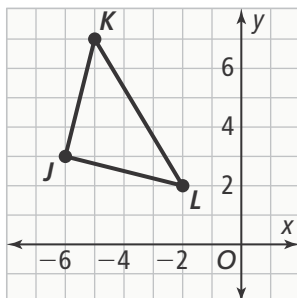


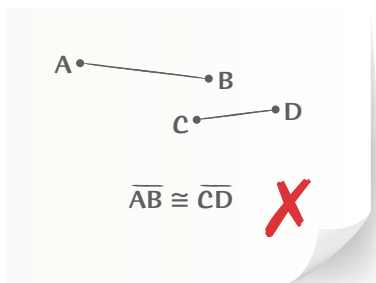


UNDERSTAND

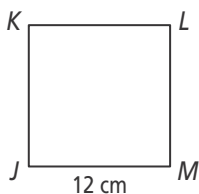
10. **Reason** If $\triangle JKL \cong \triangle RST$, give the coordinates for possible vertices of $\triangle RST$. Justify your answer by describing a composition of rigid motions that maps $\triangle JKL$ to $\triangle RST$.



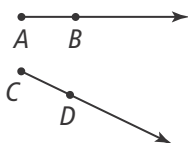
11. **Error Analysis** Yuki says that if all lines are congruent, then all line segments must be congruent. Is Yuki correct? Explain.



12. **Mathematical Connections** Given square $JKLM$ and $(T_{(-6, 4)} \circ T_{(1, 5)})(JKLM) = RSTU$, what is the area of $RSTU$?

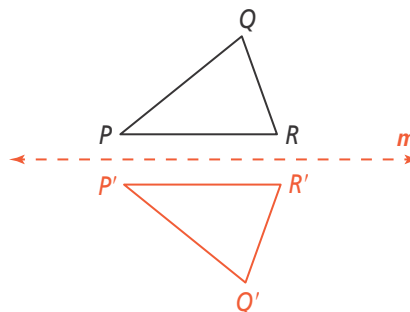


13. **Higher Order Thinking** Are $\overrightarrow{AB}$ and $\overrightarrow{CD}$ congruent? If so, describe a composition of rigid motions that maps any ray to any other ray. If not, explain. Are any two rays congruent? Explain.

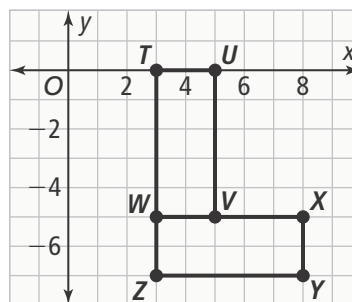


PRACTICE

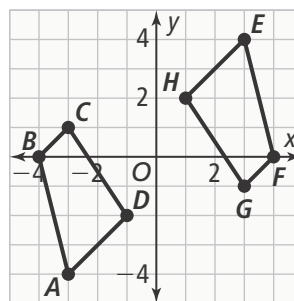
14. Given $R_m(\triangle PQR) = \triangle P'Q'R'$, do $\triangle P'Q'R'$ and $\triangle PQR$ have equal perimeters? Explain.
SEE EXAMPLE 1



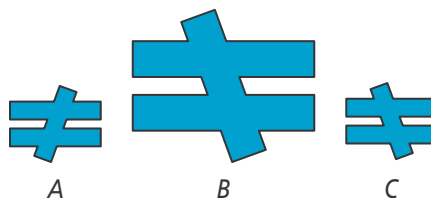
15. Given $WXYZ \cong WTUV$, describe a composition of rigid motions that maps $WXYZ$ to $WTUV$.
SEE EXAMPLE 2



16. Are $ABCD$ and $EFGH$ congruent? If so, describe a composition of rigid motions that maps $ABCD$ to $EFGH$. If not, explain. SEE EXAMPLE 3

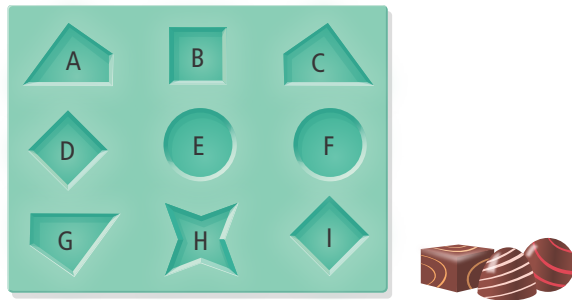


17. Which objects are congruent? For any congruent objects, describe a composition of rigid motions that maps the preimage to the image. SEE EXAMPLES 4 AND 5



APPLY

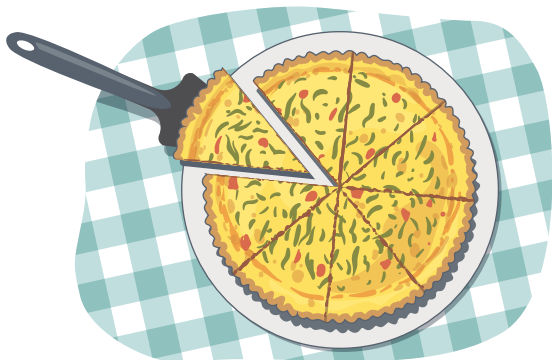
18. **Communicate Precisely** Using a 3D printer, Emery makes the chocolate mold shown by copying different shapes.
- Which of the designs in the mold appear to be congruent?
 - Describe a composition of rigid motions that maps the congruent shapes.



19. **Reason** Are the illustrations of the shoes in the advertisement congruent? If so, describe a composition of rigid motions that maps the left shoe to the right shoe.



20. **Use Structure** Describe a rigid motion or a composition of rigid motions that can be used to make sure that each slice of quiche is the same size and shape as the first slice.

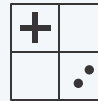


ASSESSMENT PRACTICE

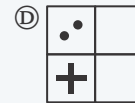
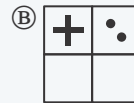
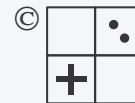
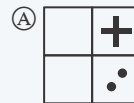
21. The transformation $T_{\langle 3, 8 \rangle} \circ r_{(90^\circ, A)}$ maps $\triangle ABC$ to $\triangle DEF$.

Triangle ABC is _____?_____ to $\triangle DEF$ because $T_{\langle 3, 8 \rangle} \circ r_{(90^\circ, A)}$ is a _____?_____.

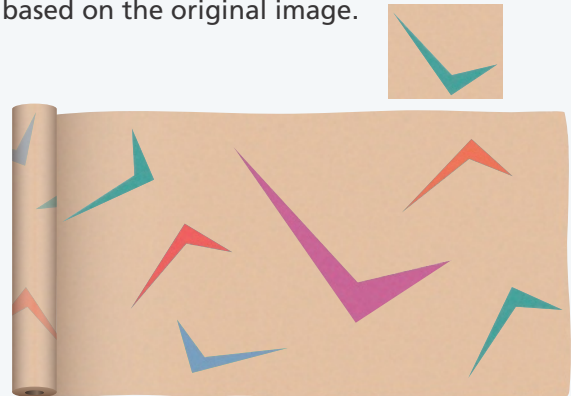
22. **SAT/ACT** A board game token is shown.



Which is congruent to the token?



23. **Performance Task** The fabric pattern shown is based on the original image.



Part A Identify any images in the pattern that appear to be congruent to the original image.

Part B Describe a composition of rigid motions that maps the original image to each congruent image in the pattern.

Part C For any images in the pattern that are not congruent to the original image, explain how you know they are not congruent.