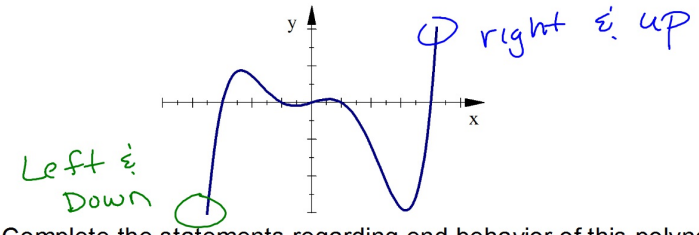
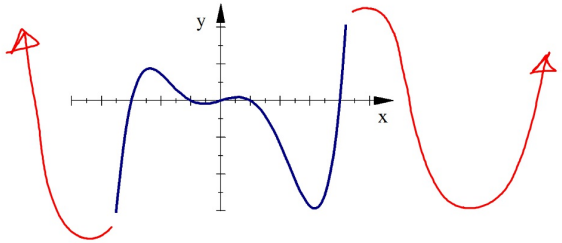


Complete the statements regarding end behavior of this polynomial.

- As $x \to \infty$, $f(x) \to$ ∞ (up) — right
- As $x \to -\infty$, $f(x) \to$ $-\infty$ (down) — Left
- Degree is most likely 5 → 4 extremes
- Leading Coefficient is Pos

end behavior ↙ ↗

Pos odd



Suppose there is another minumum to the left and another minimum to the right that are off the screen. What would the degree and leading coefficient turn out to be?

end behavior shows a Pos even

7 extremes → $n-1=7$

$n=8$

Pos 8th degree

Factor each completely.

1. $6x^{11} - 1536x^3$

2. $12x^2 - 8x - 15$

1. $6x^{11} - 1536x^3$

GCF $= 6x^3$

$= 6x^3(x^8 - 256)$

$= 6x^3(x^4+16)(x^4-16)$

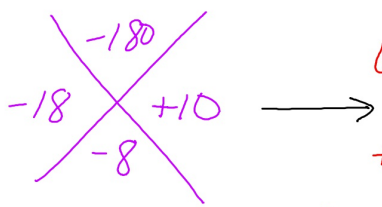
$= 6x^3(x^4+16)(x^2+4)(x^2-4)$

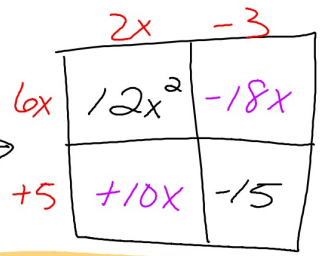
$= 6x^3(x^2+16)(x^2+4)(x+2)(x-2)$

$6x^3(x^2+16)(x^2+4)(x\pm 2)$

2. $12x^2 - 8x - 15$

NO GCF





	2x	-3
6x	$12x^2$	-18x
+5	+10x	-15

$(6x+5)(2x-3)$