2.3 & 2.4 Graph, Solve, and Analyzing Polynomials
Markerboard Problems

- On your markerboard…

1. Write a polynomial function in factored form that has a zero of 0 with multiplicity 2 and crosses the x-axis at a zero of 1

2. Write a polynomial function that has two terms with end behavior $\lim_{x \to -\infty} f(x) = \infty$ and $\lim_{x \to \infty} f(x) = -\infty$

3. Write a list of all potential zeros of $f(x) = 2x^3 + x - 7$ using the Rational Zeroes Theorem

4. Write a summary statement in fraction form if $f(x) = x^3 - x + 1$ is divided by $g(x) = x - 2$

- On your markerboard, create a sketch of a polynomial…

5. With odd degree and negative leading coefficient

6. With even degree and positive leading coefficient

7. With a degree of 4, three real zeros, and a negative leading coefficient

8. With end behavior $\lim_{x \to \infty} f(x) = \infty$ and $\lim_{x \to -\infty} f(x) = \infty$

9. With one real zero and the following end behavior: $\lim_{x \to \infty} f(x) = -\infty$ and $\lim_{x \to -\infty} f(x) = \infty$

10. With multiplicity of 2 @ $x = 4$ and multiplicity of 1 @ $x = -2$

11. That has a negative leading coefficient, multiplicity of the zero $x = -5$ is 3, and the multiplicity of the zero $x = -3$ is 2,

12. $f(x) = x(x - 3)^2(x - 7)^3$

13. With degree of 5, maximum number of turning points, and three real zeros