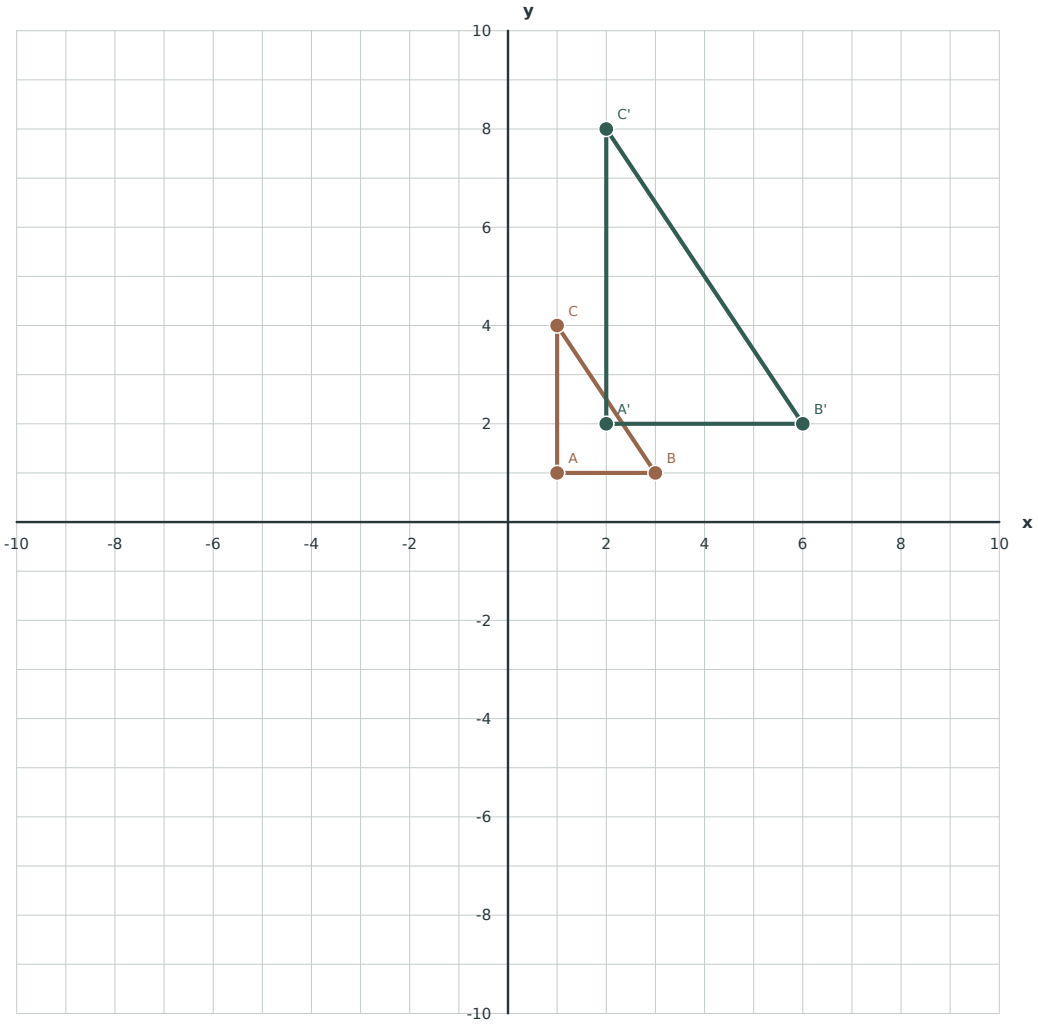
Double the triangle

Vertices in order: A(1, 1); B(3, 1); C(1, 4).

Dilate about (0, 0) by scale factor 2. Draw and label the image. State the length and area ratios.

ANSWER / worked construction



Brown: original / Green: transformed image (answer only)

Dilate about (0, 0) by scale factor 2.

Image vertices: A(2, 2); B(6, 2); C(2, 8).

Length ratio = 2; area ratio = 4. Area: 3 to 12 square units.

