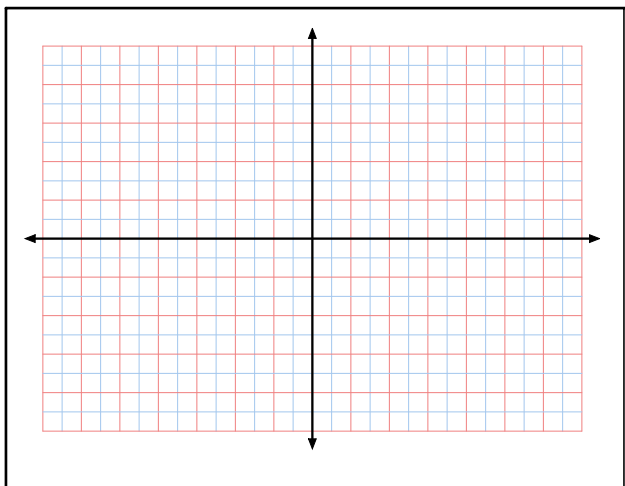


factors) has a **slant asymptote** if the degree of the numerator exceeds the degree of the denominator by 1. To find the slant asymptote, use long division to rewrite the rational function as the sum of a first-degree polynomial and another rational function.

$$f(x) = \frac{x^2 - 2x + 4}{x - 2} \quad \text{Rewrite using long division.}$$
$$= x + \frac{4}{x - 2} \quad \text{y = x is a slant asymptote.}$$

Oct 9 - 7:32 AM



XY axis - medium

Example 2 Analyzing and Sketching the Graph of a Rational Function

Analyze and sketch the graph of $f(x) = \frac{x^2 - 2x + 4}{x - 2}$.

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