10/12 REVIEW FOR UNIT 2 EXAM

Key

Again, this is NOT homework. However, all of these questions will prepare you for the Unit 2 exam. I will post solutions on Monday.

1. What is the solution set for x in the equation below?

$$\sqrt{x+1} - 1 = x$$

2. The expression (x + a)(x + b) can *not* be written as

$$\mathcal{N} \quad \alpha(x+b) + x(x+b)$$

$$(2)$$
 $x^2 + abx + ab$

$$3y x^2 + (a+b)x + ab$$

A)
$$x(x+a)+b(x+a)$$

 $x^2+ax+bx+ab$

3. Determine the solutions to $x + 3 - \frac{4}{x - 1} = 5$ in simplest radical form.

$$x^{2}-3x+2=4$$

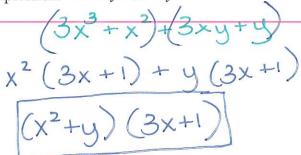
$$x^{2}-3x-2=0$$

$$x=3\pm\sqrt{(-3)^{2}-4(1)(-2)}$$

$$2(1)$$

$$x=3\pm\sqrt{17}$$

 \dashv Completely factor the following expression: $x^2 + 3xy + 3x^3 + y$



5. Elizabeth found the product of (4 + 2i) and (5 - i). What was her answer in simplest form?

$$(4+2i)(5-i)$$

 $20-4i$
 $+10i-2i$
 $20+6i+2=22+6i$

6. Given: $f(x) = 2x^2 + x - 3$ and g(x) = x - 1

Express $f(x) \cdot g(x) - [f(x) + g(x)]$ as a polynomial in standard form.

$$(2x^{2}+x-3)(x-1) - [2x^{2}+x-3+x-1]$$

$$2x^{3}-2x^{2}$$

$$+x^{2}-x$$

$$-3x+3$$

$$2x^{3}-1x^{2}-4x+3 - (2x^{2}+2x-4)$$

$$2x^{3}-1x^{2}-4x+3$$

$$-2x^{2}-2x+4$$

$$2x^{3}-3x^{2}-6x+7$$