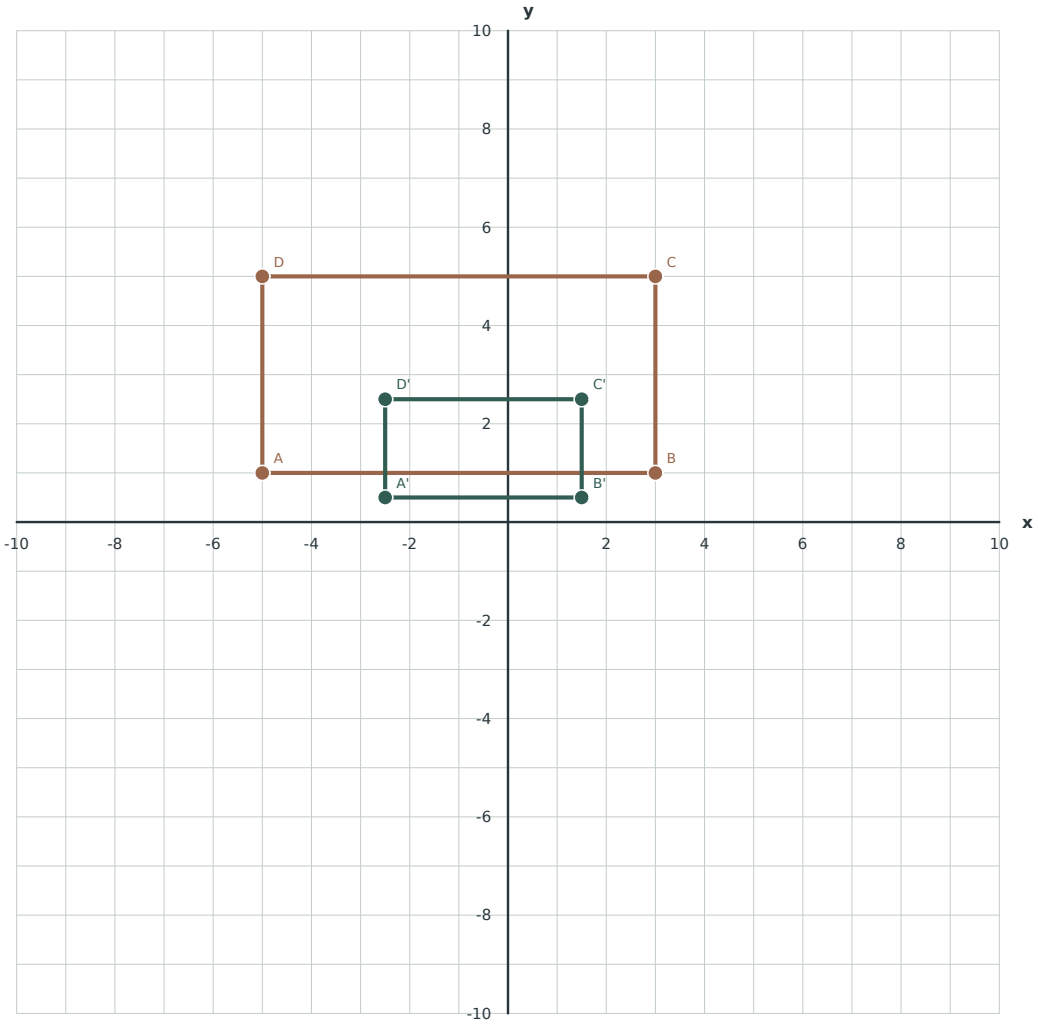
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Half-size rectangle

Vertices in order: A(-5, 1); B(3, 1); C(3, 5); D(-5, 5).

Dilate about (0, 0) by scale factor 1/2. Draw and label the image. State the length and area ratios.

ANSWER / worked construction



Brown: original / Green: transformed image (answer only)

Dilate about (0, 0) by scale factor 1/2.

Image vertices: A(-5/2, 1/2); B(3/2, 1/2); C(3/2, 5/2); D(-5/2, 5/2).

Length ratio = 1/2; area ratio = 1/4. Area: 32 to 8 square units.

