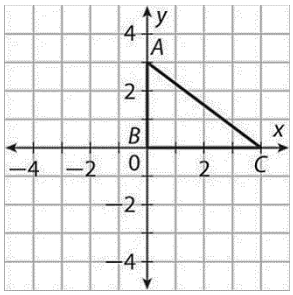
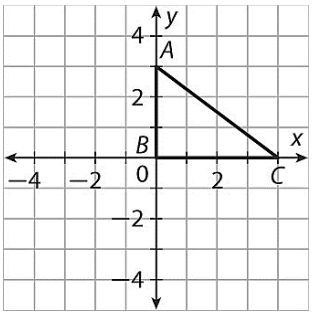
3.1 Name_____

Complete each sequence of transformations. Make sure you label all transformations.

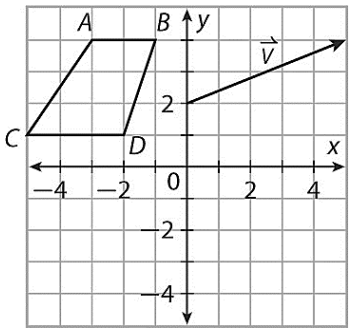
1. a. Rotate 90° about the origin.
   b. Reflect over the *x*-axis.



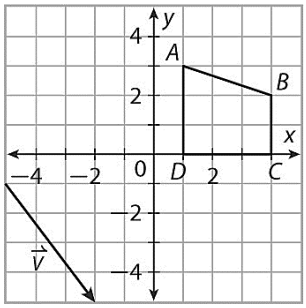
2. a. Rotate 180° about the origin.
   b. Translate 4 units right.



3. a. Reflect over the x-axis.
   b. Translate along $\vec{v}$.



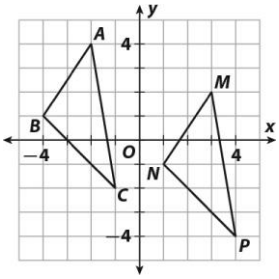
4. a. Reflect over the y-axis.
   b. Translate along $\vec{v}$.



3.2

Determine whether Δ*ABC* and Δ*MNP* are congruent. Explain your answer.

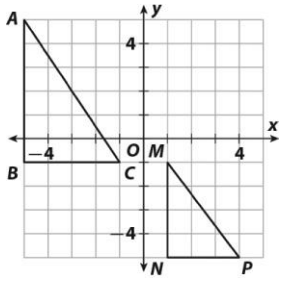
5.



_____

_____

6.

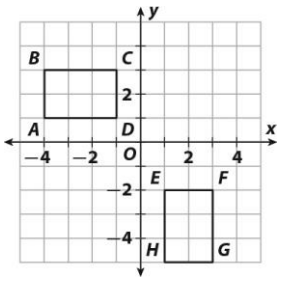


_____

_____

For each pair of congruent figures, specify a sequence of rigid motions that maps one figure onto the other.

7.

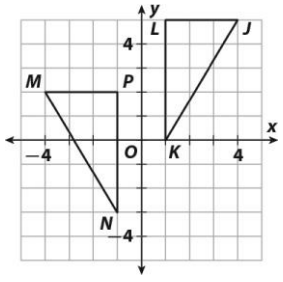


$ABCD \rightarrow EFGH$

_____

_____

8.



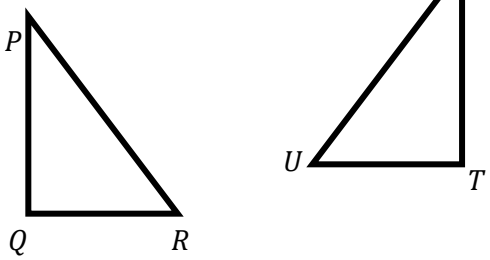
$\Delta JKL \rightarrow \Delta MNP$

_____

_____

3.3 & 5.1 Show work for 10-17

9. $\Delta PQR \cong \Delta STU$. Write the corresponding angle or side.

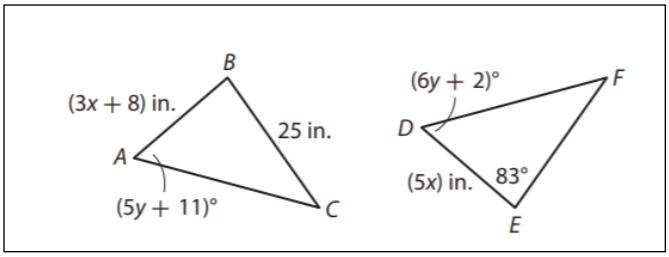


$\overline{PQ} \cong$ _____ $\angle T \cong$ _____

$\overline{QR} \cong$ _____ $\angle S \cong$ _____

$\overline{RP} \cong$ _____ $\angle U \cong$ _____

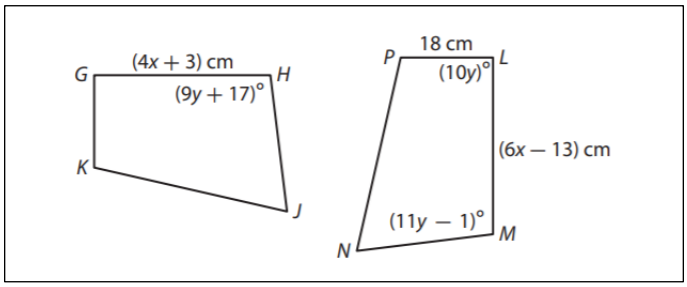
For 10-11, $\Delta ABC \cong \Delta DEF$



10. Find AB _____

11. Find $m\angle A$ _____

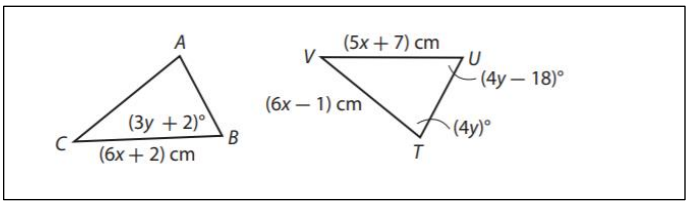
For 12-13, quadrilateral $GHJK$ is congruent to quadrilateral $LMNP$.



12. Find GH. _____

13. Find $m\angle H$. _____

For 14-15, $\Delta ABC \cong \Delta TUV$.



14. Find $m\angle B$. _____

15. Find BC. _____

16. Explain the error. A student was told that $\Delta GHJ \cong \Delta RST$ and was asked to find GH. The student's work is shown below. Explain the error and find the correct answer. Show work.

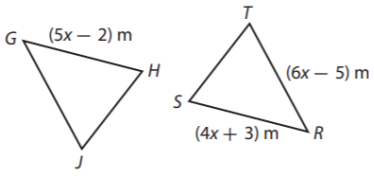
Student's Work

$5x - 2 = 6x - 5$

$-2 = x - 5$

$3 = x$

$GH = 5x - 2 = 5(3) - 2 = 13$ m



The error the student made is _____

_____

_____

_____

The correct answer is _____.

17. In $\Delta ABC, m\angle A = 55°, m\angle B = 50°,$ and $m\angle C = 75°$. In $\Delta DEF, m\angle E = 50°,$ and $m\angle F = 65°$. Is it possible for the triangles to be congruent? Make a sketch and explain.

_____

_____

_____