Mathematics

Enlargement by a non-integer scale factor

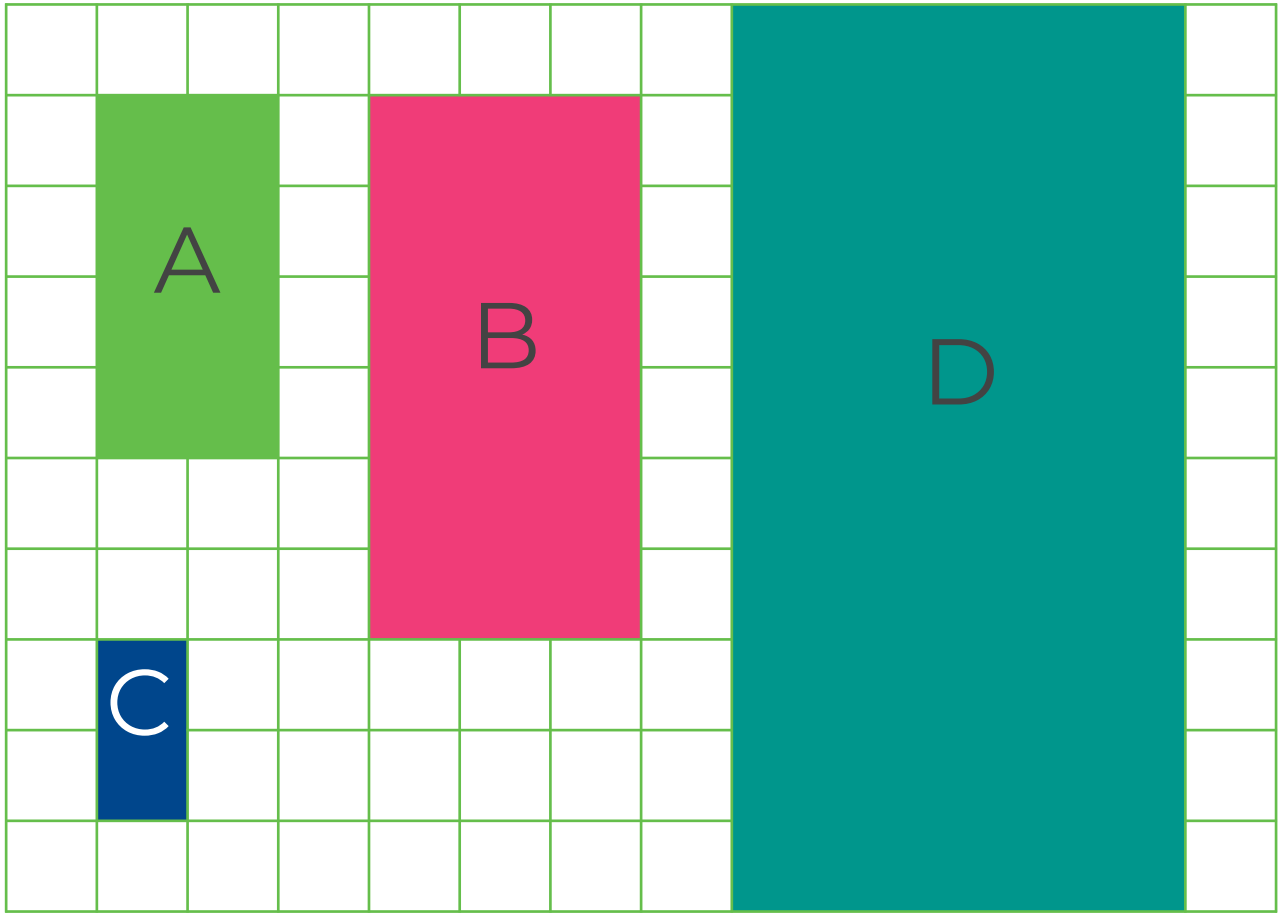
Lesson 2 of 8

Downloadable Resource

Miss Kidd-Rossiter

Try this

Which of the shapes on the grid are enlargements of each other?



