Pop Quiz

Math 113-001/6 College Algebra
Colorado Mesa University Fall 2022

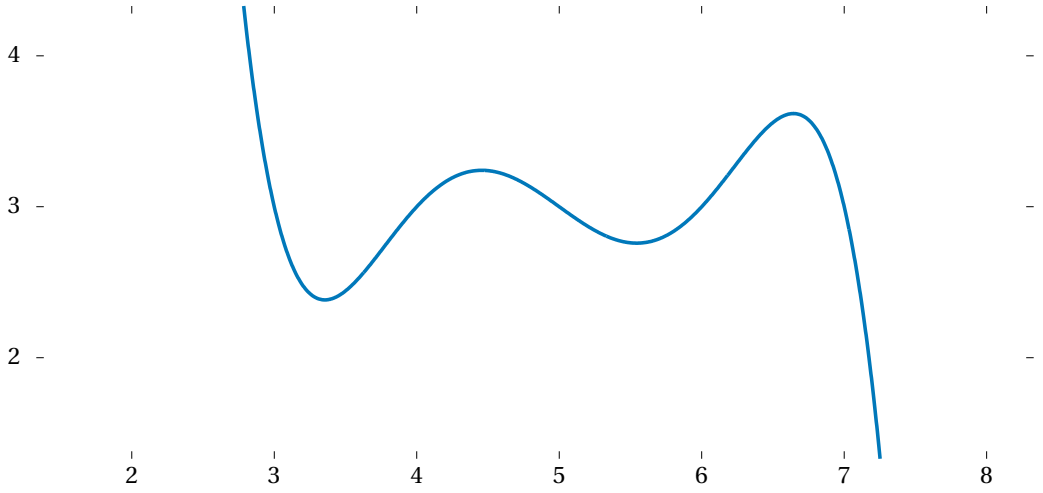
1. How can you find all the roots of the polynomial $x^4 - 7x^3 + 12x^2$ without using technology?

2. How can you find all the roots of the polynomial $x^4 - 7x^2 + 12$ without using technology?

3. What is an equation of the unique degree-four polynomial whose graph passes through all of these points?

$(1,-3)$ $(2,2)$ $(3,5)$ $(4,3)$ $(5,1)$

4. What degree might the polynomial whose graph is below have?



5. How can you find all the roots of the polynomial $x^3 - x^2 - 8x + 12$ without using technology, if you know one of the roots is 2?

6. Fifty counting numbers (positive whole numbers) are written down in a list in such a way so that the sum of any four consecutive numbers is 53. The first number is 3, the 19th number is eight times the 13th number, and the 28th number is five times the 37th number. What is the 44th number?