

Mathematics

# **Enlargement by a negative scale factor**

## **Lesson 4 of 8**

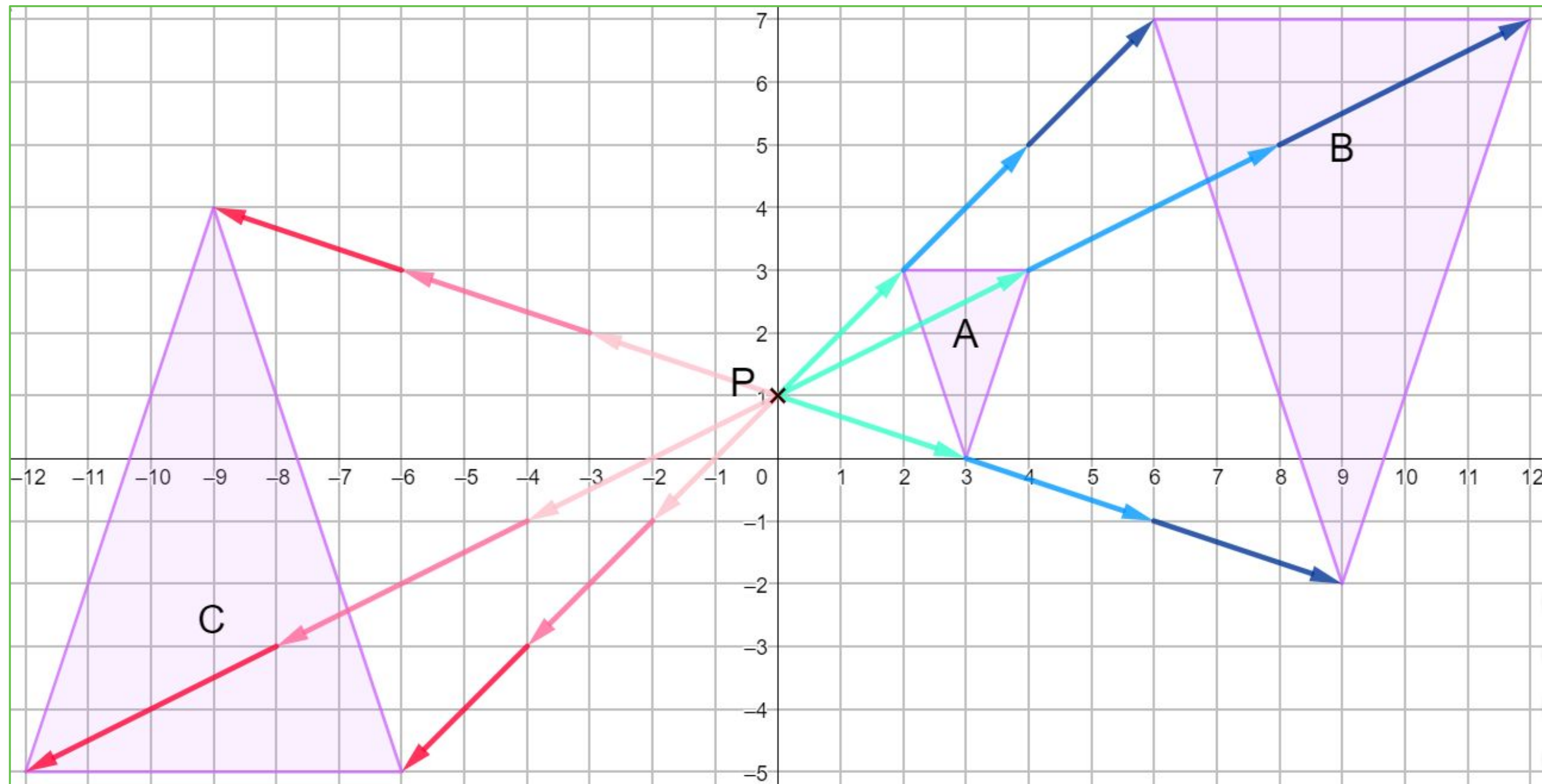
Downloadable Resource

Miss Kidd-Rossiter

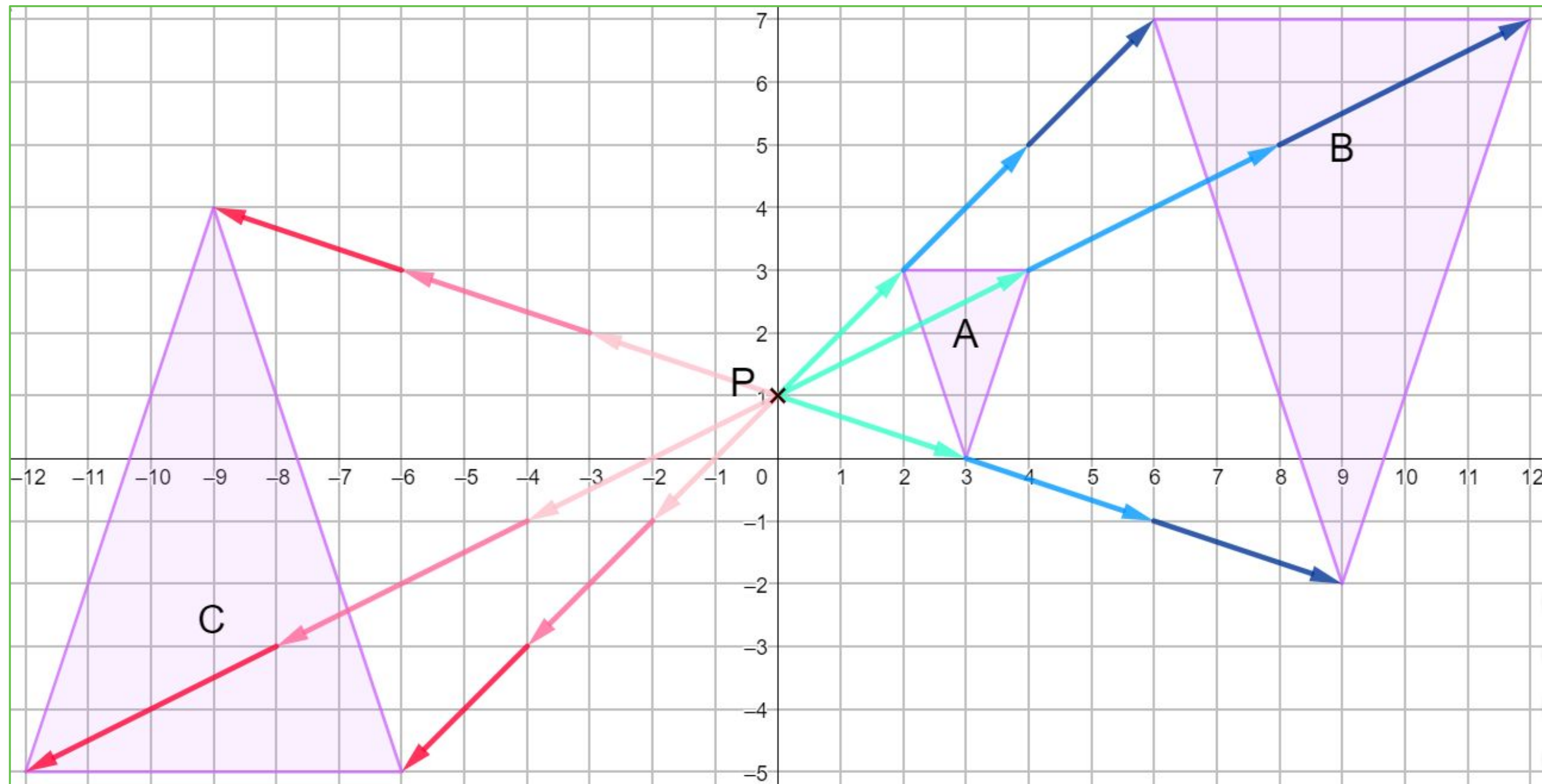


