

Graphing Polynomial Functions — Part C: Sketching from Factored Form

State the degree, end behavior, zeros with multiplicity, and y-intercept, then sketch.

Name: _____

Date: _____

Period: _____

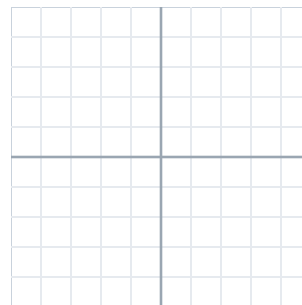
Set the ends from the leading term, mark each zero as a cross or a touch, plot the y-intercept, and draw a smooth curve. A degree-n graph has at most $n - 1$ turning points.

1. $f(x) = (x + 2)(x - 1)(x - 3)$

Degree: _____ End behavior: _____

Zeros & multiplicity: _____

y-intercept: _____

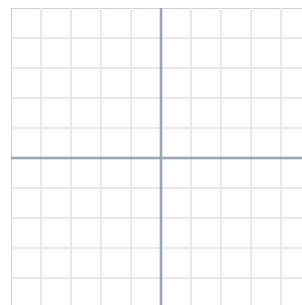


2. $f(x) = -(x - 1)^2(x + 2)$

Degree: _____ End behavior: _____

Zeros & multiplicity: _____

y-intercept: _____

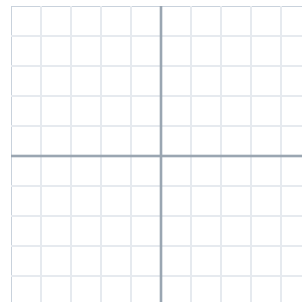


3. $f(x) = x^2(x - 3)$

Degree: _____ End behavior: _____

Zeros & multiplicity: _____

y-intercept: _____

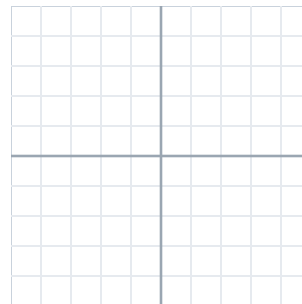


4. $f(x) = (x + 1)(x - 2)^2$

Degree: _____ End behavior: _____

Zeros & multiplicity: _____

y-intercept: _____

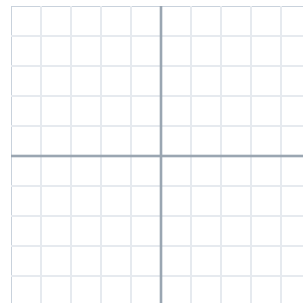


5. $f(x) = -(x + 2)(x + 1)(x - 1)(x - 2)$

Degree: _____ End behavior: _____

Zeros & multiplicity: _____

y-intercept: _____



6. $f(x) = (x - 1)^2(x + 2)^2$

Degree: _____ End behavior: _____

Zeros & multiplicity: _____

y-intercept: _____

