Choose the correct answer.

Use the transformation below for questions 1 and 2.

Triangle ABC is rotated 90° clockwise to create Triangle EDC.

1. Which angle is congruent to ∠B?
   A. ∠BCE
   B. ∠ECD
   C. ∠E
   D. ∠D

2. Which side is congruent to AC?
   A. BC
   B. EC
   C. ED
   D. DC

Use the coordinate plane below for questions 3–5.

Parallelogram QRS T is reflected over the y-axis to create parallelogram Q'R'S'T.'

3. Which angle is congruent to ∠S?
   A. ∠Q'
   B. ∠R'
   C. ∠S'
   D. ∠T'

4. Which side is congruent to QT?
   A. Q'T'
   B. ST
   C. Q'R'
   D. QR

5. Q'R' is parallel to TS. Which side is parallel to Q'R'?
   A. S'R'
   B. S'T'
   C. Q'T'
   D. R'S

Draw the image of the figure after it has been reflected over the x-axis. Label the image ∆FG'H'.

B. Name the congruent sides and the congruent angles.
   \[ GF = G'F', \quad F'H = F'H', \quad GH = G'H' \]
   \[ G = G', \quad F = F', \quad H = H' \]
1. A dilation is another type of transformation that changes the **size** of a figure, but not its **shape**.
   a. A stretch = **enlargement**
   b. A shrink = **reduction**

2. The change in a dilation depends on its **scale factor**.
   a. If scale factor is > 1 the dilation will **enlarge**
   (fraction)
   b. If the scale factor is between 0-1, the dilation will **shrink**

3. To find the **center of dilation**, draw a line that connects each pair of corresponding **vertices**.

4. **EXAMPLE 1:** *if the center of the dilation is at the origin* and you have two figures, you can compare the two and determine the scale factor:
   a. **compare 1st to 2nd**
   b. **count units of sides**
   c. **set up a ratio to give you SF**

\[ \frac{6}{3} = 2 \]
5. EXAMPLE 2: *if the center of dilation is \( \text{at the origin} \), and you are given the scale factor, you can draw the dilated image...
   a. label ordered pairs
   b. label each ordered pair \((x, y)\) by SF
   c. now plot new ordered pairs for prime figure & label

![Graph of triangle FGH with vertices labeled] (3,9) \( G \)

\[ G \rightarrow (9, 12) \cdot \frac{1}{3} \cdot \frac{1}{3} = \frac{1}{9} \]

\[ G' \rightarrow (3, 4) \]

\[ F \rightarrow (3, 9) \cdot \frac{1}{3} = \frac{1}{3} \times \frac{1}{3} = \frac{1}{9} \]

6. EXAMPLE 3: *if the center of dilation is \( \text{not} \) at the origin...
   a. determine where center of dilation is (circle this)
   b. determine where SF (circle this)
   c. start at center of dilation point
      i. multiply by scale factor for horizontal line – plot new point
      ii. multiply by scale factor for vertical line – plot new point