# Try this

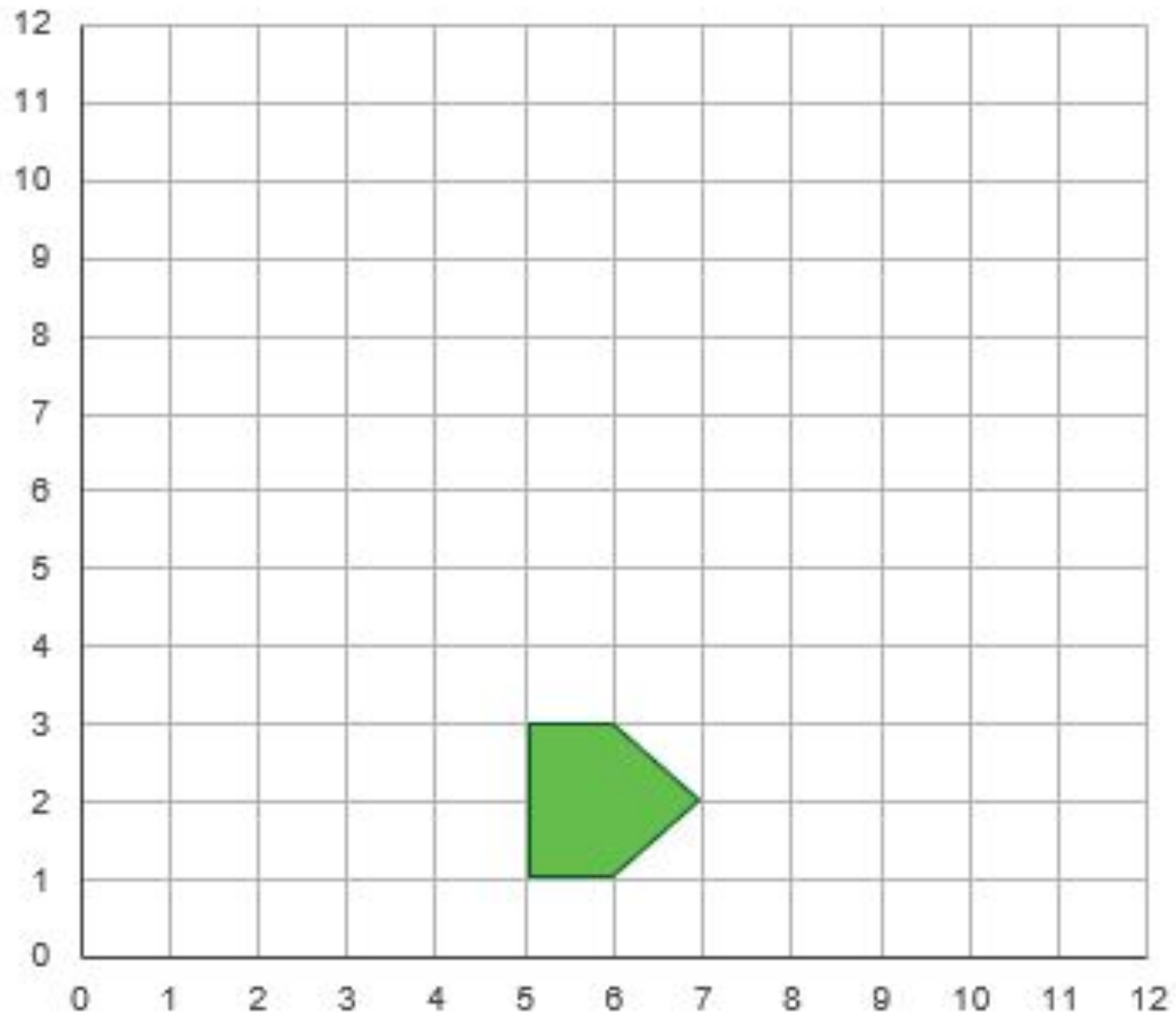
What's the same and what's different?



