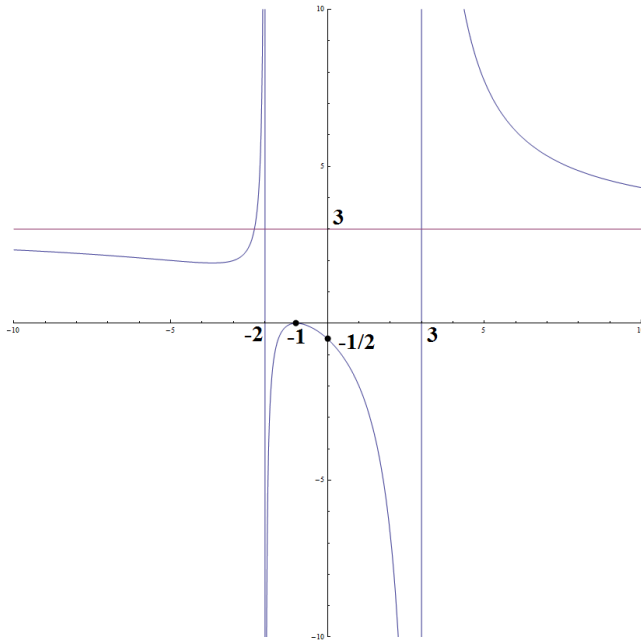
(c) Find the horizontal asymptote.

(d) Find the y -intercept.

(e) Find the x -intercept(s).

(f) Sketch the graph of $y = f(x)$, clearly labeling all important points and showing all features.

2. [5 points] Consider the function $y = f(x)$ whose graph is shown below.



- Find the domain.
- Find the vertical asymptotes.
- Find the horizontal asymptote.
- Find the y -intercept.
- Find the x -intercept(s).
- Find a possible formula for $f(x)$.