

AP Calculus Absolute Value, Domain & Range Review

Name: _____

Date: _____

- The number of solutions of the equation $|x| = x^2$ is:
- How many positive integers can be represented in the form $\left| \frac{7N}{3} - 12 \right|$ for some odd integer N where $-20 \leq N \leq 30$?
- The solution set for $|x^2 - 1| < 3$ is
- If $|x|$ denotes the absolute value of x , then $|x| > 3$ is equivalent to:
- If $|4 - 3x| > 8$
- Solve the inequality $|x| > 5$. The solution for x is
- Express using absolute value notation: $x < -3$ or $x > 3$
- Express using absolute value notation: $x < -9$ or $x > 9$
- Express $-2 < x < 2$ using absolute value notation.
- Express $-7 \leq x \leq 7$ using absolute value notation.
- Use absolute value notation to describe: "The difference between x and 9 is at least 4."
- Find the domain of the function $y = \frac{1}{x}$.
- Find the domain of the function $y = \frac{1}{x+2}$.
- Find the range of $f(x) = \sqrt{2x+3}$.
- What is the domain of $f(x) = \frac{\sqrt{x^2-9}}{x-5}$?
- Find the horizontal asymptote of $y = \frac{7}{x-4}$.
- The graph of $y = \frac{3x^2}{x^2-4}$ has horizontal asymptote(s)

A. $y = 3$	B. $y = -2$
C. $y = 2$	D. $y = \pm 2$
- Find the vertical asymptote(s) of $y = \frac{x^2}{x^2-1}$.

A. $x = \pm 1$	B. $y = x$
C. $y = 1$	D. $x = 0$
- The graph of $y = \frac{2x^3}{x^4-16}$ has vertical asymptote(s)

A. $x = 0$	B. $y = 0$
C. $x = \pm 2$	D. $x = \pm 4$
- The graph of $y = \frac{5x^2}{x^2-9}$ has horizontal asymptote(s)

A. $y = 5$	B. $y = -3$
C. $y = 3$	D. $y = \pm 3$