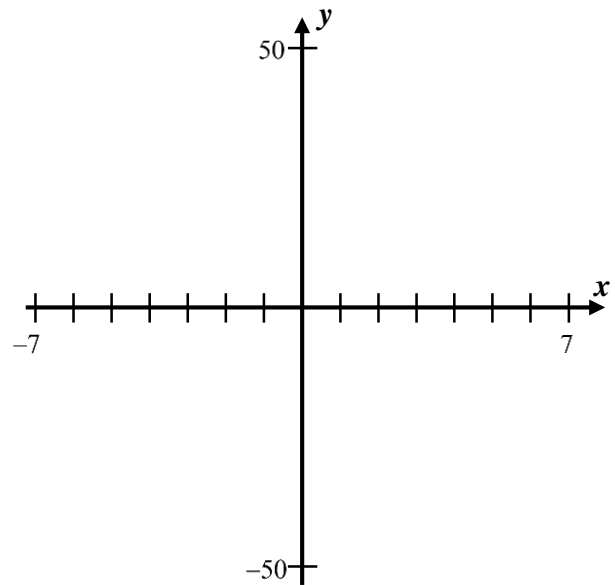Name: _____   Date: _____

3-2 CREATING EQUATIONS OF POLYNOMIALS

FLUENCY

1. Create the equation of a quadratic polynomial, in standard form, that has zeroes of -5 and 2 and which passes through the point $(3, -24)$. Sketch the graph of the quadratic below to verify your result.

2. Create the equation of a quadratic function, in standard form, that has one zero of -3 and a turning point at $(-1, -16)$. Hint – try to determine the second zero of the parabola by thinking about the relationship between the first zero and the turning point (axis of symmetry). Sketch your solution below.
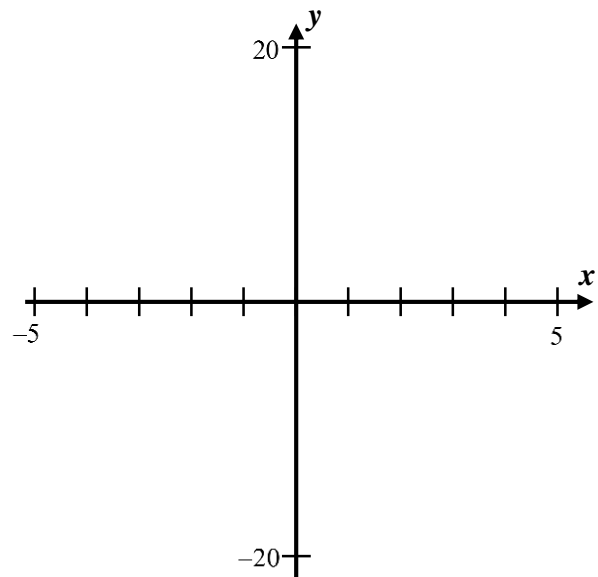
3. Create an equation for a cubic function, in standard form, that has x-intercepts given by the set $\{-3, 1, 7\}$ and which passes through the point $(-2, 54)$. Sketch your result on the axes shown below.
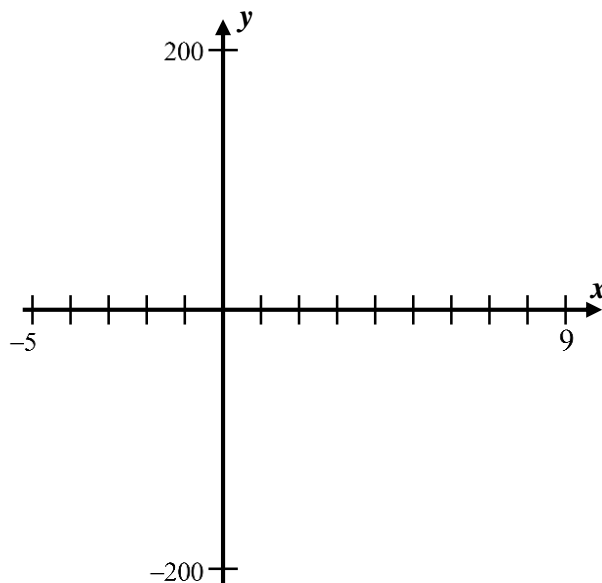
4. Create the equation of a cubic whose x-intercepts are given by the set $\{-6, -3, 5\}$ and which passes through the point $(3, 36)$. Note that your leading coefficient in this case will be a non-integer. Sketch your result below.