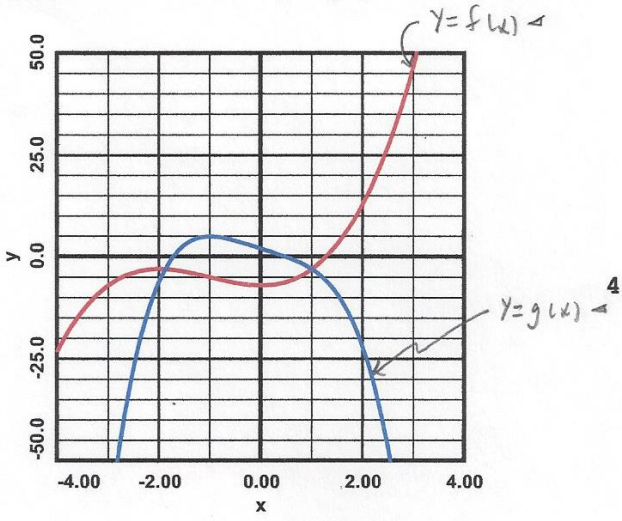
PRE–AP ALGEBRA 2

3B.7 CLASSWORK

1) Without using your calculator, *i.e.,* by using the Leading Term Test, identify
$f(x) = x^3 + 3x^2 - 7$ and
$g(x) = -x^4 - 4x + 2$ on the graph.



Problems **2** through **4** concern the function
$f(x) = (x-2)^2(x-4)(x-6)^3$.

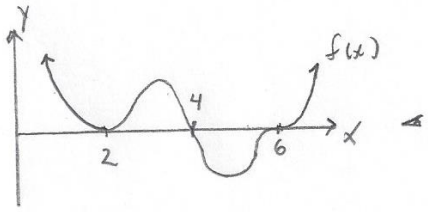
2) **a)** State the degree of $y = f(x)$.

b) State the roots (and their multiplicities) of $y = f(x)$.

a) 6

b) $x=2$, mult. = 2
$x=4$, mult. = 1
$x=6$, mult. = 3

3) Without using a calculator, sketch the character of the graph of $y = f(x)$.



4) Check your answer to problem **3** by using your calculator to graph $y = f(x)$ on the axes below.