**NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Algebra II CC QUIZ REVIEW (Lessons 6-11)**

**Part I:**

What is the complete factorization of:

1. $5x^{3}-80x$ b) $x^{2}-14x+48$

Complete the square for$ 2x^{2}+16x=0$

Using the discriminant, describe the roots of the quadratic:$ 7x^{2}-11x+6=0$

1. 2 real rational roots
2. 2 real irrational roots
3. 1 real root (2 equal roots)
4. imaginery

**Part II:**

Solve by **factoring** and *state the negative solution* to the quadratic $3x^{2}-10x-8=0$

Consider a parabola with vertex point (-3,2) and directrix the horizontal line y = 4

 a) Find the coordinates of the **focus** of the parabola.

 b) Find the equation of the parabola

 c) sketch the parabola on the axis provided

**Part III:**

Algebraically, find the solutions of the equation$ -4x^{2}+7x+8=0$. Round to the nearest thousandth.

**Part IV:**

You manage to get your cell phone in school without having it taking at scanning. Not using your best judgement, you take it out and start using it during Algebra 2 class. Visca sees you. He takes your phone, nonchalantly opens a window and tosses it out and you hear it smash on the ground below. The flight of your cell phone is represented by, $y=-16x^{2}+45x+22$ where y is the height of the phone off the ground and x is the time in seconds. (any rounding should be done to the tenths)

* 1. Find the time when your cell phone reaches its greatest height during Visca’s toss. What is that height?
	2. Determine the time that you heard the cell phone smash into a million pieces (when it hit the ground).