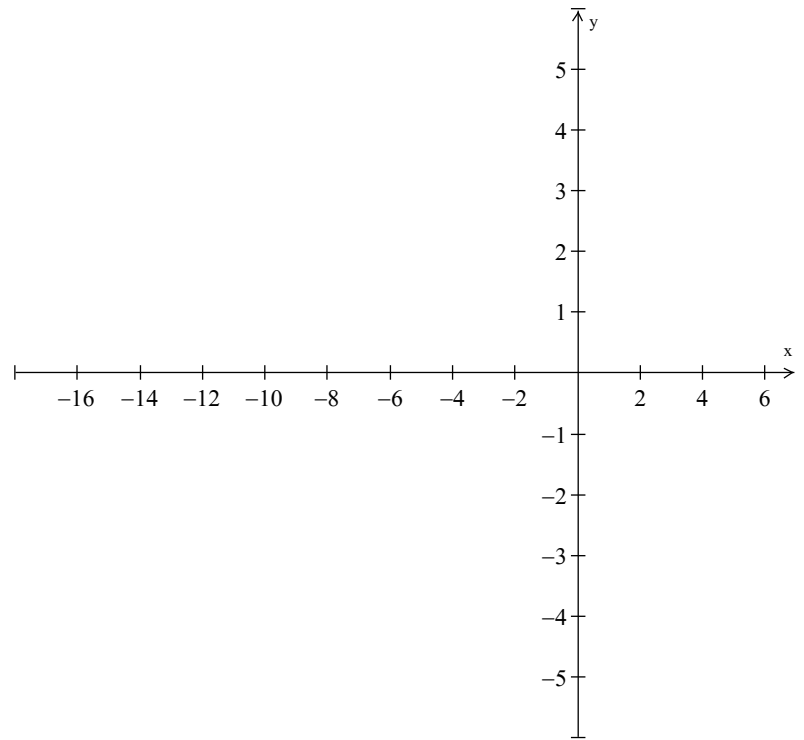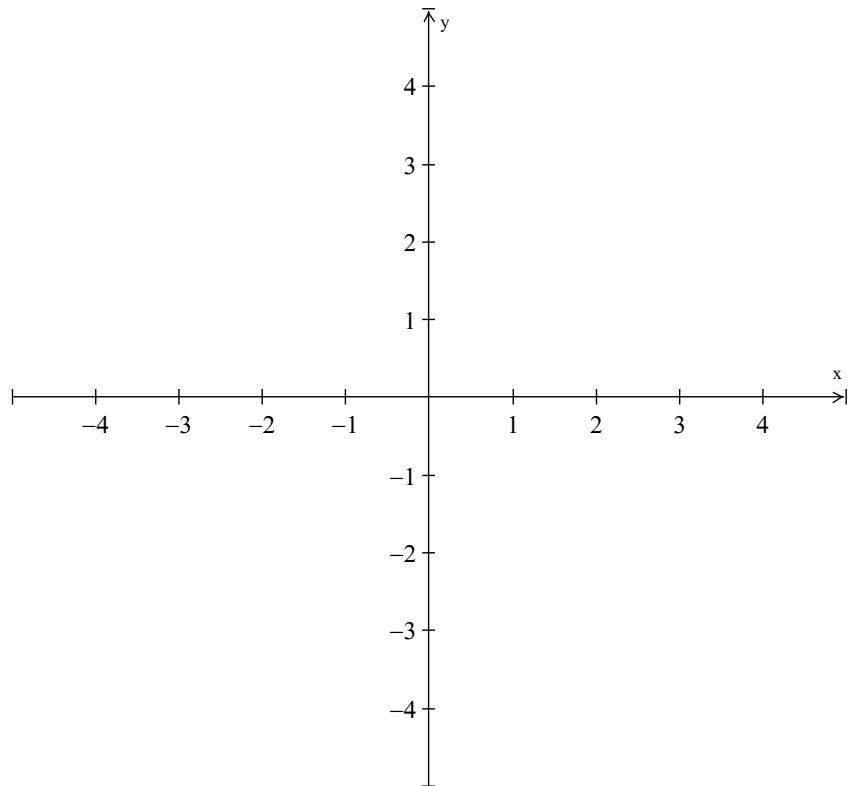**Rational Functions**

