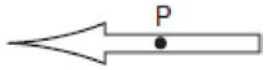
Name: _____

G.CO.A.5: Rotations 2

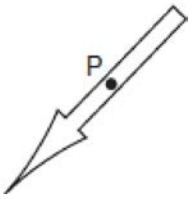
1 The accompanying diagram shows the starting position of the spinner on a board game.

How does this spinner appear after a 270° counterclockwise rotation about point *P*?

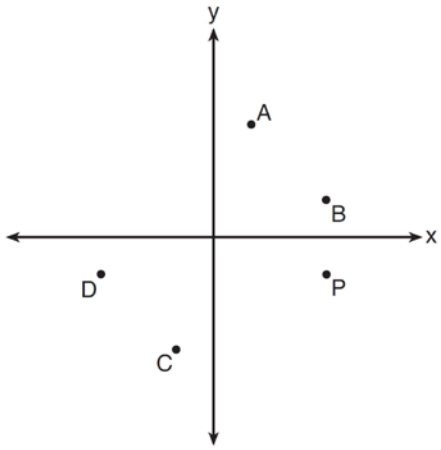
1) 

2) 

3) 

4) 

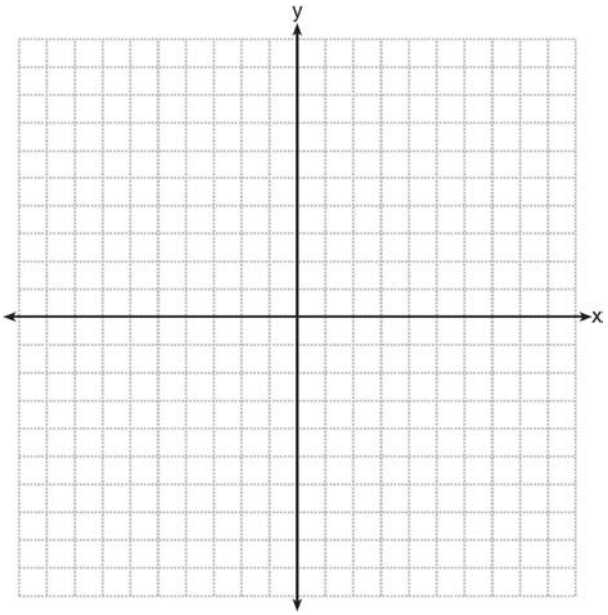
2 Which point shown in the graph below is the image of point *P* after a counterclockwise rotation of 90° about the origin?



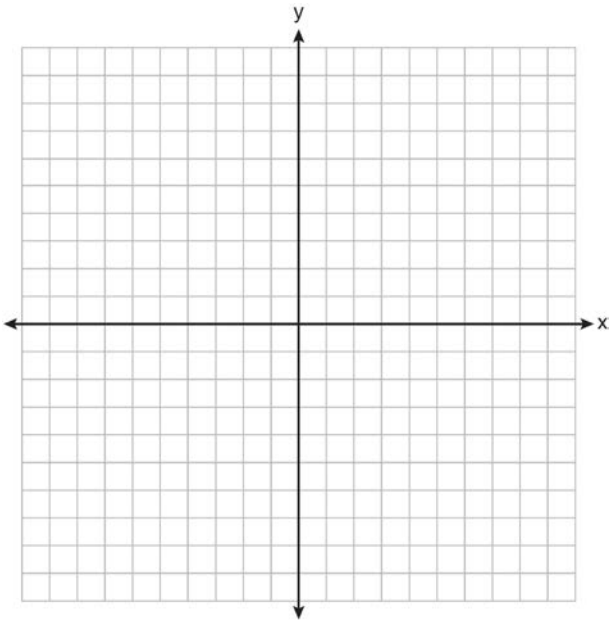
1) *A*
2) *B*
3) *C*
4) *D*

Name: _____

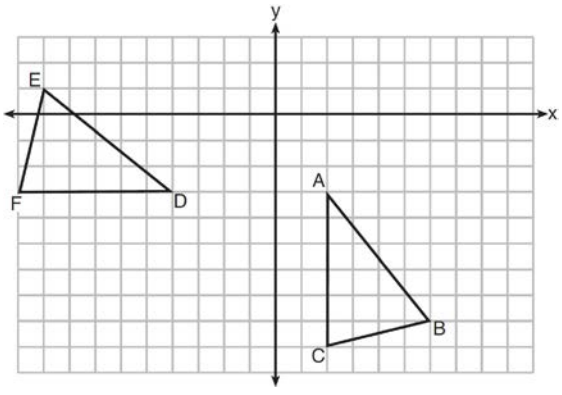
3 The coordinates of the vertices of $\triangle ABC$ are $A(1,2)$, $B(-4,3)$, and $C(-3,-5)$. State the coordinates of $\triangle A'B'C'$, the image of $\triangle ABC$ after a rotation of 90° about the origin. [The use of the set of axes below is optional.]



4 The coordinates of the vertices of $\triangle RST$ are $R(-2,3)$, $S(4,4)$, and $T(2,-2)$. Triangle $R'S'T'$ is the image of $\triangle RST$ after a rotation of 90° about the origin. State the coordinates of the vertices of $\triangle R'S'T'$. [The use of the set of axes below is optional.]



5 The grid below shows $\triangle ABC$ and $\triangle DEF$.



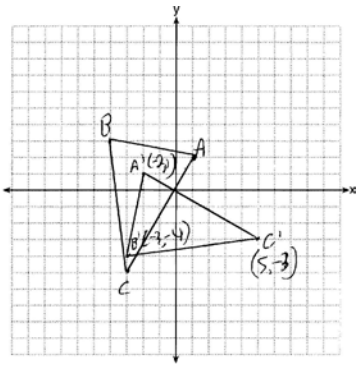
Let $\triangle A'B'C'$ be the image of $\triangle ABC$ after a rotation about point A. Determine and state the location of B' if the location of point C' is $(8,-3)$. Explain your answer. Is $\triangle DEF$ congruent to $\triangle A'B'C'$? Explain your answer.

G.CO.A.5: Rotations 2
Answer Section

1 ANS: 3 REF: 080721a

2 ANS: 1 REF: 081605geo

3 ANS:



$A'(-2,1)$, $B'(-3,-4)$, and $C'(5,-3)$

REF: 081230ge

4 ANS:
$R'(-3,-2)$, $S'(-4,4)$, and $T'(2,2)$.

REF: 011232ge

5 ANS:
ABC – point of reflection $\rightarrow (-y,x)+$ point of reflection $\triangle DEF \cong \triangle A'B'C'$ because $\triangle DEF$ is a reflection of

$A(2,-3)-(2,-3)=(0,0)\rightarrow(0,0)+(2,-3)=A'(2,-3)$

$B(6,-8)-(2,-3)=(4,-5)\rightarrow(5,4)+(2,-3)=B'(7,1)$

$C(2,-9)-(2,-3)=(0,-6)\rightarrow(6,0)+(2,-3)=C'(8,-3)$

$\triangle A'B'C'$ and reflections preserve distance.

REF: 081633geo