**Chapter 9 – Rational Equations**

Example 1: Example 2:

You can solve rational equations algebraically or graphically.

**I – Algebraically (reminder from Precalc 11)**   
  
***General method:***

* Determine the non-permissible values.
* Write all the terms of the equation on the same denominator.
* Multiply both sides of the equation by the common denominator… (Denominators disappear)
* Solve
* Make your solutions are not non-permissible values…

Example 1:

* Non permissible values:
* *x* = - 4 or *x* = 2
* solutions: (I’ve checked the restrictions)

Example 2:

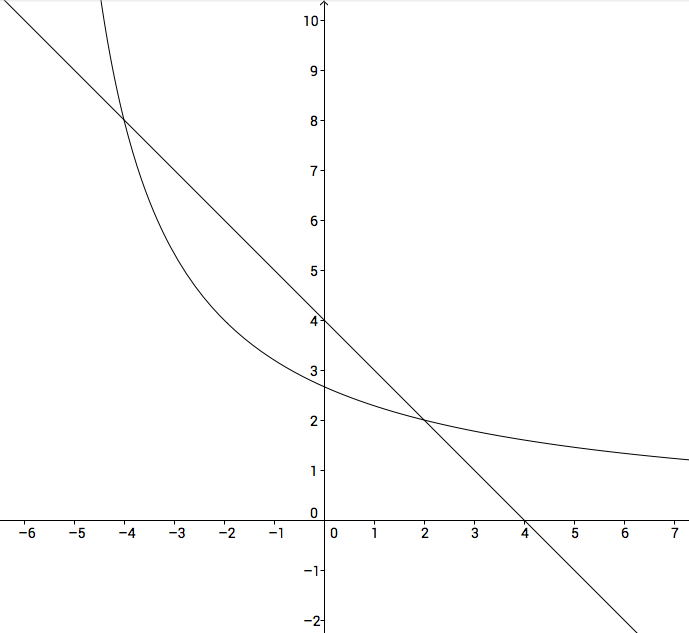
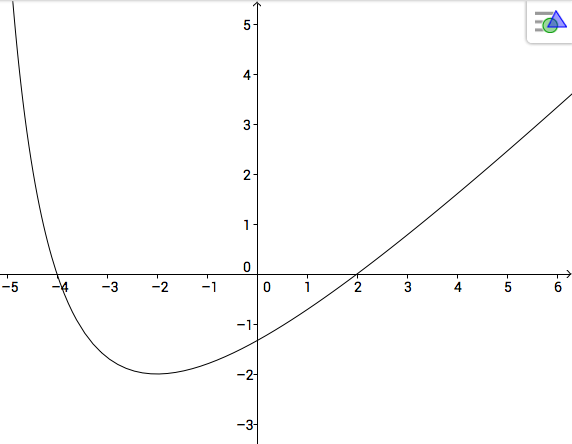
* Non-permissible values:
* (alternative to the quadratic formula)  
   or
* Solution:

**II – Graphically:**

***General method:***

* Graph both sides of the equation separately and look for the *x*-intercepts of the points of intersection.  
   OR
* Put all the terms on the same side, graph the expression and look for the zeros.

Example 1:

or 

Both ways, you can read that the solutions are -4 and 2.

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