NAME: _____ QUARTER: _____

GR. & SEC - _____ DATE: _____

REMEDIAL CLASS ACTIVITY # 4

Synthetic Division, Remainder Theorem and Factor Theorem

DIRECTION: Read and understand the questions carefully. Check the box that corresponds to your answer.

1. In the division algorithm, $\frac{P(x)}{d(x)} = Q(x) + \frac{r(x)}{d(x)}$. What is the divisor?

- ☐ P(x)
- ☐ r(x)
- ☐ d(x)
- ☐ Q(x)

2. In the division algorithm, $\frac{P(x)}{d(x)} = Q(x) + \frac{r(x)}{d(x)}$. What is the dividend?

- ☐ P(x)
- ☐ r(x)
- ☐ d(x)
- ☐ Q(x)

3. Divide: $x^3 + 2x^2 - 5x - 10$ by $x^2 - 5$.

- ☐ $x^2 - 3x + 10$
- ☐ $x + 2$
- ☐ $x^2 + 7x + 30$
- ☐ $x - 2$

4. Find the remainder when $x^3 - 2x^2 + 4x - 3$ is divided by $x + 2$.

- ☐ 27
- ☐ -5
- ☐ 5
- ☐ -27

5. If $x^3 - 2x^2 - 5x + 6$ is divided by $x + 1$, the remainder is zero.

- ☐ True
- ☐ Maybe
- ☐ False
- ☐ Cannot be determine

6. Which statement is TRUE?

- ☐ The quotient multiplied by the dividend plus the reminder is equal to the divisor.
- ☐ If $x^2 + 5x + 7$ is divided by $x + 2$, the remainder is 1.
- ☐ If the remainder is 0, then the dividend is a factor of the divisor.
- ☐ The remainder is a factor of the dividend if the quotient is 0.

7. Which is the missing factor in the equation: $x^2 - 4 = (x - 2)(_____)$?

- ☐ x - 2
- ☐ x + 4
- ☐ x + 2
- ☐ x - 4

8. Based on synthetic division below, which polynomial is the dividend?

2	2	0	0	-1	-36
		4	8	16	30
	2	4	8	15	-6

- ☐ $x^3 - x - 36$
- ☐ $x^4 - x^2 - 36$
- ☐ $x^4 - x - 36$
- ☐ $x^3 + x^2 - +36$

9. Based on the synthetic division in #8, what is the remainder?

- ☐ 0
- ☐ -6
- ☐ -1
- ☐ 6

10. If a sixth-degree polynomial is divided by a second-degree polynomial, what is the degree of the quotient?

- ☐ 1
- ☐ 3
- ☐ 2
- ☐ 4

REFLECTION:

What have you learned in this activity?

_____

_____

_____

_____

LIVEWORKSHEETS