

NAME _____

QUARTER 1

GRADE & 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 $x + 3$

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

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

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

$$P(-3) = R = \boxed{}$$

Is it a factor?

Yes

No

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

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

$$P(2) =$$

$$P(2) =$$

$$P(2) = R = \boxed{}$$

Is it a factor?

Yes

No

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

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) =$$

$$P(\quad) = R = \boxed{}$$

Is it a factor?

Yes

No

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

$P() =$

$P() =$

$P() =$

$P() = R =$ Is it a factor?

Yes

No

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

$P() =$

$P() =$

$P() =$

$P() =$

$P() = R =$

Is it a factor?

Yes

No