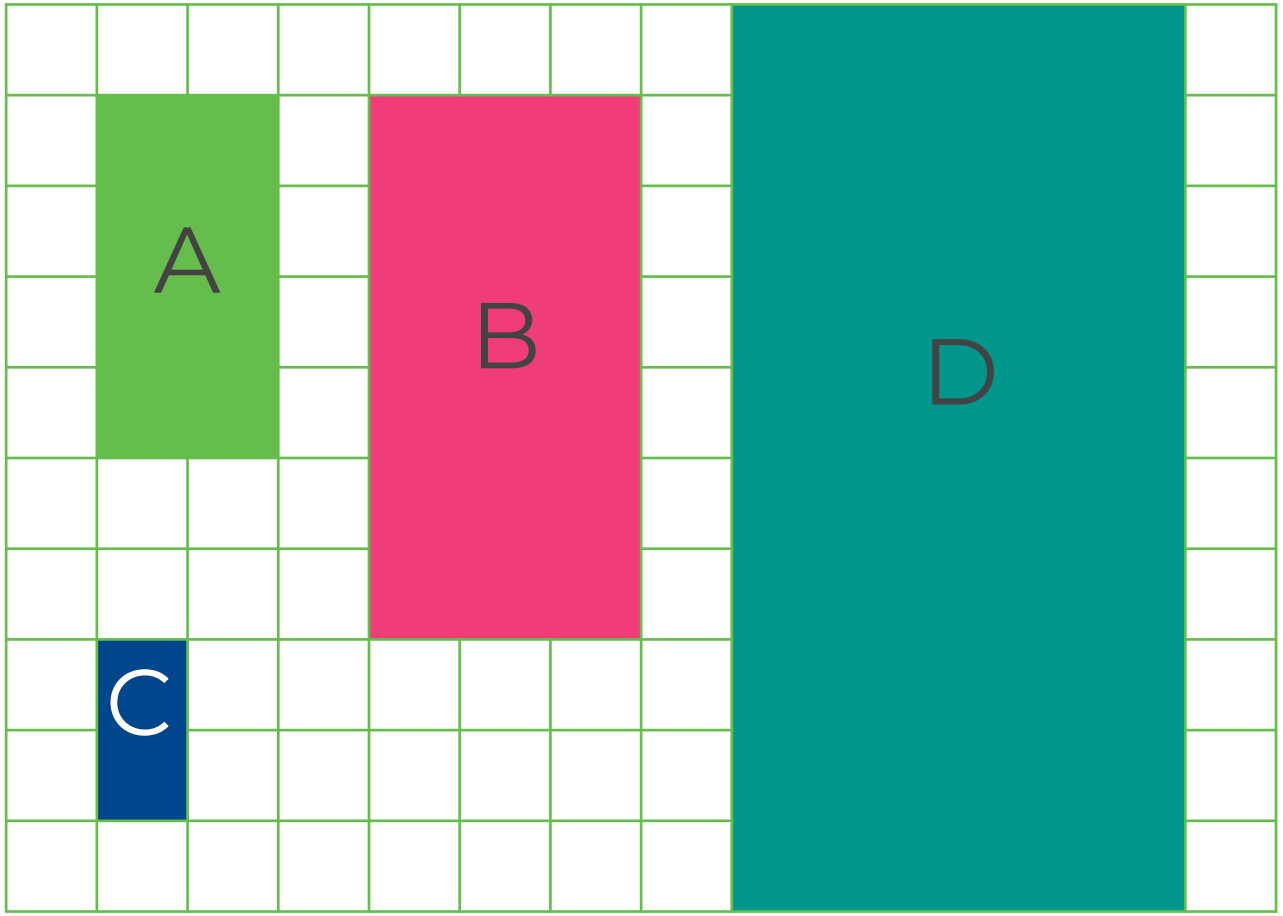
Hint on next slide, if needed

Try this

Which of the shapes on the grid are enlargements of each other?

Hints:

- *Has the same scale factor been used to multiply the lengths of each side?*
- *Are any of them non-integer enlargements?*



