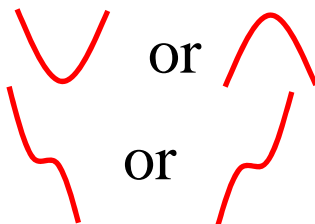
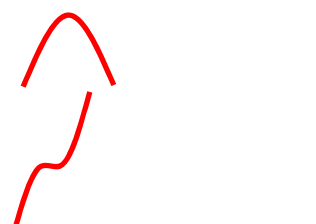


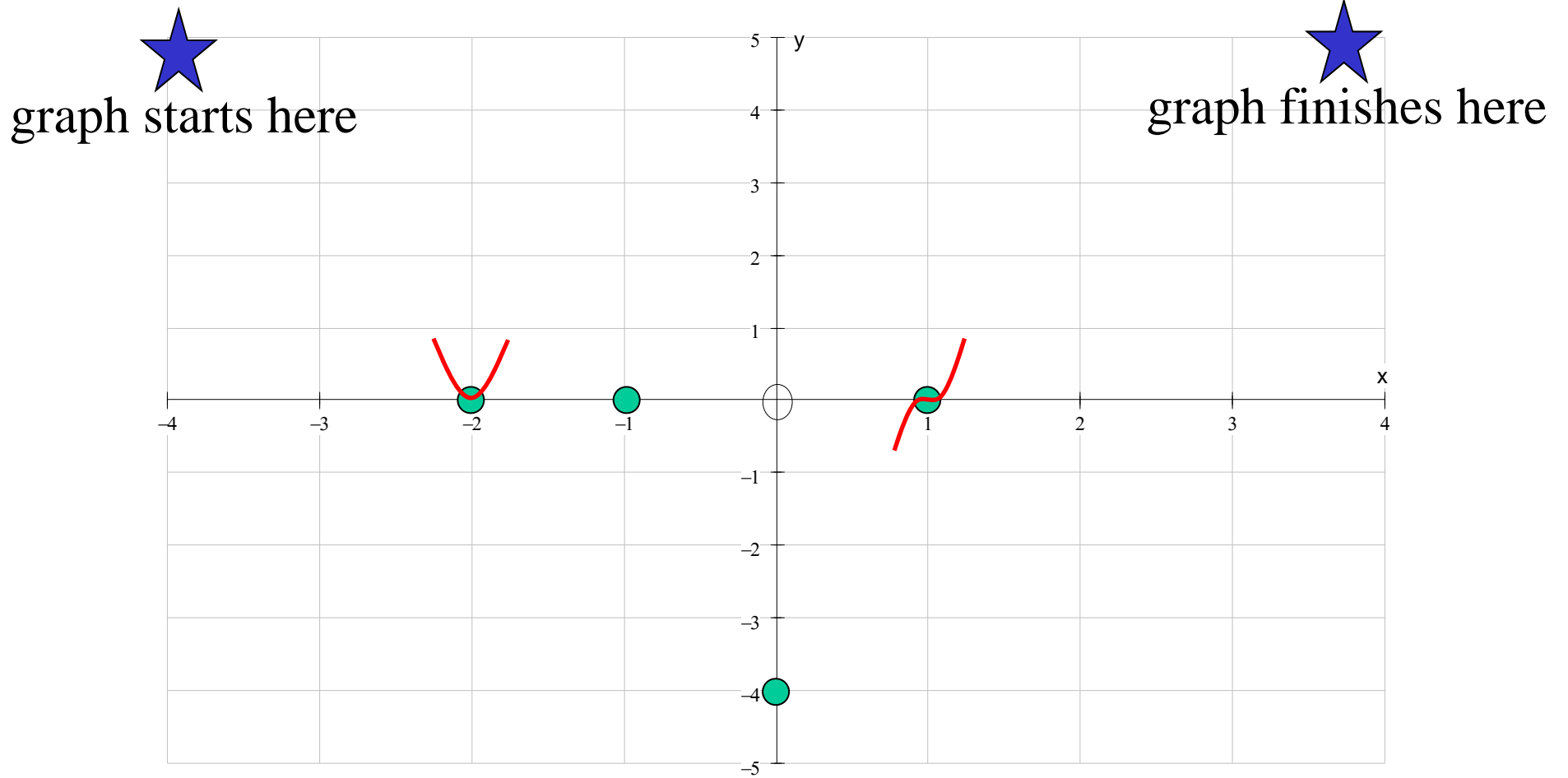


Sketching Polynomials

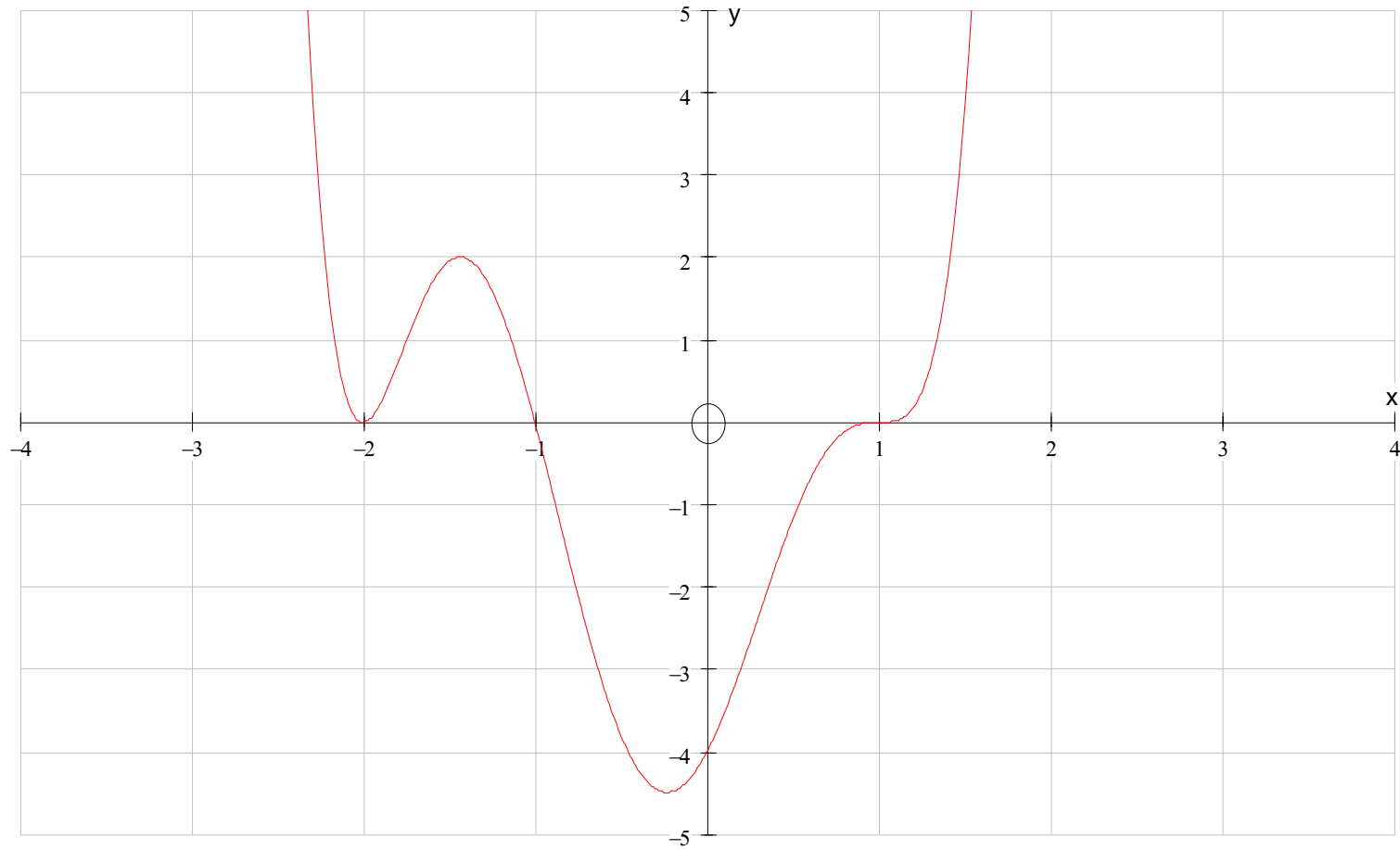
When drawing $y = P(x)$

- y intercept is the constant
- x intercepts are the roots
- as $x \rightarrow \pm\infty$, $P(x)$ acts like the leading term
- even powered roots look like  or 
- odd powered roots look like  or 
- If the polynomial can be written as $(x - a)^n$, then it is a basic curve

