Math 11: Unit 6.6B: Reciprocals of Quadratic functions
-last class, we did reciprocals of linear functions:
$E x: y=x \quad$ vs

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

$E x: y=x+2$
$y=\frac{1}{x+2}$
-now: what about...
Ex: $y=x^{2}$

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

$$
E x: y=(x-3)^{2}-4
$$

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

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

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

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

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: $\mathrm{C}=\quad, \mathrm{C}=$ concentration (ppm) and $\mathrm{t}=$ time (hours)
-allows doctors/nurses to determine when drug will where off.
-do: handout

See:
http://www.bcmath.ca/PC11/PC11ch7/Section\ 7.4\ Reciprocal\ \%2 OFunctions\%20(Web)/html5.html
https://www.youtube.com/watch?v=qD7ZGPLIwzk
https://www.youtube.com/watch?time continue=819\&v=dmFryb6nx44
-quiz next day

