

Name: _____ Hour: _____ Date: _____

Answer the first problem. Circle your answer. Find your answer among the choices. Put #2 in the problem blank. Answer that question and proceed in this manner until finished.

<p>Answer: $x^4 - 2x^2y^2 + y^4$ # _____</p> <p>Name the polynomial</p> <p>$3x^3 + 2$</p>	<p>Answer: : $x \rightarrow -\infty$, $y \rightarrow \infty$ and $x \rightarrow \infty$, $y \rightarrow \infty$ # _____</p> <p>Find the product</p> <p>$x(x^3 - 3)$</p>
<p>Answer: $2x^3 - 5x^2 - 2x + 5$ # _____</p> <p>Find the product</p> <p>$x(x - 3)^2$</p>	<p>Answer: up, down # _____</p> <p>Describe the end behavior of the polynomial</p> <p>$50x + 10$</p>
<p>Answer: down, down # _____</p> <p>Using only arrows (not our usual notation) describe the end behavior of the polynomial</p> <p>$y = -4x^7 + 8x^4 - 30$</p>	<p>Answer: $x^3 - x^2y - y^2x + y^3$ # _____</p> <p>Find the product</p> <p>$(x + y)(x - y)(x + y)(x - y)$</p>
<p>Answer: $x^3 - 6x^2 + 9x$ # _____</p> <p>Find the product</p> <p>$(x - y)^2(x + y)$</p>	<p>Answer: $x^4 + 2x^2 + 1$ # _____</p> <p>Find the product</p> <p>$(2x - 5)(x^2 - 1)$</p>

<p>Answer: $x^4 - 3x$ #_____</p> <p>Find the product and write in standard form.</p> <p>$(x^2 + 1)^2$</p>	<p>Answer: Linear binomial #_____</p> <p>Using only arrows (not our usual notation) describe the end behavior of the polynomial</p> <p>$y = -x^4 + 6x + 8$</p>
<p>Answer: $x \rightarrow -\infty, y \rightarrow -\infty$ and $x \rightarrow \infty, y \rightarrow \infty$ #_____</p> <p>Describe the end behavior of the polynomial</p> <p>$y = 3x^4$</p>	<p>Answer: Cubic Binomial #_____</p> <p>Name the polynomial</p> <p>$3 + x$</p>

1. Write the polynomial in standard form then name it based on degree and number of terms.

$$3x^4 + 2x^2 - 3x - 15$$

2. Describe the end behavior of the function using arrows and algebraic notation

$$y = -3x^{99} - 100$$

Arrows:

L:

R:

3. Find the product, classify the resulting polynomial and describe the end behavior.

$$5x^4(x^3 + 3x)$$

4. Find the product, classify the resulting polynomial and describe the end behavior.

$$(x + 4)^2(x + 3)$$