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Date _____
Algebra II

CCA2 Weekly Review 3

10 STO→X 2100

1. When factored completely, the expression $3x^3 - 5x^2 - 48x + 80$ is equivalent to

1) $(x^2 - 16)(3x - 5)$ 2100 Not Factored Completely
2) $(x^2 + 16)(3x - 5)(3x + 5)$
3) $(x + 4)(x - 4)(3x - 5)$ 2100 Factored Completly
4) $(x + 4)(x - 4)(3x - 5)(3x - 5)$

2. What is the solution set of the equation $\frac{30}{x^2 - 9} + 1 = \frac{5}{x - 3}$?

1) {2,3} 2 STO→X −5=−5
2) {2}
3) {3} 3 STO→X ERROR X
4) { }

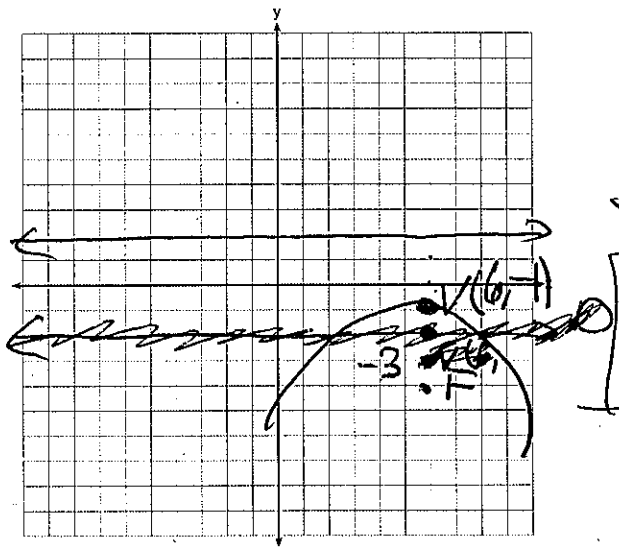
3. Use an appropriate procedure to show that $x - 4$ is a factor of the function $f(x) = 2x^3 - 5x^2 - 11x - 4$. Explain your answer.

$f(4) = 2(4)^3 - 5(4)^2 - 11(4) - 4$

$f(4) = 0$

x−4 is a factor because the remainder is 0.

4. Write the equation of the parabola whose directrix is $y = 2$ and focus is (6,-4).



$y = \frac{1}{4p}(x-v)^2 + t$ $v = 6$

$t = -1$

$p = -3$

$y = \frac{1}{4(-3)}(x-6)^2 - 1$

$y = -\frac{1}{12}(x-6)^2 - 1$

5. Solve algebraically for all values of x:

$x = -4 + \sqrt{5x+26}$

	x	$+4$
x	x^2	$4x$
$+4$	$4x$	16

$x^2 + 8x + 16$

$+4 \quad +4$

$(x+4)^2 = (\sqrt{5x+26})^2$

$(x+4)(x+4) = 5x+26$

$x^2 + 8x + 16 = 5x + 26$

$-5x-26 \quad -5x-26$

$x^2 + 3x - 10 = 0$

$(x+5)(x-2) = 0$

$x+5=0 \quad x-2=0$

$-5 \quad -5 \quad +2 \quad +2$

$x = -5$ reject

$x = 2$ ✓