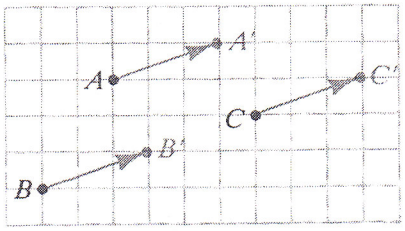
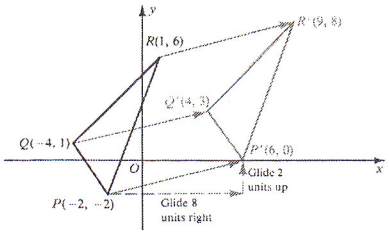
Name: _____ Date: _____ Row: _____ Period: _____

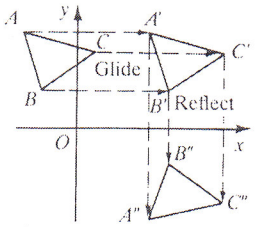
NOTES SECTION 14.3: TRANSLATIONS AND GLIDE REFLECTIONS

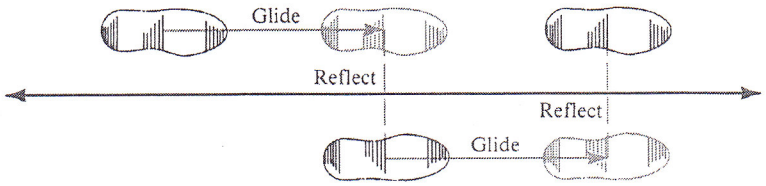
TRANSLATION





GLIDE REFLECTION





1) If $T:(3,4)\rightarrow(\_\_,\_\_)$, then

$T:(-5,4)\rightarrow(\_\_,\_\_)$

2) If $T:(6,2)\rightarrow(\_\_,\_\_)$, then

$T:(-3,-1)\rightarrow(\_\_,\_\_)$

3) If $T:(-7,2)\to(\_\_,\_\_)$, then

$T:(0,0)\to(\_\_,\_\_)$

4) If $T:(4,5)\to(\_\_,\_\_)$, then

$T:(\_\_,\_\_)\to(9,14)$

5) If $T:(-3,-4)\to(\_\_,\_\_)$, then

$T:(\_\_,\_\_)\to(4,8)$

6) If $T:(1,3)\to(\_\_,\_\_)$, then

$T:(\_\_,\_\_)\to(2,8)$

7-9: Translation R maps P to *P'* and translation S maps *P'* to *P"*.
Find T, the translation that maps P directly to *P"*.

7) $R:(x,y)\to(x-3,y+2)$

$S:(x,y)\to(x+1,y+7)$

$T:(x,y)\to(\_\_\_\_,\_\_\_\_)$

8) $R:(x,y)\to(x,y+1)$

$S:(x,y)\to(x+4,y-1)$

$T:(x,y)\to(\_\_\_\_,\_\_\_\_)$

9) $R:(x,y)\to(x+1,y-3)$

$S:(x,y)\to(x-4,y-3)$

$T:(x,y)\to(\_\_\_\_,\_\_\_\_)$

10-12: A glide reflection has translation T and reflection in the given line.

a. Find the image *P'* of P under T.

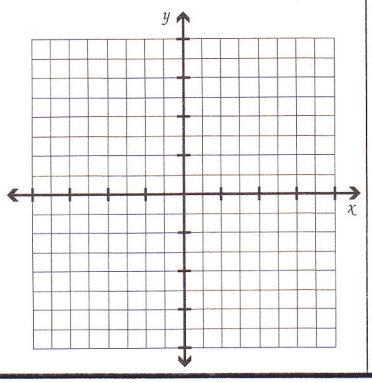
b. Find the image *P"* of *P'* under reflection in the line.

c. Under the glide reflection, (x,y) is first mapped to $(?,?)$ and then to $(?,?)$.

10) $T:(x,y)\to(x+4,y+4)$

Reflection: In the line $y=x$

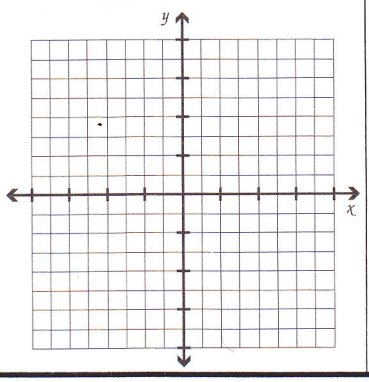
$P(4,0)$



11) $T:(x,y)\to(x,y-2)$

Reflection: In the y-axis

$P(-1,7)$



12) $T:(x,y)\to(x+1,y)$

Reflection: In the x-axis

$P(2,-1)$