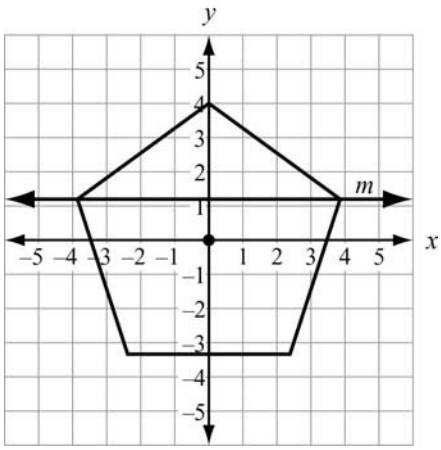
SAMPLE ITEMS

1. A regular pentagon is centered about the origin and has a vertex at (0, 4).

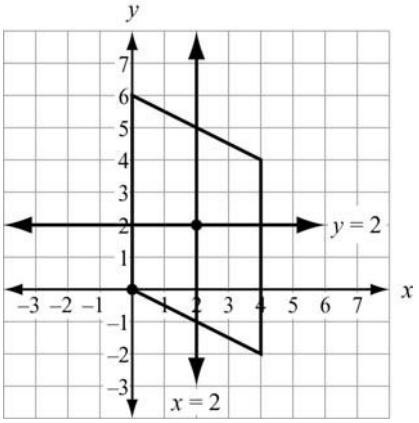


Which transformation maps the pentagon to itself?

A. a reflection across line *m*
B. a reflection across the *x*-axis
C. a clockwise rotation of 100° about the origin
D. a clockwise rotation of 144° about the origin

Correct Answer: D

2. A parallelogram has vertices at (0, 0), (0, 6), (4, 4), and (4, –2).

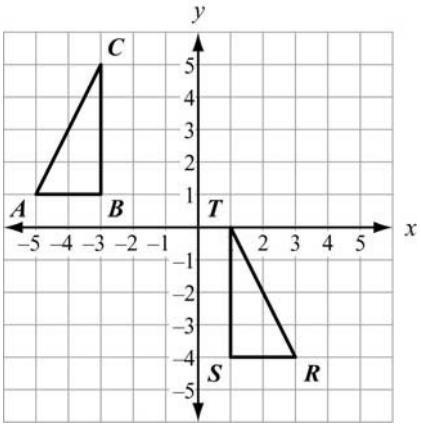


Which transformation maps the parallelogram to itself?

A. a reflection across the line $x = 2$
B. a reflection across the line $y = 2$
C. a rotation of 180° about the point (2, 2)
D. a rotation of 180° about the point (0, 0)

Correct Answer: C

3. Which sequence of transformations maps △*ABC* to △*RST*?



A. Reflect △*ABC* across the line $x = –1$. Then translate the result 1 unit down.
B. Reflect △*ABC* across the line $x = –1$. Then translate the result 5 units down.
C. Translate △*ABC* 6 units to the right. Then rotate the result 90° clockwise about the point (1, 1).
D. Translate △*ABC* 6 units to the right. Then rotate the result 90° counterclockwise about the point (1, 1).

Correct Answer: B