

NAME

QUARTER 1

GRADE &amp; SECTION

DATE

## Activity: Remainder Theorem and Factor Theorem

Find the remainder when the first polynomial is divided by the second polynomial. Then identify if the divisor is also a factor or not..

1.  $x^4 + 4x^3 - 11x - 5$  by  $x + 3$

$$P(-3) = (-3)^4 + 4(-3)^3 - 11(-3) - 5$$

$$P(-3) = 81 + 4(-27) - (-33) - 5$$

$$P(-3) = 81 - 108 + 33 - 5$$

$$P(-3) = R =$$

Is it a factor?

Yes

No

2.  $x^3 + 5x^2 - 2x - 24$  by  $x - 2$

$$P(2) = (2)^3 + 5(2)^2 - 2(2) - 24$$

$$P(2) =$$

$$P(2) =$$

$$P(2) = R =$$

Is it a factor?

Yes

No

3.  $4x^3 - 12x^2 - x + 3$  by  $x - 3$ ,

$$P( ) =$$

$$P( ) =$$

$$P( ) =$$

$$P( ) = R =$$

Is it a factor?

Yes

No

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Find the remainder when the first polynomial is divided by the second polynomial. Then identify if the divisor is also a factor or not..

4.  $x^4 - x^3 - x^2 + x - 8$  by  $x - 2$

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) = R =$$

Is it a factor?

Yes

No

5.  $6x^3 + 5x^2 - 3x - 2$  by  $3x - 2$

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) = R =$$

Is it a factor?

Yes

No