Find the x and y intercepts, POE's, and vertical asymptotes of the given equations. Then sketch a graph on the axes to the right. Use your graphing calculator to verify your graphs but label each intercept, POE, and asymptote. Remember that not every rational function has all three traits.
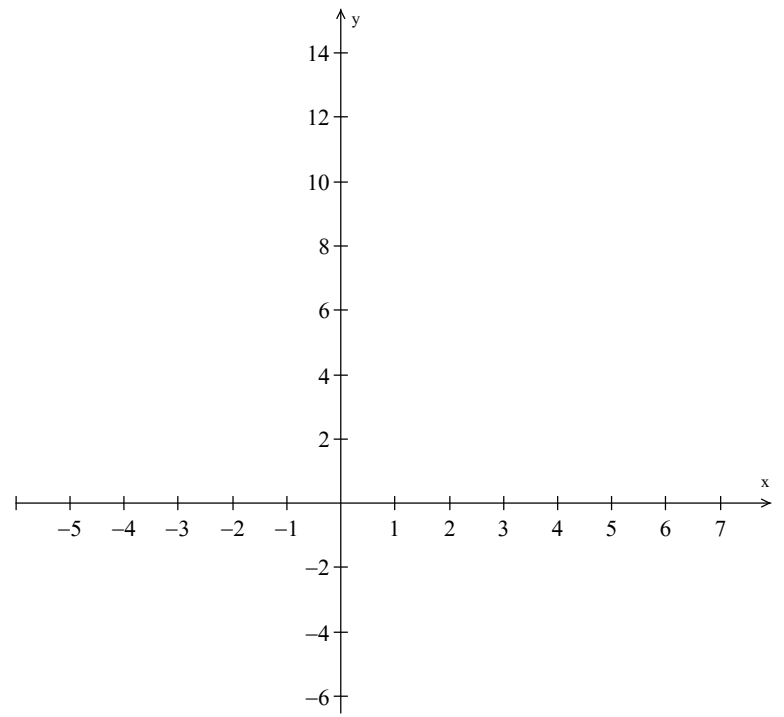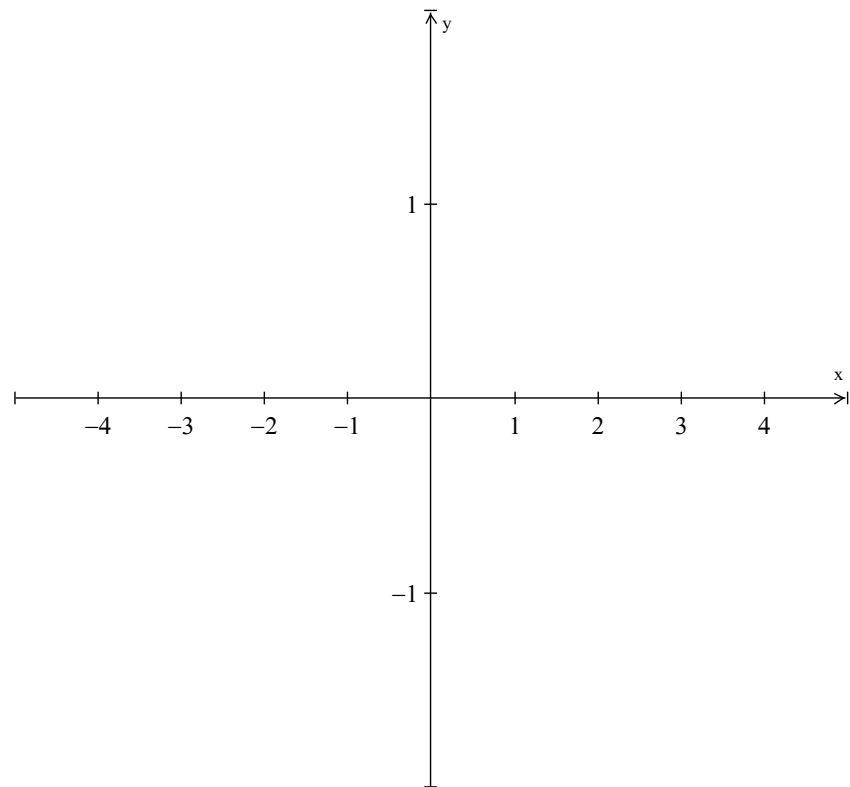
1) $y = \dfrac{x^2 - 4x - 5}{x^2 + 7x + 6}$

2) $y = \dfrac{x^2 - 4}{x^3 - 2x^2 - x + 2}$

3) $y = \dfrac{x^2 + 3x + 2}{2x - 3}$

4) $y = \dfrac{x^2 - 1}{x^3 + 1}$

5) $y = \dfrac{x-1}{x^2 - x + 1}$

(compare this with #4)