# Connect



# Independent task



1. Copy down the diagram to the left. Enlarge the shape by:
  - a. Scale factor -1 from (6, 4)
  - b. Scale factor -1 from (7, 4)
  - c. Scale factor -1 from (4, 4)
  - d. Scale factor -1 from (4, 2)
  - e. Scale factor -2 from (5, 3)

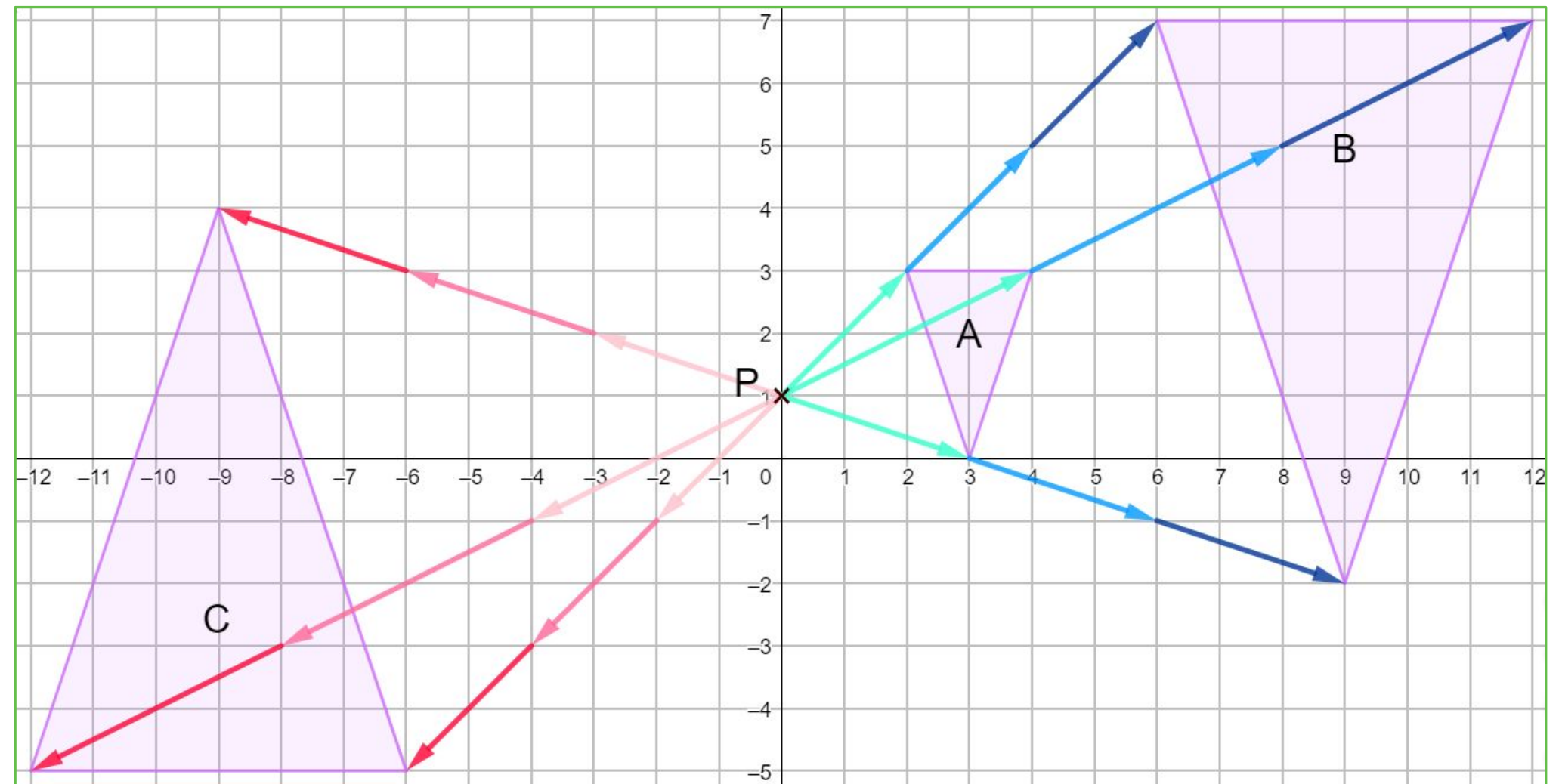


# Independent task

2. Draw a set of axes like the ones below. Copy A and P.

Enlarge A with centre P and:

- a. Scale factor -2
- b. Scale factor -1.5
- c. Scale factor -0.5



# Explore

Zaki is going to enlarge the shape in the diagram about the marked point

Give an example of a scale factor he could be thinking of.

Can you write a similar statement for each of the following scales factors ranges?

