Review 2.4-2.5

Divide f(x) by d(x). Then write a summary statement in polynomial form and fraction form.

$f(x) = x^4 - 3x^3 + 6x^2 - 3x + 5$ $d(x) = x^2 + 1$

Use the factor theorem to determine whether the first polynomial is a factor of the second polynomial.

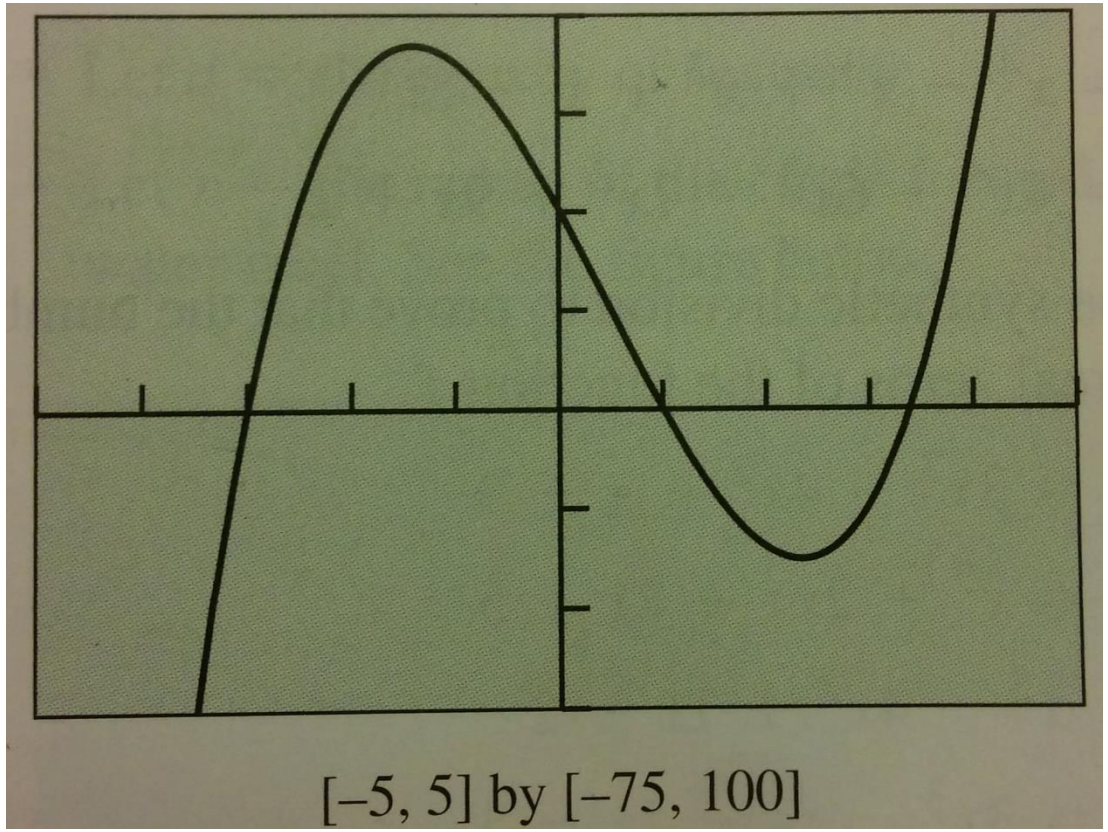
$x - 3$ and $x^3 - x^2 - x - 15$

Use the factor theorem to determine whether the first polynomial is a factor of the second polynomial.

$x - 2$ and $x^3 + 3x - 4$

Use the graph to guess possible linear factors of f(x). Then completely factor f(x) with the aid of synthetic division.

$5x^3 - 7x^2 - 49x + 51$



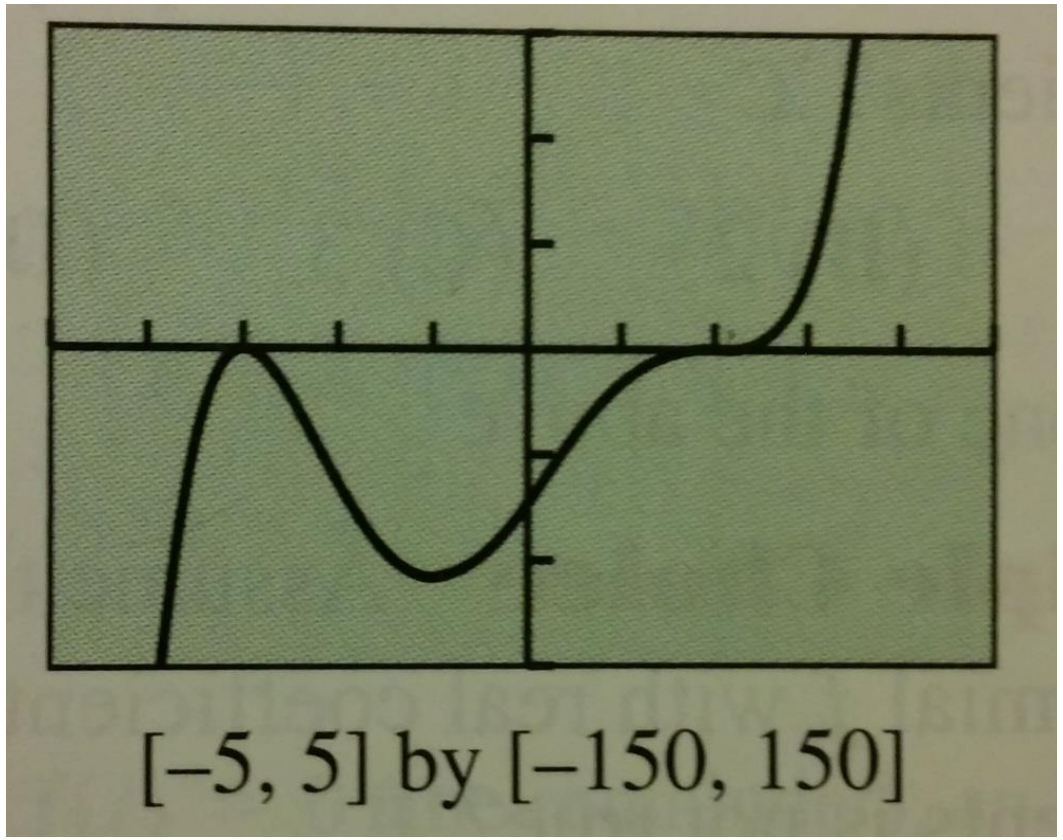
Using only algebraic methods, find the cubic function with the given table of values

x	-4	0	3	5
y	0	180	0	0

Find all of the real zeros of the function given that x = 4 is a zero. Identify each zero as rational or irrational.

$f(x) = x^3 - 6x^2 + 7x + 4$

Determine the zeros and multiplicity from the graph below. Then write the equation of the function in factored form.



Given the zeros and multiplicity write the equation of the function in factored form. Then sketch a graph of the function.

x = - 2 (multiplicity of 3)

x = 4 (multiplicity of 2)

Find the polynomial function with leading coefficient 2 that has the given degree and zeros

Degree: 3, with 2, 1/2, and 3/2 as zeros