Advanced Algebra

Final Exam Quadratic Review #4

The Zero Product Property:

I know how to apply the zero product property:

This Property simply says that after you have the function in factored form, you may set each of the factors equal to zero and solve. The reason you are doing this is to find the x intercepts. The x intercepts are where y = 0. This is why you are setting your factors equal to zero.

Solve the following with the zero product property. Use the answers to find the vertex.

1) $(x-3) (x+8) = 0$ 2) $8(x-4) (x+10) = 0$ 3) $6(x-8) (x+12) = 0$

4) $12(x-18)(x+4) = 0$

Solve the following with the zero product property. You first must factor the problem if you are going to use the zero product property. Use your answers to find the vertex.

1) $y= x^2 + 9x + 20$ 2) $y= x^2 -7x – 18$ 3) $y= x^2 + 3x – 10$

7) $y= x^2 +4x -12$ 8) $y= x^2 – 23x – 50$ 9) $y= x^2 -8x -65$

FOIL- This is a method to multiply out 2 binomials. FOIL stands for first, outer , inner, last. If that method is confusing for you, set up a box to multiply the binomials out.

Transform the following into General Form:

1) (x-2) (x+7)

2) (x+1) (x-6)

3) (x-5) (x+10)

4) (x-2) (x+6)

5) (x-1)(x+7)

6) (x+1)(x-10)

7)(x+3) (x-5) (x+2)

8) (x-2) (x-25) (x+3)

9) (x-1)(x+5) (x-6)

I can find the Intersection between a parabola and a line

1) $\begin{cases} y = 2x + 4 \\ y = -2(x + 2)(x - 4) \end{cases}$

2) $\begin{cases} y = x^2 - 4x - 12 \\ y = -2x + 3 \end{cases}$