Homework

1. The graph of $y = x^3 - 4x + 2$ passes through the point (0, 3a). What is the value of a?

$x=0 \quad y=0^3-4(0)+2$

$y=3a \quad 3a=0-0+2$

$3a=2$

$a=2/3$

Use the quadratic formula to solve the equation. (All solutions are real numbers.)

13) $2n^2 = -10n - 7$

A) $\left\{\frac{-10+\sqrt{11}}{2}, \frac{-10-\sqrt{11}}{2}\right\}$

B) $\left\{\frac{-5+\sqrt{39}}{2}, \frac{-5-\sqrt{39}}{2}\right\}$

C) $\left\{\frac{-5+\sqrt{11}}{2}, \frac{-5-\sqrt{11}}{2}\right\}$

D) $\left\{\frac{-5+\sqrt{11}}{4}, \frac{-5-\sqrt{11}}{4}\right\}$

$2n^2+10n+7=0$

$n=\frac{-10\pm\sqrt{100-4(2)(7)}}{4}=\frac{-10\pm\sqrt{100-56}}{4}=\frac{-10\pm\sqrt{44}}{4}=\frac{-10\pm\sqrt{4\cdot11}}{4}=$

$\frac{-10\pm2\sqrt{11}}{4}=\frac{-5\pm\sqrt{11}}{2}$

3. Determine if $(x - 2)$ a factor of $y = 3x^4 - 2x^3 + x^2 - 4x + 1$.

2	3	−2	1	−4	1
	↓	6	8	18	28
	3	4	9	14	29

$(x-2)$ is not a factor b/c there is a remainder!

4. Write a polynomial function that has zeros at x=2, -3, and 1 and which has one zero with a multiplicity of 4.

$y=(x-2)^4(x+3)(x-1)$

+ THREE KHAN SETS