TEXAS TAKS PRACTICE
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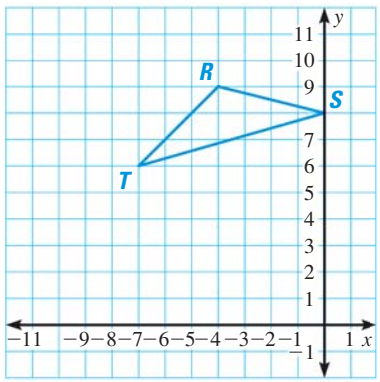
CONGRUENT FIGURE PROBLEMS ON TAKS

Below are examples of congruent figure problems in multiple choice format. Try solving the problems before looking at the solutions. (Cover the solutions with a piece of paper.) Then check your solutions against the ones given.

1. Which coordinates are the vertices of a triangle congruent to $\triangle RST$?



A (−3, −1), (−5, −4), and (−1, −4)

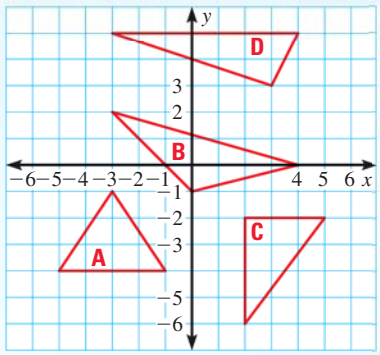
B (−3, 2), (0, −1), and (4, 0)

C (2, −2), (5, −2), and (2, −6)

D (3, 3), (4, 5), and (−3, 5)

Solution

Sketch each triangle in a coordinate plane.



Choice B describes the only triangle with the same size and shape as $\triangle RST$.

The correct answer is B.

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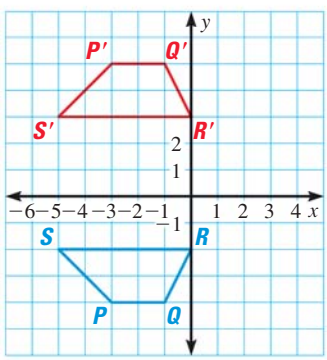
2. Which transformation maps figure $PQRS$ onto figure $P'Q'R'S'$?



F A 270° counterclockwise rotation about the origin

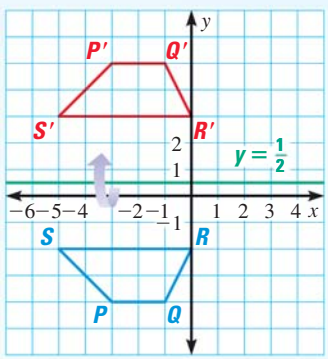
G A translation 5 units up

H A reflection in the x-axis

J A reflection in the line $y = \frac{1}{2}$

Solution

The transformation must be a reflection since figure P′Q′R′S′ is a mirror image of figure PQRS. Choice J is the correct reflection, as shown below.



The correct answer is J.

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