

Review 2.4-2.5

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

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

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

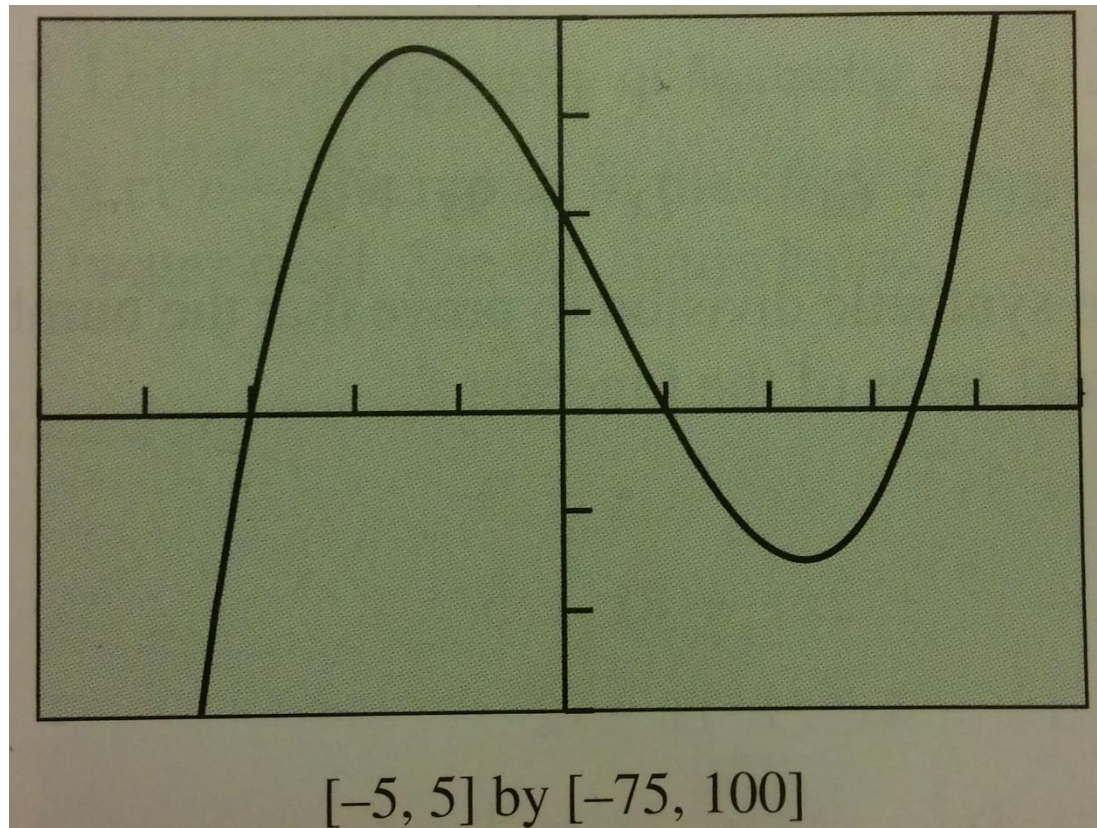
$$x - 3 \quad \text{and} \quad x^3 - x^2 - x - 15$$

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

$$x - 2 \quad \text{and} \quad x^3 + 3x - 4$$

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

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



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

Degree: 3, with 2, $\frac{1}{2}$, and $\frac{3}{2}$ as zeros

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

x	-4	0	3	5
y	0	180	0	0

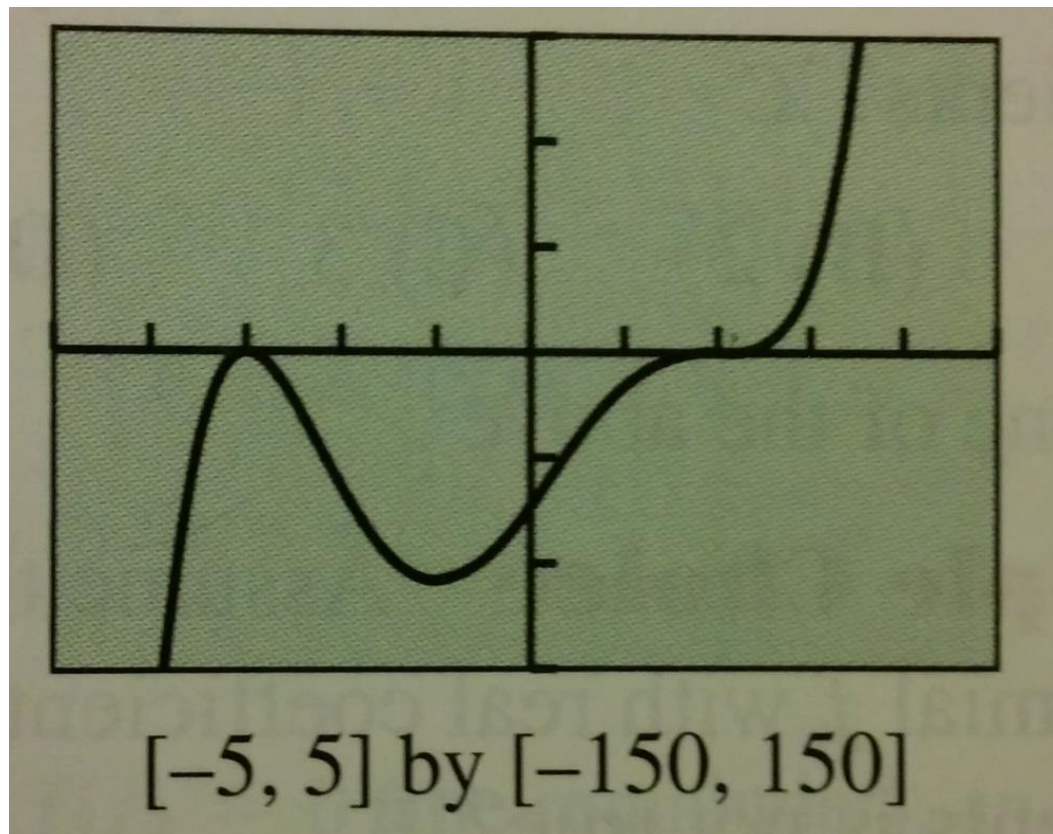
Find all of the real zeros of the function given that $x = 4$ is a zero. Identify each zero as rational or irrational.

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

Write a polynomial function of minimum degree in standard form with real coefficients whose zeros include those listed.

$$2i, \sqrt{5}$$

Determine the zeros and multiplicity from the graph below



Find all of the real zeros of the function and write a linear function of the function.

$$f(x) = x^3 - 10x^2 + 44x - 69$$

Using the given zero, find all of the zeros and write a linear factorization of the function.

$4i$ is a zero of $f(x) = x^4 + 13x^2 - 48$