Review packet

11.) $x^2 - 4x + 21 = 0$

$21, 4, 84$

$a = 1$

$b = -4$

$c = 21$

$x = \frac{-(-4) \pm \sqrt{(-4)^2 - 4(1)(21)}}{2(1)}$

$16 - 84$

$x = \frac{4 \pm \sqrt{-68}}{2} = \frac{4 \pm i\sqrt{4}\sqrt{17}}{2}$

$\frac{4 \pm 2i\sqrt{17}}{2} = 2 \pm i\sqrt{17}$

A

4.) $x^2 - 4x + 4 = 7 + 4$

$\frac{4}{2} = 2^2$

$(x - 2)^2 = \sqrt{11}$

$x - 2 = \pm\sqrt{11}$

$x = 2 \pm \sqrt{11}$

B

12.) $[x-(3+i)][x-(3-i)](x+7)$

$[(x-3)+i][(x-3)-i](x+7)$

$[(x-3)^2-i^2](x+7) = [(x-3)^2+1](x+7)$

$[x^2-6x+9+1](x+7) = (x^2-6x+10)(x+7)$

$x(x^2-6x+10)+7(x^2-6x+10)$

$x^3-6x^2+10x+7x^2-42x+70$

$x^3+x^2-32x+70$

B

8. $(y-2)x = \frac{3y+7}{y-2}(y-2)$

$x(y-2) = 3y+7$

$-7 \quad -7$

$x(y-2)-7 = 3y$

$xy-2x-7 = 3y$

$-xy \quad -xy$

$-2x-7 = 3y-xy$

$-2x-7 = y(3-x)$

$3-x \quad 3-x$

$\frac{-2x-7}{3-x} = y$

$\frac{-1(2x+7)}{1(x-3)} = y$

C

30.)

	1	-1	1	-21
3	1	2	7	0

$(x-3)(x^2+2x+7)$

$x-1\pm i\sqrt{6}$

$x+$