**4.4 PART 1: The Quadratic Formula**

**Objectives:**

* Solve quadratic equations using the quadratic formula



Flash Back to Grade 10: Simplify the following:

1.  b)  c) 



Flash Back to Last Week: Solving Quadratic Equations (ax2 + bx + c = 0) by Factoring



Ex 1) Solve x2+ 7x – 18 = 0



Ex 3) Is it possible to solve the quadratic equation x2 + 2x – 1 = 0 by factoring?



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

|  |
| --- |
|  |

* When would we want to use the formula?



* How could we check our solution(s)?



Ex 4**)** Use the quadratic formula to solve the following equation. Express your answer(s)

as exact roots.



(a)  STEP 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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STEP 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



STEP 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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STEP 4: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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STEP 5: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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STEP 6: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



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Ex 5) In Jasper, AB, cliff jumpers jump from a place called the plank 27 meters above the water. The cliff jumpers path is a parabolic curve. An equation that relates the distance x (in meters) away from the cliff and the distance y (in meters) above the water is y = -x2 + 2x +27. Calculate to the nearest tenth the distance the jumper on the bottom is away from the cliff when he first hits the water.









