Math 11: Unit 6.6B: Reciprocals of Quadratic functions -last class, we did reciprocals of linear functions:

Ex: 
$$y = x$$
 vs  $y = \frac{1}{x}$ 

Ex: y = x+2

VS

 $y = \frac{1}{x+2}$ 

-now: what about...

Ex: 
$$y = x^2$$
  $vs$   $y = \frac{1}{x^2}$ 

Ex: 
$$y = (x - 3)^2 - 4$$

$$y = \frac{1}{(x-3)^2 - 4}$$

Ex: 
$$y = -x^2 - 4x - 3$$
  $vs$   $y = \frac{1}{-x^2 - 4x - 3}$ 

$$\mathsf{Ex:} \, \mathsf{y} = (\chi - 3)^2 \qquad \qquad \mathfrak{v}$$

$$y = \frac{1}{(x-3)^2}$$

Ex: 
$$y = (x - 3)^2 + 4$$
   
  $vs$   $y = \frac{1}{(x - 3)^2 + 4}$ 

Example of an application of reciprocal quadratic functions: Before surgery, a patient may be injected with a drug. When the drug is at the required concentration in the bloodstream, the surgery can begin.

-equation: C= , C=concentration (ppm) and t =time (hours)

-allows doctors/nurses to determine when drug will where off.

-do: handout

See:

http://www.bcmath.ca/PC11/PC11ch7/Section%207.4%20Reciprocal%20%2 0Functions%20(Web)/html5.html

https://www.youtube.com/watch?v=qD7ZGPLIwzk

https://www.youtube.com/watch?time\_continue=819&v=dmFryb6nx44

-quiz next day