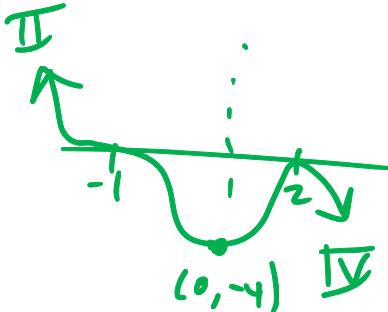
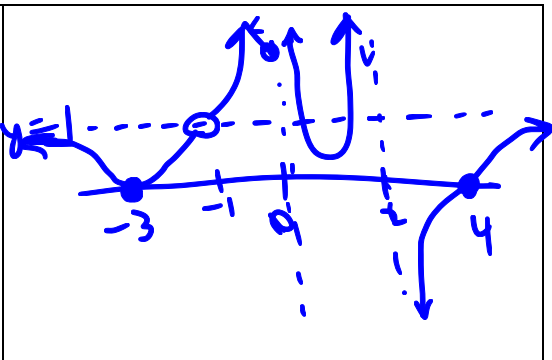


# Polynomials Cover Page; What I know and can do

Question	First Day	Last Day
What is a polynomial?		$p(x) = ax^2 + bx + c$ <p>anything that is sum of powers of x (no negative or not whole #)</p>
What does the function $p(x) = -(x+1)^3(x-2)^2$ look like?  (solving)		
How does long division work?		$\frac{x^3+3}{x-1} \Rightarrow x^2 +$ $\frac{6x+7}{5} \Rightarrow 12 + 1 + \frac{2}{5}$ <p>keep dividing the divisor in whole parts until you have a remainder.</p>
What is the remainder when $x^5 - x^3 + 2x - 3$ is divided by $x + 1$ ?  (reasoning)		$(-1)^5 - (-1)^3 + 2(-1) - 3$ $-1 + 1 - 2 - 3 = \boxed{-5}$
What is an asymptote?		<p>vertically a point of discontinuity (trend as x gets close to)</p> <p>and horizontally the point of discont. a trend as x gets large</p>

<p>What does the function  <math display="block">\frac{(x+3)^2(x+1)(x-4)}{x^2(x+1)(x-2)}</math>         Look like?</p> <p>(solving)</p>		
<p>Why can we cross a horizontal asymptote but not a vertical asymptote?</p>		<p>Horizontal asymptotes are trends as <math>x \rightarrow \infty</math> and <u>NOT</u> a discont.</p> <p>But vertical asymptote are places where we have a discont.</p>