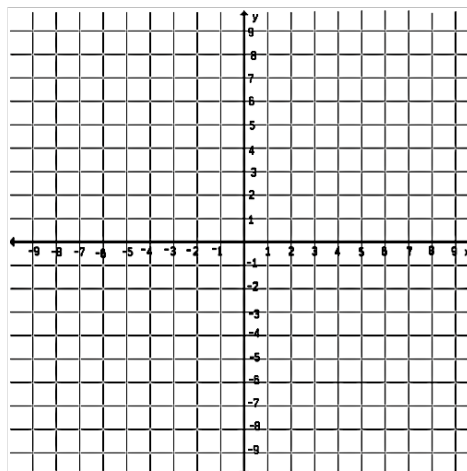### *Graphing Polynomials*

1. Given x-intercepts at – 7, 8, and 3 and that the highest degree is odd and the leading coefficient is negative...

    a. List the factors of the polynomial.

    b. Write the possible equation of g(x) in factored form.

    c. Draw a sketch of g(x)

    d. Identify the end behavior of g(x)

        As x $\to \infty$, g(x) $\to$

        As x $\to -\infty$, g(x) $\to$

2. Given the table of t(x),

x	$t(x)$
-4	336
-3	90
-2	0
-1	-12
0	0
1	6
2	0
3	0
4	48

    a. Identify the Zeros

    b. List Factors of t(x)

    c. Highest Degree: even or odd

    d. Leading Coefficient: + or –

    e. Identify the end behavior of t(x)

        As x $\to \infty$, t(x) $\to$

        As x $\to -\infty$, t(x) $\to$

    f. Create a sketch of the function.