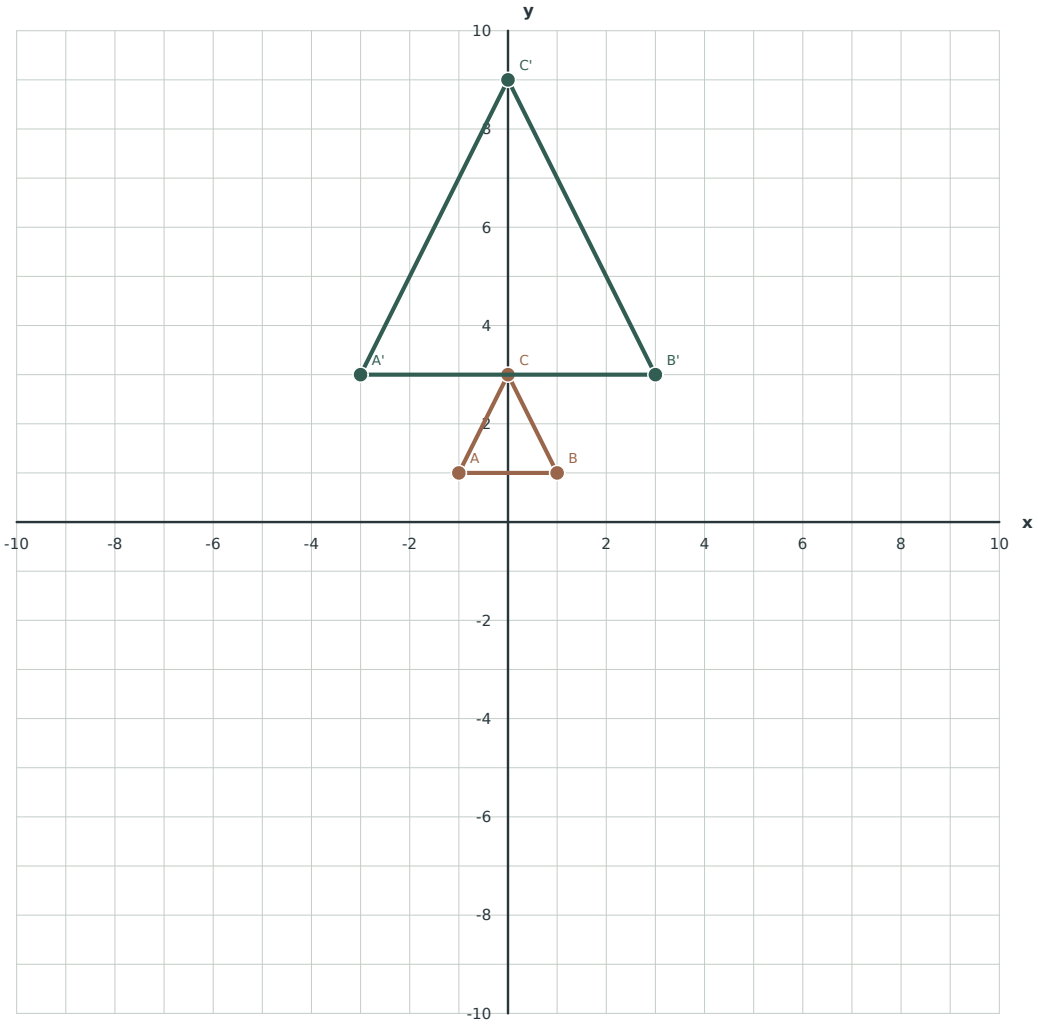
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Triple a triangle

Vertices in order: A(-1, 1); B(1, 1); C(0, 3).

Dilate about (0, 0) by scale factor 3. Draw and label the image. State the length and area ratios.

ANSWER / worked construction



Brown: original / Green: transformed image (answer only)

Dilate about (0, 0) by scale factor 3.

Image vertices: A(-3, 3); B(3, 3); C(0, 9).

Length ratio = 3; area ratio = 9. Area: 2 to 18 square units.

