

Work together. Use the blank space on this paper; if you run out of space, continue to another sheet of your own.

Name: _____

Pre-Calculus Mid-Term Review Sheet 1

Sketch the graph of the rational function. Find any vertical and horizontal asymptotes.

1. $f(x) = -\frac{4}{x^2 - 4}$

2. $f(x) = \frac{2}{x+2} + 3$

Find the inverse of the function.

3. $f(x) = \frac{x-8}{6}$

4. $f(x) = 4\sqrt{-5x+2} + 3$

5. If $f(x) = x - 1$ and $g(x) = \sqrt{x+3}$, find $(f \circ g)(x)$.

6. If $f(x) = 3 + 4x$ and $g(x) = x + 5$, find (a) $(f \circ g)(x)$ and (b) $(g \circ f)(x)$.

Find the domain of the function.

7. $f(x) = \frac{\sqrt{x-10}}{x^2 - 4x + 3}$

8. $f(x) = \sqrt[6]{x^3}$

Identify any horizontal and vertical asymptotes for the graph of the function.

9. $f(x) = \frac{4x+5}{4x+3}$

10. $f(x) = \frac{2x^2}{x^2 - 4}$