Name :
Grade : $\square$
Mathematics - Elective Pre-Calc. - Senior 1 - Assignment \#5- for oct.26-p.1/2
$I-$ Let $f$ be the function defined by $f(x)=-\frac{1}{4} x^{2}+\frac{1}{2} x+2$.
Let $f_{1}, f_{2}, f_{3}, f_{4}$ be the functions associated to $f$, defined by the following relationships :

$$
f_{1}(x)=-f(x) \quad ; \quad f_{2}(x)=f(-x) \quad ; \quad f_{3}(x)=-f(-x), \quad f_{4}(x)=f(x-2)+1
$$

Draw the five parabolas $P, P_{1}, P_{2}, P_{3}, P_{4}$ of the five functions on the same graph below.
(Chose carefully the position of the origin to be able to show the curves properly, and use 5 different colors)
Explain which geometrical tranformation of $(P)$ correspond to each of these 4 new parabolas.


Name ：
Grade ：
$\ldots . . . . / 100$
Mathematics－Elective Pre－Calc．－Senior 1 －Assignment \＃5－for oct．26－p．2／2
$I I-$ Let $h$ be the function defined by $h(x)=\frac{2-x}{2+x}$ ．
Let $h_{1}, h_{2}, h_{3}, h_{4}$ be the functions associated to $h$ ，defined by the following relationships ：

$$
h_{1}(x)=|h(x)| \quad ; \quad h_{2}(x)=h(|x|) \quad ; \quad h_{3}(x)=|h(-x)|, \quad h_{4}(x)=h(x-2)+1
$$

Draw the five Hyperbolas $H, H_{1}, H_{2}, H_{3}, H_{4}$ of the five functions on the same graph below．
（Chose carefully the position of the origin to be able to show the curves properly，and use 5 different colors）
Explain which geometrical tranformation of $(H)$ correspond to each of these 4 new Hyperbolas．