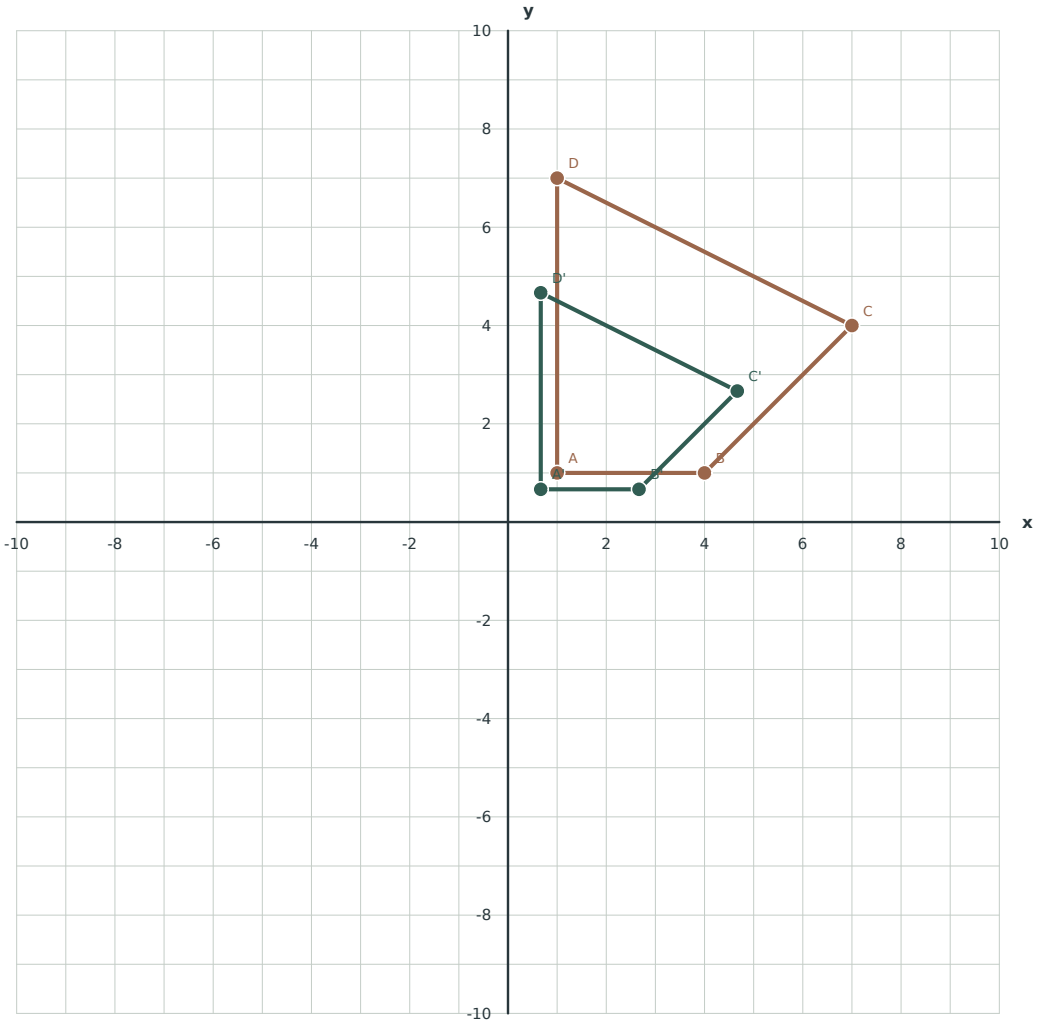
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Two-thirds quadrilateral

Vertices in order: A(1, 1); B(4, 1); C(7, 4); D(1, 7).

Dilate about (0, 0) by scale factor 2/3. Draw and label the image. State the length and area ratios.

ANSWER / worked construction



Brown: original / Green: transformed image (answer only)

Dilate about (0, 0) by scale factor 2/3.

Image vertices: A(2/3, 2/3); B(8/3, 2/3); C(14/3, 8/3); D(2/3, 14/3).

Length ratio = 2/3; area ratio = 4/9. Area: 45/2 to 10 square units.

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