Bellwork Alg 2A Monday, April 10, 2017

State the actual value of the Degree and Leading Coefficient of each polynomial.

1. $y = -8x^4 + 2x - 75x^2 - x^5 + 48$

Deg = LC =

2. $f(x) = -3x^2(5x+7)^3(3-2x)^2(4x-9)$

Deg = LC =

For each polynomial state whether the degree is even or odd and state if the leading coefficient is positive or negative.

3. $y = 6x(x-9)^2(5-x)^3(3x^2+7)^3(8-x)$

Deg: LC:

4. $f(x) = -x^3(3x-1)(2-x)^2(9-5x)^3(x+20)$

Deg: LC:

For each polynomial state the end behavior.

5. $y = -4x^3 - 10x^2 + 6x + 9x^3$

6. $y = 7x(5-2x)(8x+1)^3(x-9)$

7. $f(x) = -2x^3(4-x)^2(x+7)^2$

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Answers

State the actual value of the Degree and Leading Coefficient of each polynomial.

1. $y = -8x^4 + 2x - 75x^2 - x^5 + 48$

Deg = 5 LC = -1

2. $f(x) = -3x^2(5x+7)^3(3-2x)^2(4x-9)$

Deg = 8 LC = -6000

$(-3x^2)(125x^3)(4x^2)(4x) = -6000x^8$

For each polynomial state whether the degree is even or odd and state if the leading coefficient is positive or negative.

3. $y = 6x(x-9)^2(5-x)^3(3x^2+7)^3(8-x)$

Deg: ODD LC: POS

$(x)(x^2)(-x^3)(x^6)(-x) = +x^{13}$

4. $f(x) = -x^3(3x-1)(2-x)^2(9-5x)^3(x+20)$

Deg: EVEN LC: POS

$(-x^3)(x)(x^2)(-x^3)(x) = +x^{10}$

For each polynomial state the end behavior.

5. $y = -4x^3 - 10x^2 + 6x + 9x^3$

$5x^3 - 10x^2 + 6x$

POS ODD (↙, ↗)

6. $y = 7x(5-2x)(8x+1)^3(x-9)$

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

NEG EVEN (↖, ↘)

7. $f(x) = -2x^3(4-x)^2(x+7)^2$

$(-x^3)(x^2)(x^2) = -x^7$

NEG ODD (↖, ↘)