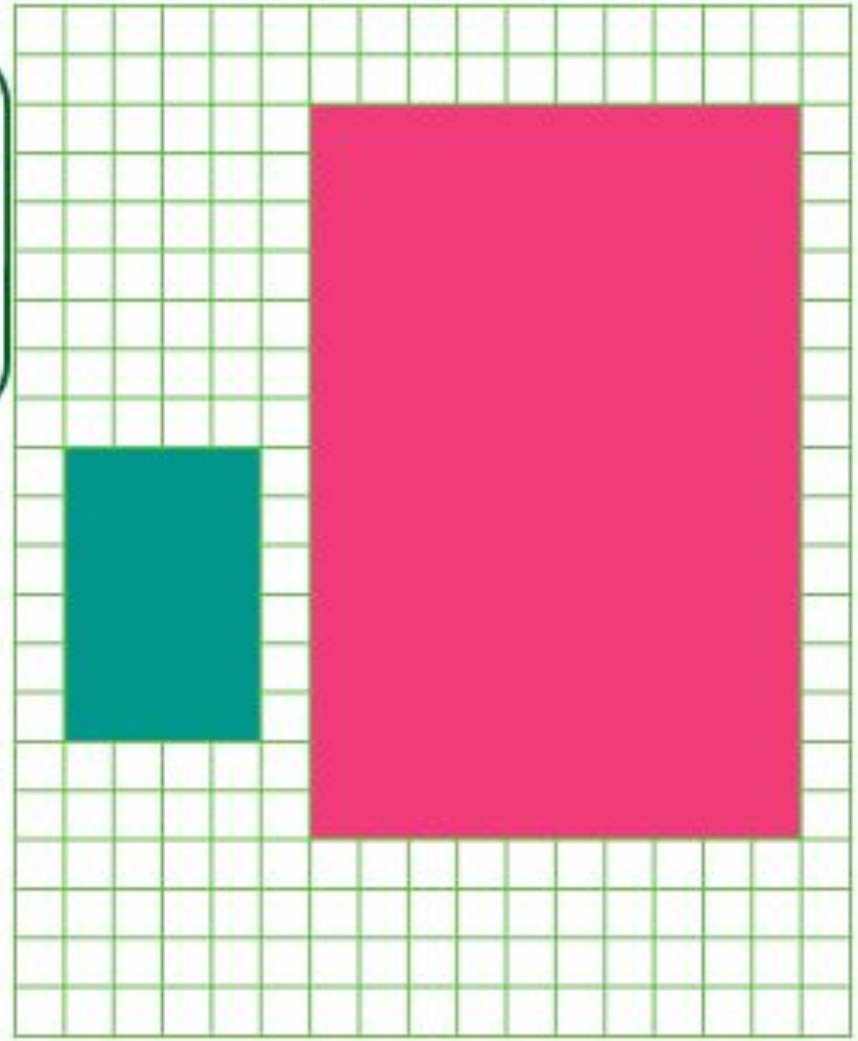
Connect

The object has been enlarged by a scale factor of 2.5 to give the image.

The object has been enlarged by a scale factor of $\frac{2}{5}$ to give the image.

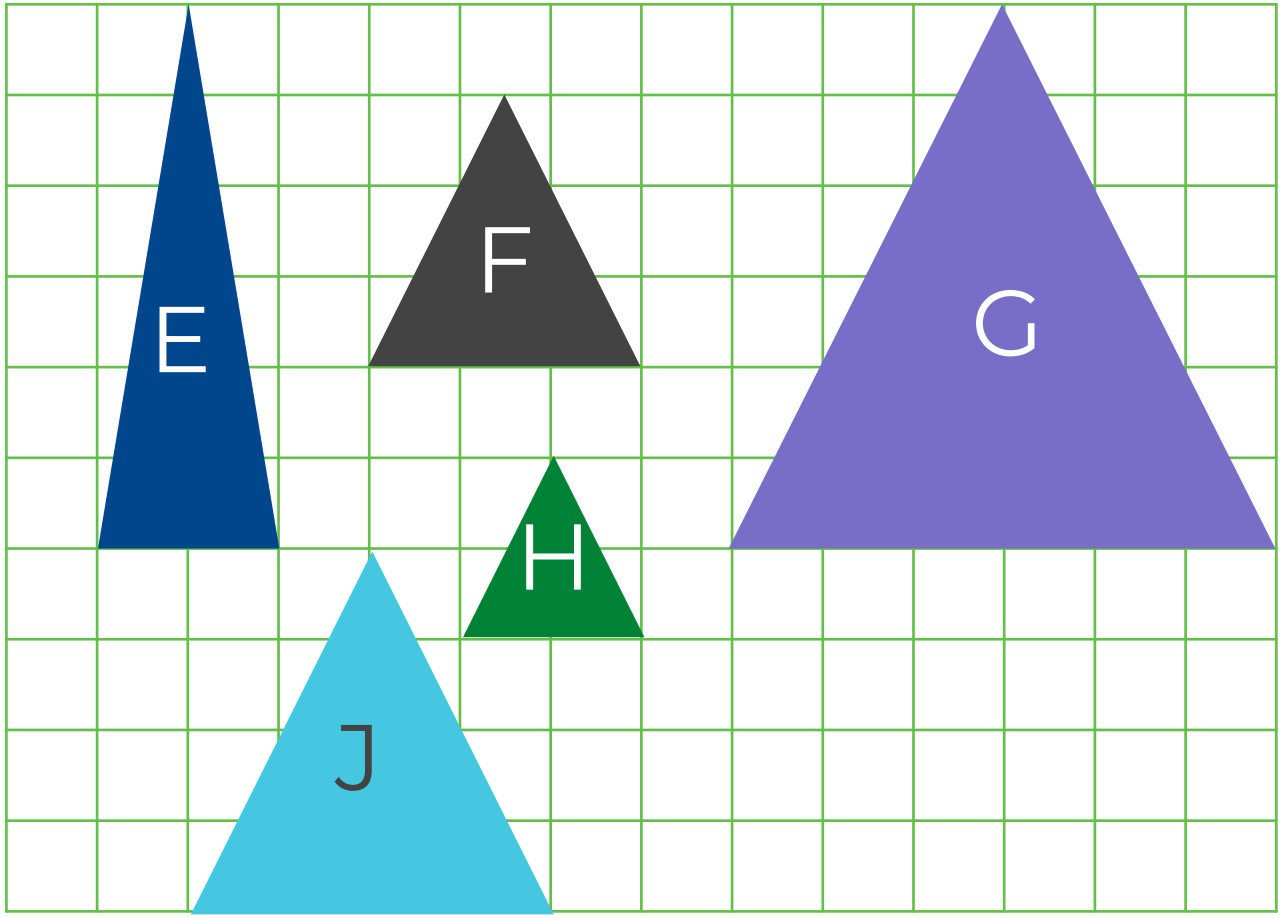
Who is correct?

