Polynomial Test Review-Test on Tuesday (Bring your laptop)

Classify the polynomial by degree and number of terms.

1. 6x3 – 5x2
2. 2x4 + 4x – 3

Add or subtract the polynomials.

1. (5x4 + x2) + (7 + 9x2 – 2x4 + x3)
2. (x2 – 8) – (3x3 + 6x – 4 + 9x2)
3. (5x4 + 2x2) + (-2x4 + 3)
4. (5x4 + x2) – (7 + 9x2 – 2x4 + x3)

Multiply the polynomials.

1. -5x3 (7y4 – 2xy3 + 6)
2. (5x – 2)(2x2 – 6x + 1)
3. 3xy4 (-2x + 4xy – 5y2)
4. (3x2 + 2)(x2 + 2x – 5)

Divide the polynomials.

1. x4 – 3x3 – 7x – 14

 x – 4

1. –x3 + 5x2 – 5x – 2

 x – 2

1. x4 + 3x3 – 2x2 – 3x + 2

 x + 3

1. x3 + 20x2 – 15x + 9

 x + 4

Factor the polynomial.

1. 15x3 + 6x2 – 10x – 4
2. 2x4 – 3x3 – 16x + 24
3. x3 – 64
4. 4x3 + 5x2 – 100x – 125

Find all rational zeros for the polynomial function.

1. f(x) = 4x3 – 9x2 + 6x – 1
2. f(x) = 3x4 – 10x3 – 24x2 – 6x + 5