

9-3 Standardized Test Prep

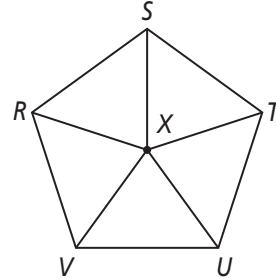
Rotations

Multiple Choice

In Exercises 1–5, choose the correct letter. Use the figure at the right for Exercises 1 and 2.

1. Point X is the center of regular pentagon $RSTUV$. What is the measure of the angle of rotation that will map S onto U ?

(A) 70 (C) 144
(B) 72 (D) 216

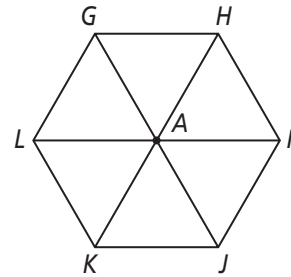


2. Point X is the center of regular pentagon $RSTUV$. What is the image of \overline{RS} after a 144° rotation about X ?

(F) \overline{ST} (G) \overline{TU} (H) \overline{UV} (I) \overline{VR}

3. Point A is the center of regular hexagon $GHIJKL$. What is the image of I after a 300° rotation about A ?

(A) J (C) L
(B) K (D) M



4. A Ferris wheel has 16 cars spaced equal distances apart. The cars are numbered 1–16 clockwise. What is the measure of the angle of rotation that will map the position of car 16 onto the position of car 13?

(F) 22.5 (G) 45 (H) 67.5 (I) 90

5. What are the coordinates of $(2, -5)$ after a 90° rotation about the origin?

(A) $(5, 2)$ (B) $(-5, 2)$ (C) $(5, -2)$ (D) $(-2, -5)$

Short Response

6. $\triangle ABC$ has coordinates $A(3, 3)$, $B(0, 0)$, and $C(3, 0)$. If the triangle is rotated 180° about point B , what will be the coordinates of the images of A and C (A' and C')?