***Pre-Calculus 11***

***Unit III: Solving Quadratic Equations – Review***

1. Factor the following:
2.  b)  c) 

d)  e)  f) 

g)  h)  i) 

j)  k)  l) 

1. Solve the following:
2.  b)  c) 

d)  e)  f) 

g)  h)  i) 

j)  k)  l) 

m)  n)  o) 

p)  q)  r) 

1. Solve for *x* exactly by completing the square:
2.  b)  c) 
3. A young lad shoots off a model rocket. The height *h*, in meters, of the rocket off the ground is given by the formula , where *t* is the time in seconds after the rocket is launched. Determine how long it takes for the rocket to reach a height of 25*m*.
4. When three times a number is subtracted from the square of the number, the result is 88. Determine the number.
5. Carla Carlson's rectangular emu pen measures 4*m* by 6*m*. She wants to double the area of the emu pen by adding the same amount to each dimension. Determine the new dimensions of the pen **algebraically**.
6. Make sure you can prove the Quadratic Formula for the quadratic equation 

***Solutions***

1. a)  b)  c) 

d)  e)  f) 

g)  h)  i) 

j)  k)  l) 

1. a)  b)  c) 

d)  e)  f) 

g)  h)  i) 

j)  k)  l) 

m)  n)  o) 

p)  q) no solutions r) 

1. a)  b)  c) 
2. 

1. –8 or 11

1. 6*m* by 8*m*