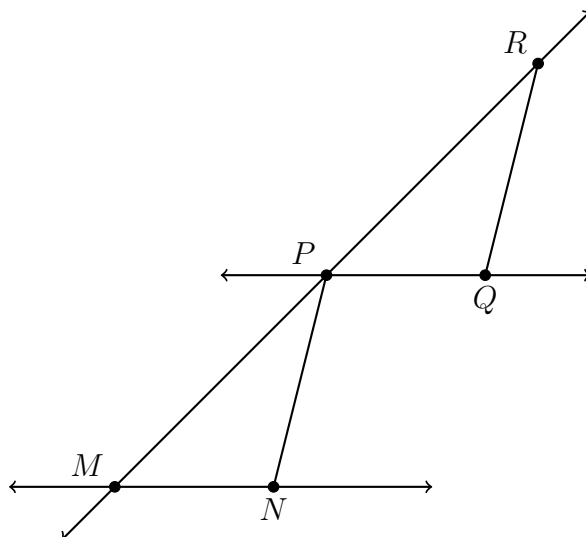


Do Now: Triangle congruence proofs

1. The transversal \overleftrightarrow{MPR} intersects two parallel lines, $\overleftrightarrow{PQ} \parallel \overleftrightarrow{MN}$. 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) $\triangle MPN \cong \triangle PRQ$

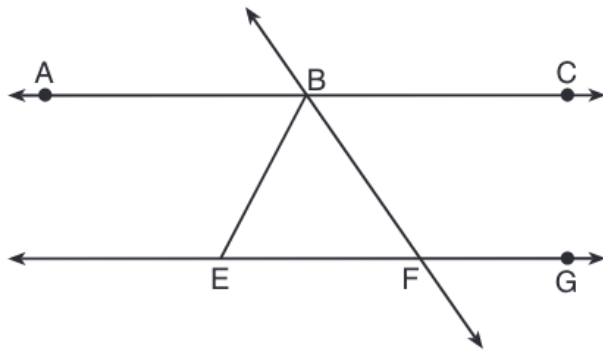
6) _____

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

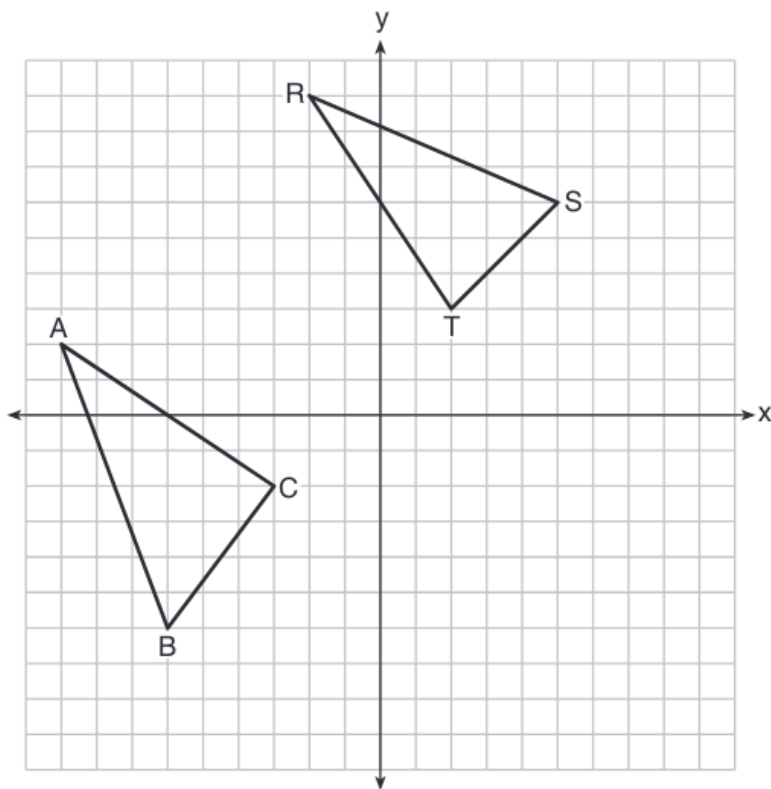
As shown in the diagram below, $\overline{ABC} \parallel \overline{EFG}$ and $\overline{BF} \cong \overline{EF}$.



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

- | | |
|-------------------|-------------------|
| (1) 42.5° | (3) 95° |
| (2) 68.75° | (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.