**Alg2 Quiz Review on 3.7 – 3.8 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Use the remainder theorem to find the remainders if 3x3 + 14x2 – x + 20 is divided by the following:
2. x – 2
3. x + 2
4. x – 5
5. x + 5

Which is any of the binomials above are Factors of 3x3 + 14x2 – x + 20?

 2. Which is a third degree polynomial with -3 and 2 as its only zeros?

1. x2 – 3x + 2 b) x3 + x2 – 3x + 2

c) x3 – x2 – 8x + 12 d) x3 + x2 + 2x – 3

3. Use binomial expansion to solve (x – 2)4.

4. Use binomial expansion to solve (3a + 2)3.

5. Use long division for x3 + 2x2 – 5x – 6 with a divisor of x + 3.

6. Use long division for x3 + 3x2 – x + 5 with a divisor of x – 2.

7. Use synthetic division for x3 + 2x2 – 5x – 6 with a divisor of x + 5.

8. Use synthetic division for x3 + 4x2 – 5x + 1 with a divisor of x – 3.