

# Rational Polynomials: Graphing and Asymptotes

Find the intercepts, if there are any.

**Step 1:** Set the numerator to 0 to solve for horizontal intercepts.

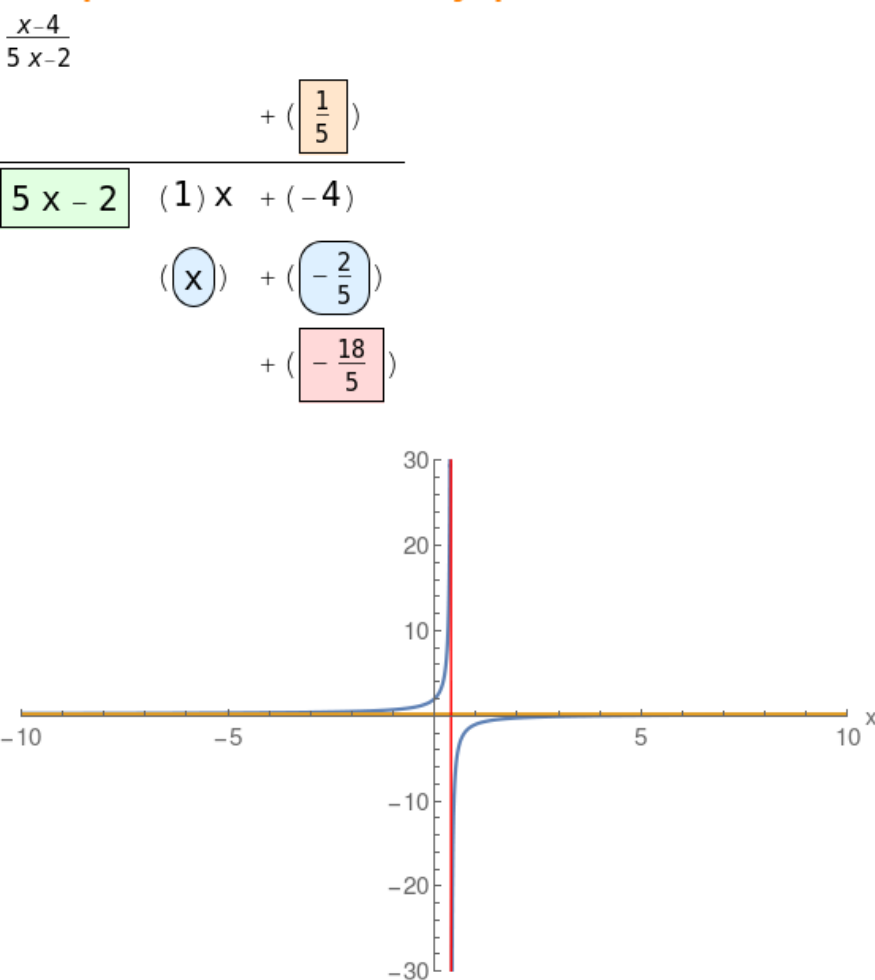
**Step 2:** Set the x to 0 to solve for vertical intercept.

**Step 3:** Set the denominator to 0 to solve for vertical asymptotes.

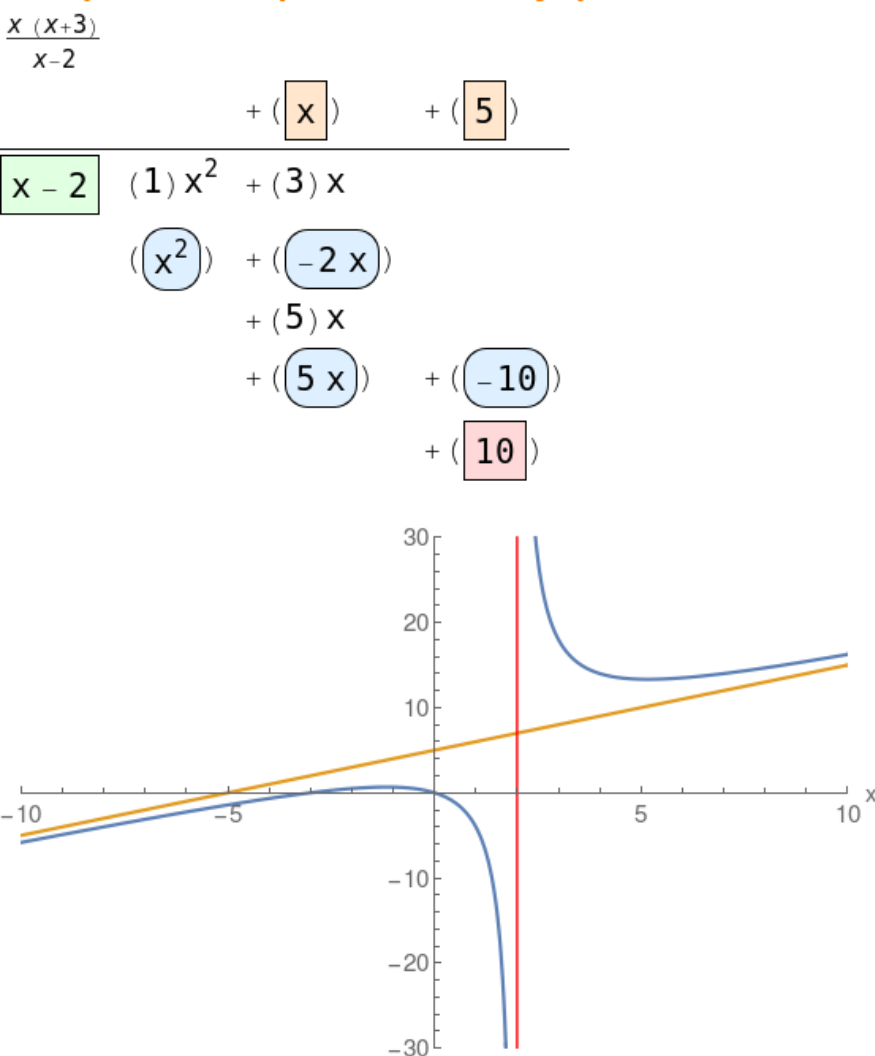
**Step 4:** Perform a long division to find the quotient which specifies the oblique asymptote.

**Note:** Blue curve the actual Rational function.  
Red and Gold asymptotes.

## Example: Horizontal Asymptote



## Example: Oblique Linear Asymptote



## Example: Multiple Vertical Asymptotes

