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Grado 12

Precalculus
Quiz No.: 1

Mr. Reyes
Chapter 3 section 2

Name CLAVE Date 2/21/2004

1. Use the Reminder Theorem to find f(c). (5 points)

$f(x) = 3x^3-x^2+5x-4$; $c = 2$

$f(2) = 3(2)^3-(2)^2+5(2)-4$

$f(2) = 3(8)-4+10-4$

$f(2) = 24-8+10$

$f(2) = 24+2$

$f(2) = 26$

Since $f(2) \neq 0$ then the remainder theorem applies

2. Use synthetic division to find f(c), determine if (x-c) satisfies the Reminder or Factor Theorem. (10 points)

$f(x) = 2x^3-3x^2+4x-5$; $x - 2$

2	2	-3	4	-5
		4	2	12
	2	1	6	(7)

3. Use synthetic division to show that c is a zero of f(x) and verify substituting c by x. (bonus 10 points)

$f(x) = 3x^4+8x^3-2x^2-10x+4$; $c = -2$

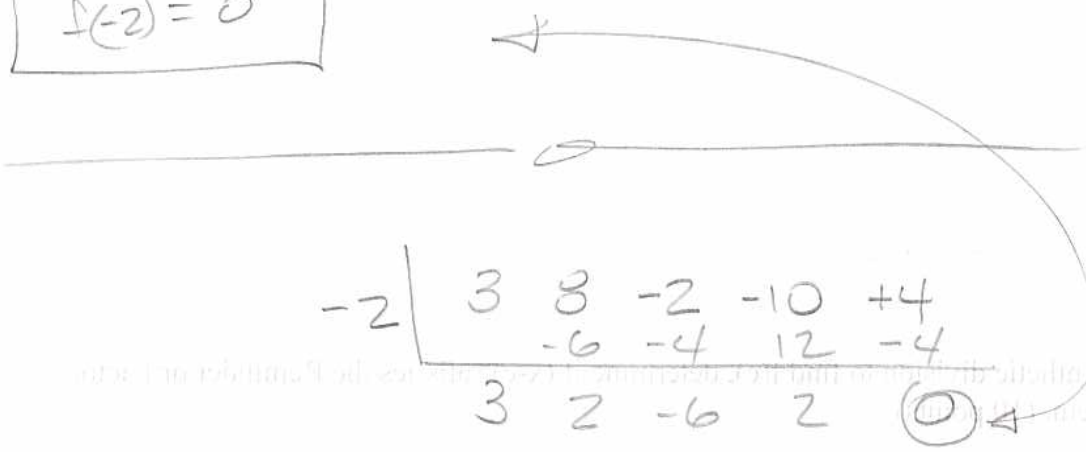
$f(-2) = 3(-2)^4 + 8(-2)^3 - 2(-2)^2 - 10(-2) + 4$

$f(-2) = 3(16) - 64 - 8 + 20 + 4$

$f(-2) = 48 - 64 + 16$

$f(-2) = 48 - 48$

$f(-2) = 0$



$$\begin{array}{r|rrrrr} -2 & 3 & 8 & -2 & -10 & +4 \\ & & -6 & -4 & 12 & -4 \\ \hline & 3 & 2 & -6 & 2 & 0 \end{array}$$