Scale factor = 1

Scale factor = -1

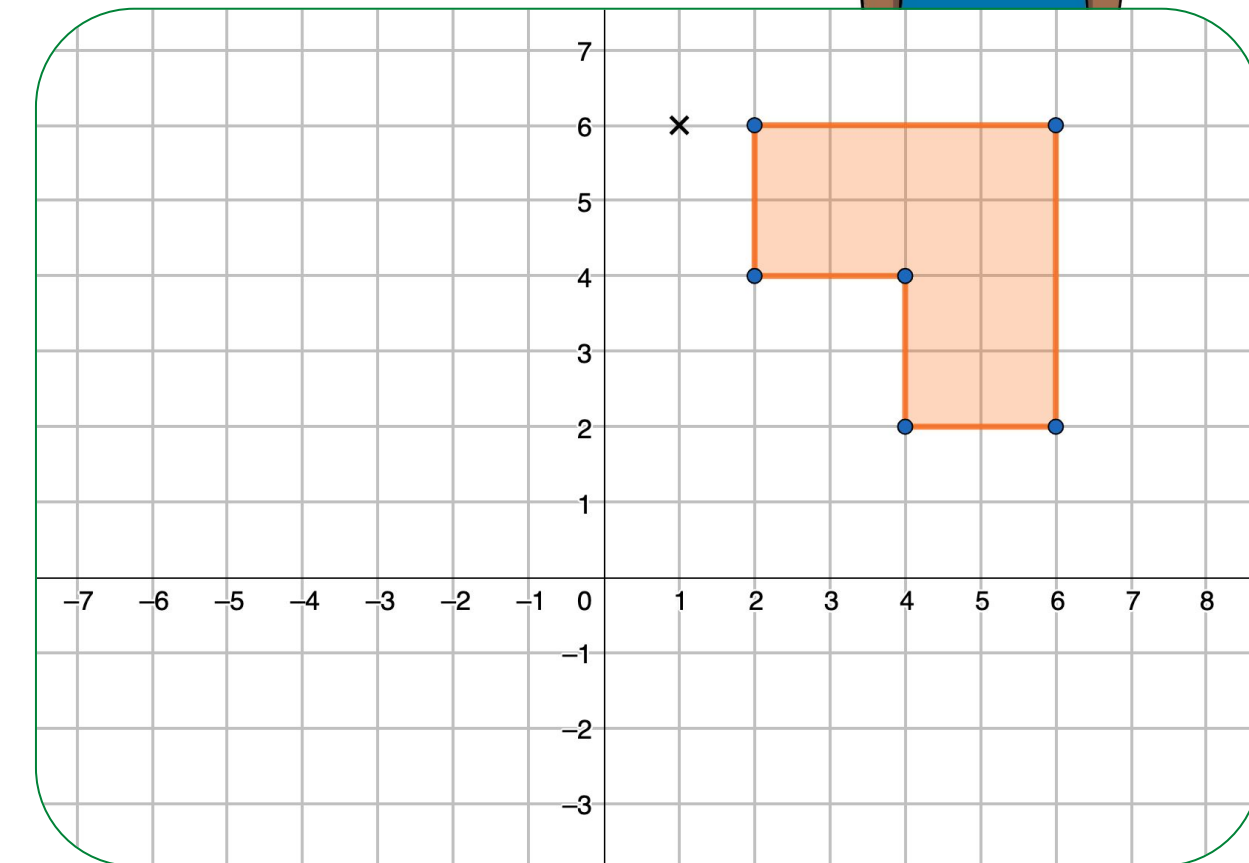
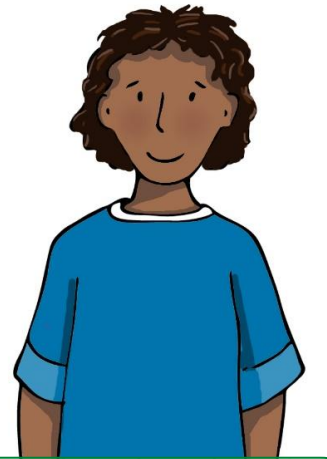
$-1 < \text{Scale factor} < 0$

