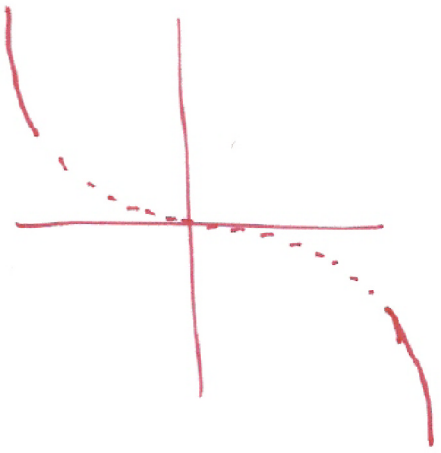
Problem 7: Let $P(x) = (x+2)(x-2)(3-x)$.

(a) What is the leading term?

$-x^3$



(b) What are the x-intercepts and what is the linear behavior of P near them?

- $x = -2$, $x \sim -2 \Rightarrow P(x) \sim -20(x+2)$
- $x = 2$, $x \sim 2 \Rightarrow P(x) \sim 4(x-2)$
- $x = 3$, $x \sim 3 \Rightarrow P(x) \sim 5(3-x)$

(c) Sketch the graph of $y = P(x)$.

$P(0) = -12$