**4.2: Solving Quadratic Equations by Factoring**

**Objectives:**

* Factor different types of quadratic expressions
* Solving quadratic equations by factoring

Recall that a quadratic equation is an equation that can be written in the form: **** where a, b and c are constants and a ≠ 0



As with last class, we can “solve” a quadratic equation by setting the equation equal to zero and finding the **roots** or **zeros** of the equation. We can do this by factoring.



* How many possible solutions might we have?



Solve the following quadratic equations by factoring. Check your solution(s).



1) (x – 5)(x + 2) = 0 2) 9x2 = 16



3) 4y2 = 4 4) – 4m2 + 24m = 0



5) x2 – 9x +20 = 0 6) ****



**4.4: The Quadratic Formula**

Flash Back to Grade 10: Simplify the following:

1.  b)  c) 



Any quadratic equation written in the form  can be solved using the quadratic formula:

|  |
| --- |
|  |

* When would we want to use the formula?



Ex. 1**:** Use the quadratic formula to solve the following equations.



(a) 



(b) 



(c) 