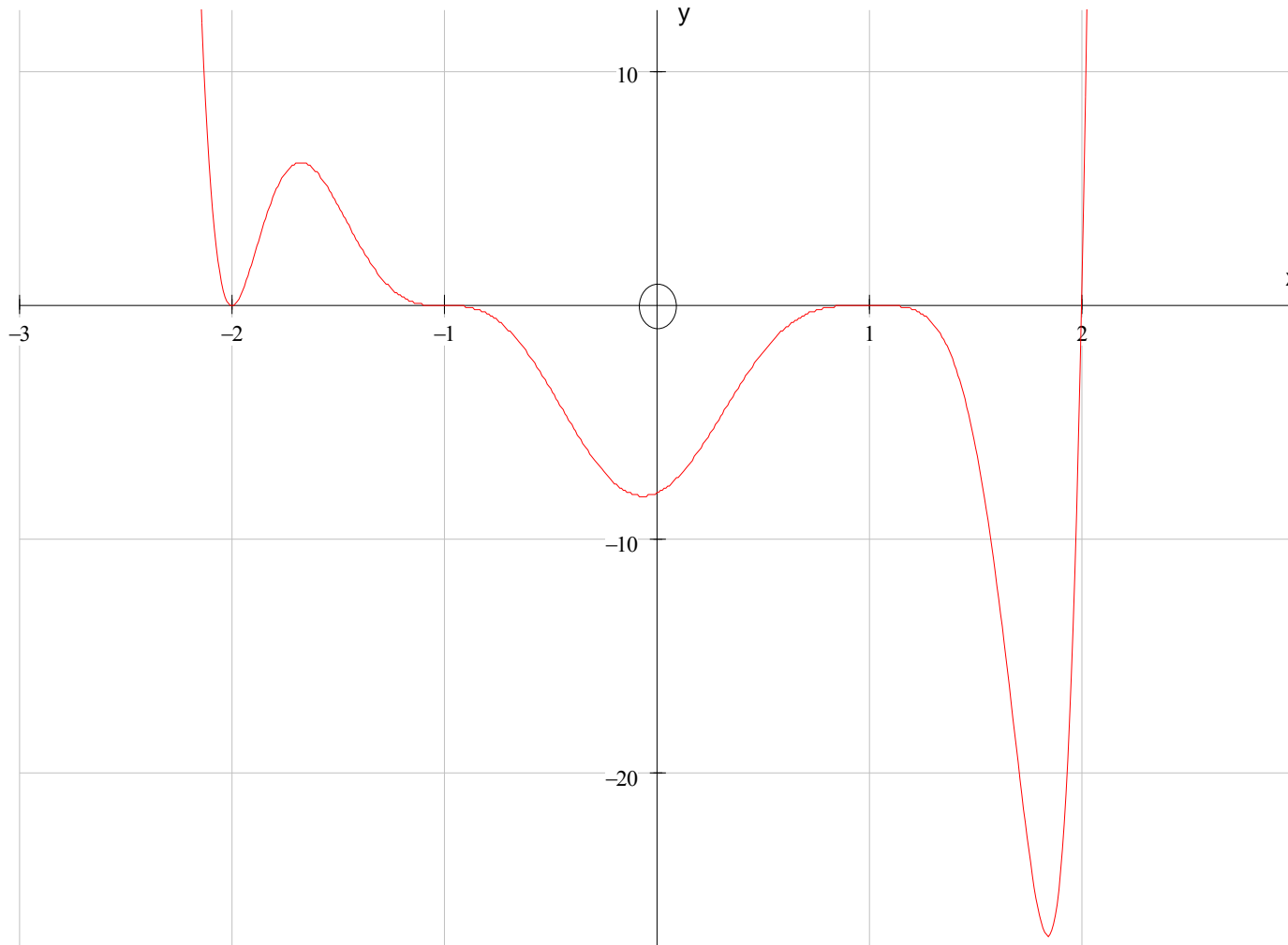
e.g. $y = (x+1)(x-1)^3(x+2)^2$



e.g. $y = (x+1)(x-1)^3(x+2)^2$



e.g. $y = (x-1)^4(x+1)^3(x+2)^2(x-2)$



Exercise 10B; 3cei, 4deghi, 6ac, 7ac, 9, 10, 11