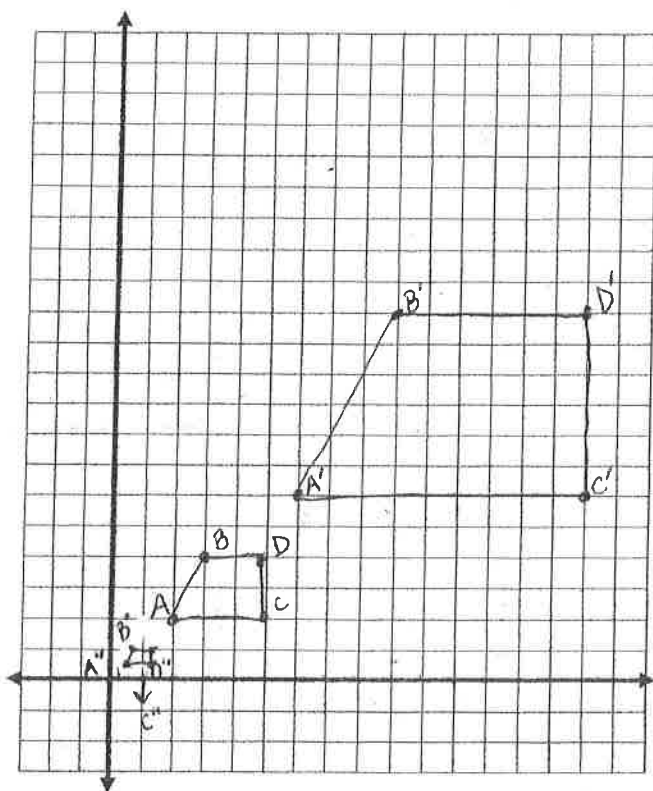


- 1) Graph and connect these points: A (2,2) B (3,4) C (5,2) D (5,4)



- 2) Graph a new figure on the same coordinate plane by applying a scale factor of 3. Compare the original figure to the new figure; include appearance and new coordinate pairs.

$A' (6,6)$ $C' (15,6)$
 $B' (9,12)$ $D' (15,12)$
 Shape is the same, the image got larger.

- 3) Graph a new figure on the same coordinate plane by applying a scale factor of $\frac{1}{4}$ to your original coordinates. Compare the original figure to the new figure; include appearance and new coordinate pairs.

$A'' (\frac{1}{2}, \frac{1}{2})$ $C'' (\frac{5}{4}, \frac{1}{2})$
 $B'' (\frac{3}{4}, 1)$ $D'' (\frac{5}{4}, 1)$
 Shape is the same, but the size is smaller than pre-image.

- 4) What happens when you apply a scale factor greater than 1 to a set of coordinates?

the pre-image gets larger in size.

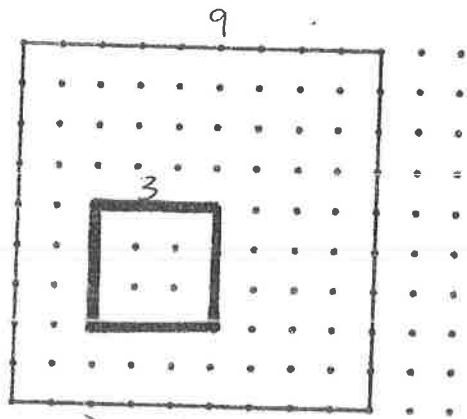
- 5) What happens when you apply a scale factor less than 1 to a set of coordinates?

the preimage gets smaller in size.

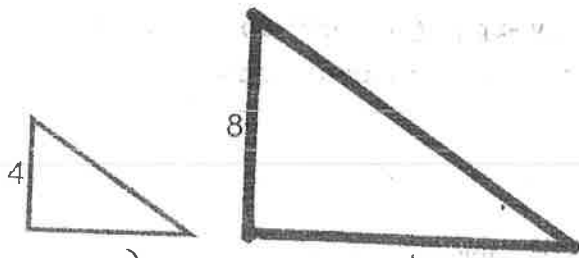
- 6) Predict what would happen if you applied a scale factor of 1 to a set of coordinates.

the pre-image would stay the same.

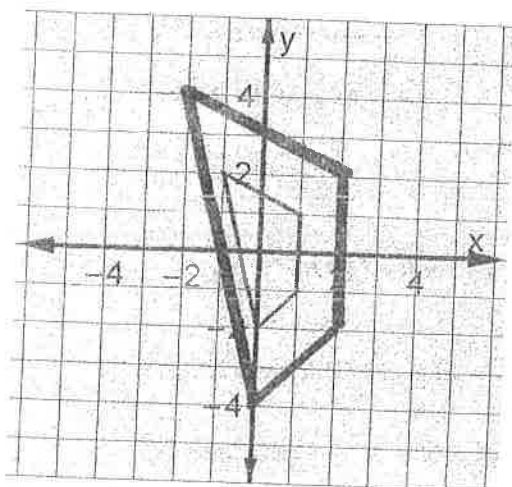
- 7) The bold figure is a dilation of the regular figure.
- Determine whether the dilation is a reduction or an enlargement.
 - Find the scale factor.



- reduction
- $\frac{1}{3}$



- enlargement
- 2



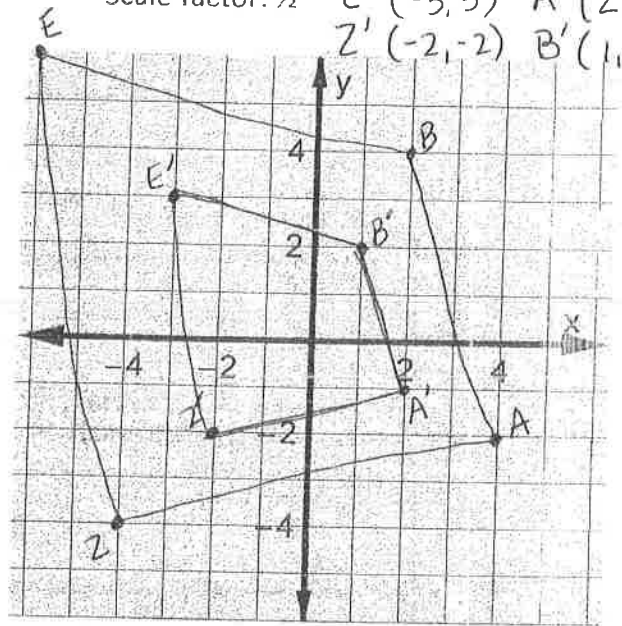
(1,1)
 $\downarrow \times 2$
 (2,2)

- enlargement
- 2

- 8) Graph EZAB and its image E'Z'A'B' under a dilation of the given scale factor.

a) $E(-6,6)$ $Z(-4,-4)$ $A(4,-2)$ $B(2,4)$

Scale factor: $\frac{1}{2}$ $E'(-3,3)$ $A'(2,-1)$
 $Z'(-2,-2)$ $B'(1,2)$



b) $E(-2,-2)$ $Z(1,-2)$ $A(1,2)$ $B(-1,3)$

Scale Factor: 2 $E'(-4,-4)$ $A'(2,4)$
 $B'(-2,6)$ $Z'(2,-4)$

