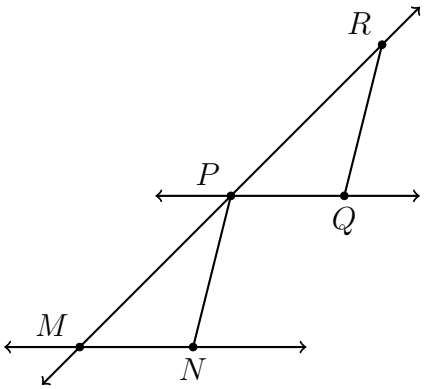
BECA / Dr. Huson / 10th Grade Geometry
6 December 2018 Name:

Do Now: Triangle congruence proofs

1. The transversal $\overleftrightarrow{MPR}$ intersects two parallel lines, $\overleftrightarrow{PQ}||\overleftrightarrow{MN}$. Given $\angle PRQ \cong \angle MPN$ and P bisects $\overline{MR}$.
   Prove $\triangle MPN \cong \triangle PRQ$.



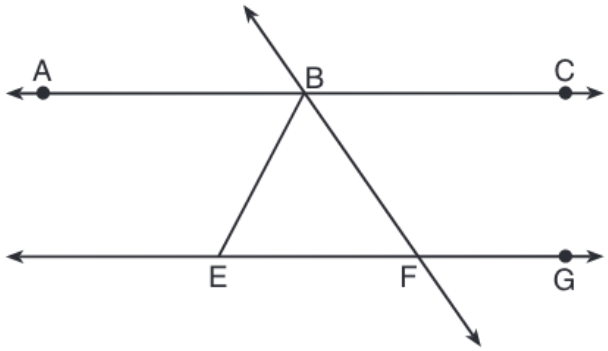
Statement	Reason
1) _____	1) Given
2) _____	2) Given
3) _____	3) Given
4) $\angle RPQ \cong \angle PMN$	4) _____
5) _____	5) Definition of a bisector
6) $\triangle MPN \cong \triangle PRQ$	6) _____

2. Translate the point $A(3, 4)$ by $T_{1,-3}$.

3. Find the result after the point $B(-2, 5)$ is translated first by the vector $\begin{pmatrix} 5 \\ -1 \end{pmatrix}$ and then by a second translation, $\begin{pmatrix} 1 \\ -3 \end{pmatrix}$.

Regents problems

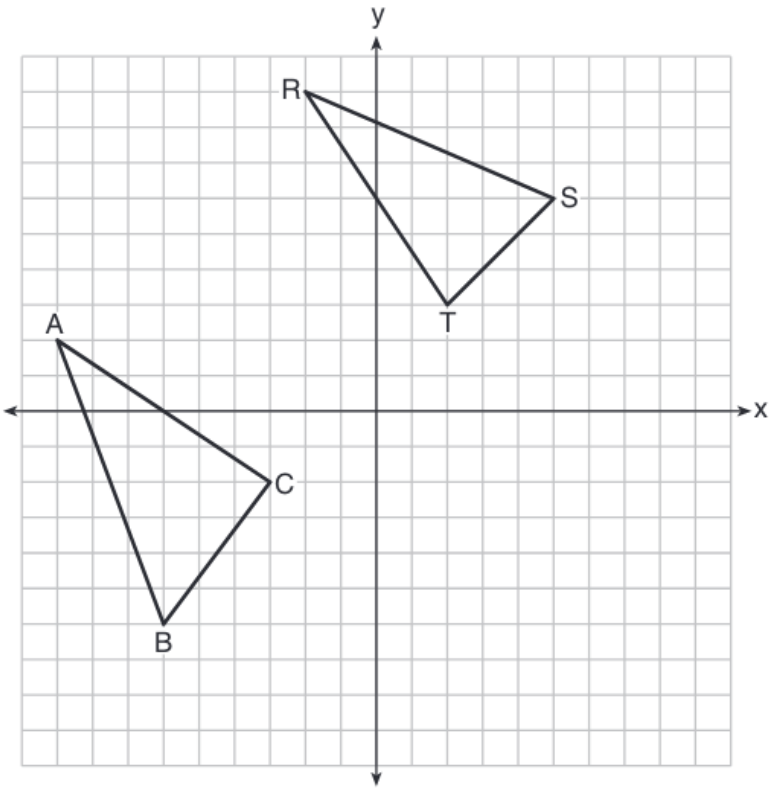
As shown in the diagram below, $\overleftrightarrow{ABC} \parallel \overleftrightarrow{EFG}$ and $\overline{BF} \cong \overline{EF}$.



If $m\angle CBF = 42.5°$, then $m\angle EBF$ is

(1) 42.5°
(2) 68.75°
(3) 95°
(4) 137.5°

In the graph below, $\triangle ABC$ has coordinates $A(-9,2)$, $B(-6,-6)$, and $C(-3,-2)$, and $\triangle RST$ has coordinates $R(-2,9)$, $S(5,6)$, and $T(2,3)$.



Is $\triangle ABC$ congruent to $\triangle RST$? Use the properties of rigid motions to explain your reasoning.