**Chapter 1 Review**

1. Graph $y= \frac{3x}{x-4}$.



1. Vertical Asymptotes:
2. Horizontal Asymptotes:
3. Domain:
4. Range:
5. Zeros:
6. Increasing/Decreasing Intervals:
7. End Behavior:
8. Symmetry:
9. Continuous or Discontinuous (removable/nonremovable):
10. Local Extrema:
11. Bounded:
12. Graph f(x) = $\frac{x+3}{x^{2}-9}$



1. Vertical Asymptotes:
2. Horizontal Asymptotes:
3. Domain:
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11. Bounded:
12. Graph. f(x) = 2x + 3 if x > 0

 3 - $x^{2}$ if x < 0



1. Graph. f(x) = |x| if x < 1

 $x^{2}$ if x > 1



1. a) Is f(x) = $\sqrt[3]{x-8}$ a function?

 b) Is f(x) = $\sqrt[3]{x-8}$ one-to-one?

c) Find the inverse of f(x) = $\sqrt[3]{x-8}$. State the domain of the inverse.

1. a) Is f(x) = $\frac{x+2}{3}$ a function?

 b) Is f(x) = $\frac{x+2}{3}$ one-to-one?

c) Find the inverse of f(x) = $\frac{x+2}{3}$. State the domain of the inverse.

1. a) Is f(x) = $\sqrt{x+2}$ a function?

 b) Is f(x) = $\sqrt{x+2}$one-to-one?

c) Find the inverse of f(x) = $\sqrt{x+2}$. State the domain of the inverse.

1. Confirm that *f* and *g* are inverses when f(x) = $x^{3}+ 1$ and g(x) = $\sqrt[3]{x-1}$.
2. Confirm that *f* and *g* are inverses when f(x) = $\frac{7}{x}$ and g(x) = $\frac{7}{x}$.