$0 < \text{Scale factor} < 1$

Scale factor  $> 1$

Scale factor  $< -1$

The image will have a greater area and the same orientation as the object





# Explore

Scale factor = 1

$0 < \text{Scale factor} < 1$

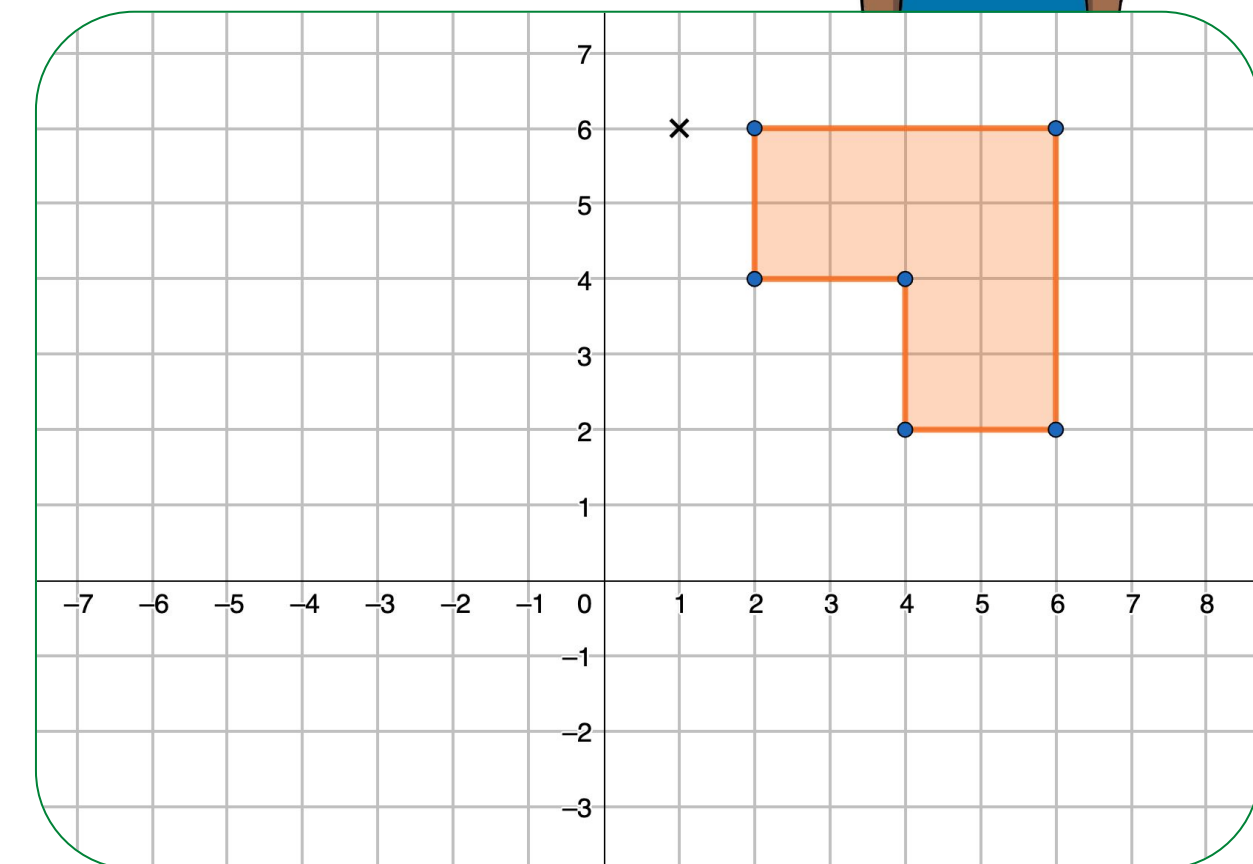
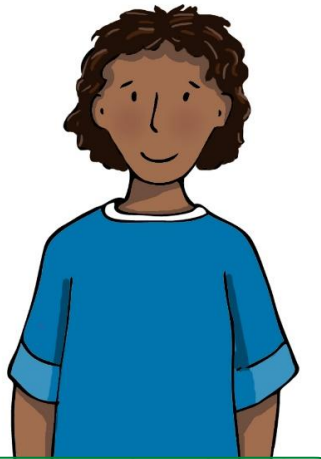
Scale factor = -1

Scale factor  $> 1$

$-1 < \text{Scale factor} < 0$

Scale factor  $< -1$

The image will have a greater area and the same orientation as the object



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