Why?



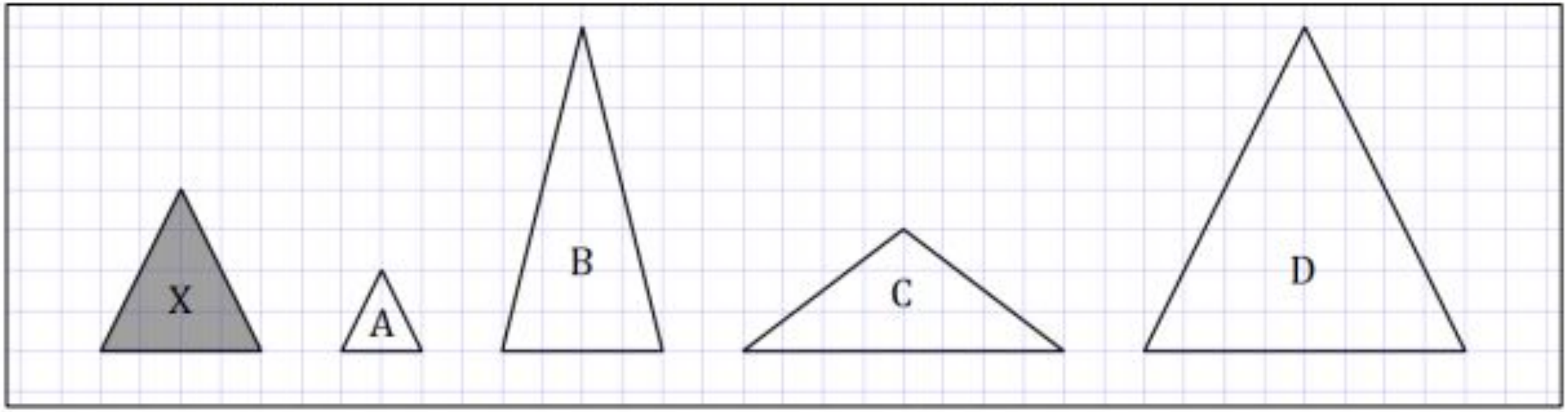
Independent task

1. Which of the shapes on the grid are enlargements of each other, what are the scale factors of enlargement?



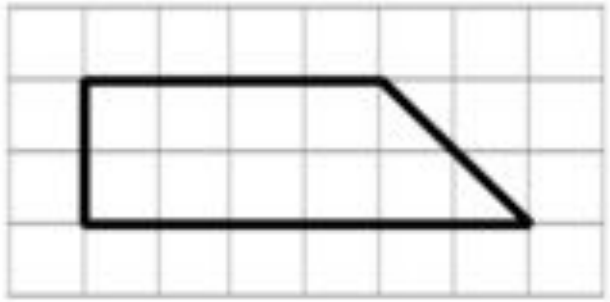
Independent task

2. Identify the triangles that are **not** enlargements of the triangles marked X. Give reasons for your choices.



Independent task

3. The shape below is enlarged by different scale factors. On squared paper draw an image of enlargement for each of the below scale factors.



Scale factor 2

Scale factor 1.5

Scale factor $\frac{1}{2}$

Scale factor 1

Explore

Draw your own shape like the one shown in the grid

a) Enlarge by scale factor $\frac{1}{2}$ then enlarge the new shape by a scale factor of 2

b) Enlarge by a scale factor of $\frac{2}{3}$, then enlarge the new shape by a scale factor of 1.5

What do you notice? Can you come up with similar pairs of numbers that have the same effect?