

1. For the table below:

x	-2	-1	0	1	2	3
y	-36	-12	-6	-6	0	24

- Find the Degree
  - Write the equation
  - Write the Left End Behavior
  - Find the coordinates of the relative minimum
2. Name the 1<sup>st</sup> five classifications of polynomial with their degree.
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3.  $f(x) = 4x^5 + 3x^4 + 2x^3 - x^2 - 9x - 3$
- List the Rational Candidates for zeros
  - Find the Total Number of Zeros
4. Completely Factor The Following:
- $2x^5 - 32x$
  - $2x^4 + 5x^3 - 5x^2 - 5x + 3$
  - $x^3 - 8y^3$
5. Find all the zeros for the following
- $6x^3 - x^2 - 10x - 3$
  - $x^3 - 8x^2 + 16x - 8$
  - $x^3 - 7x^2 + 12x + 20$
6.  $f(x) = 2x^2 + 2x - 1$ . Write  $g(x)$  as the result of the following transformations.
- Reflect  $f(x)$  about the x-axis
  - Reflect  $f(x)$  about the y-axis
  - Translate  $f(x)$  3 units down
  - Translate  $f(x)$  1 unit right
  - Horizontally shrink  $f(x)$  to half its width
  - Vertically stretch  $f(x)$  by a factor of 3
7. Solve the following:
- $x^2 - 5x + 6 = 0$
  - $6x^3 + x^2 - 12x = 0$
  - $x^2 + x = 1$