

Name(s): _____

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Work with partners in groups of 2-4. **This is required.**

1. Find the domain and any asymptotes of the following rational functions.

(a) $\frac{x^3 - 8}{x^2 - 5x + 6}$

(b) $\frac{x^4 - 1}{x^2 - x}$

2. Solve the following inequalities.

(a) $\frac{1}{x-2} < \frac{2}{3x-9}$

(b) $\frac{x-4}{2x+4} \geq 1$

3. Graph the following rational function. Clearly label any asymptotes and intercepts.

$$R(x) = \frac{x^3 + 1}{x^2 + 2x}$$

