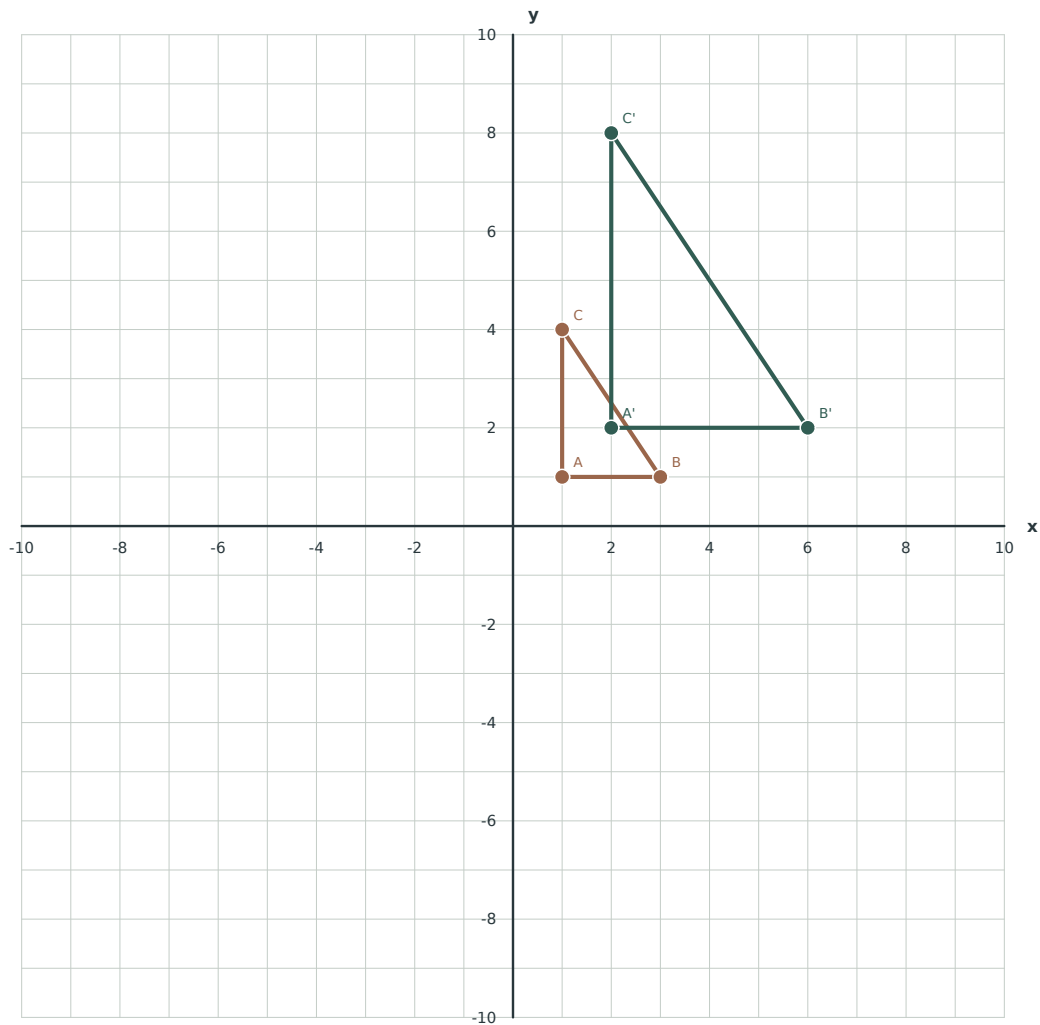


Double the triangle

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).

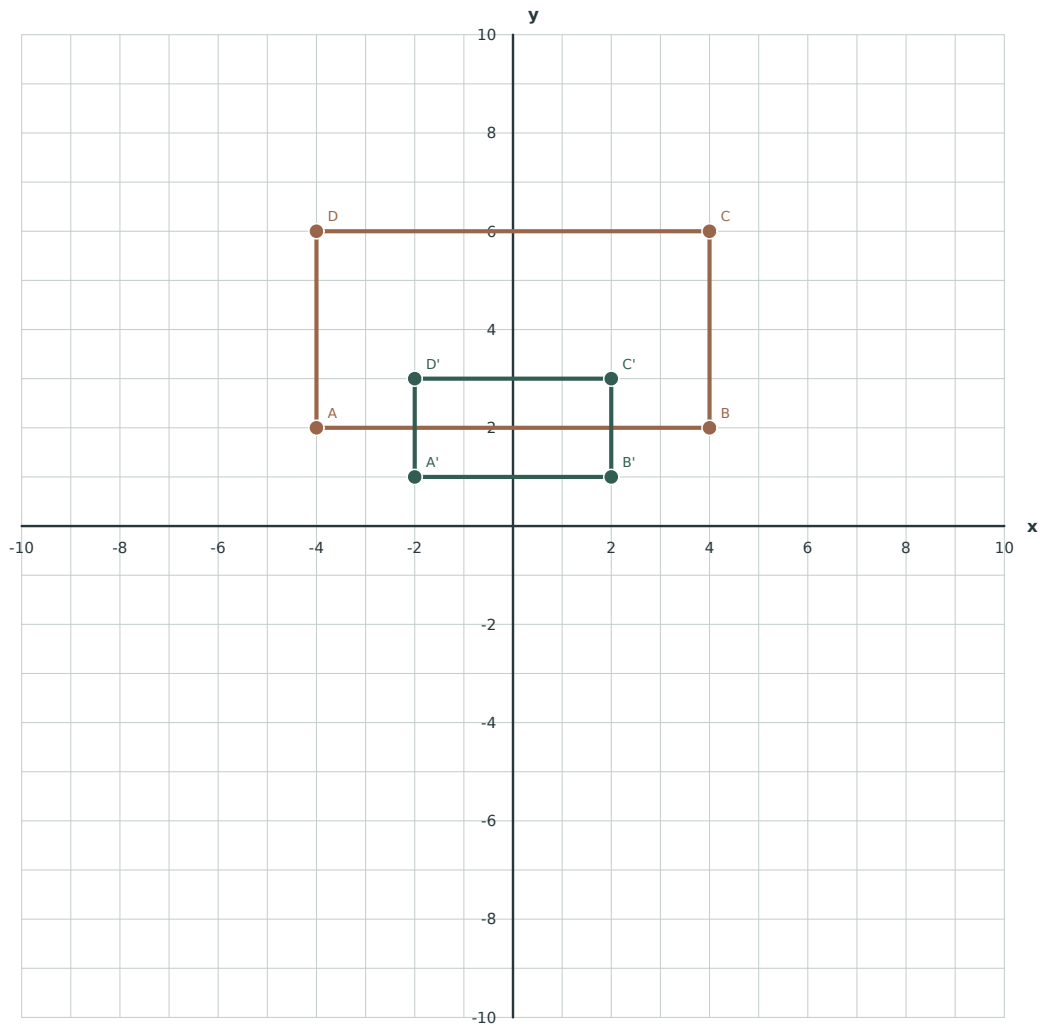
Length ratio = 2; area ratio = 4. Area: 3 to 12 square units.

Half-size rectangle

Vertices in order: A(-4, 2); B(4, 2); C(4, 6); D(-4, 6).

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(-2, 1); B(2, 1); C(2, 3); D(-2, 3).

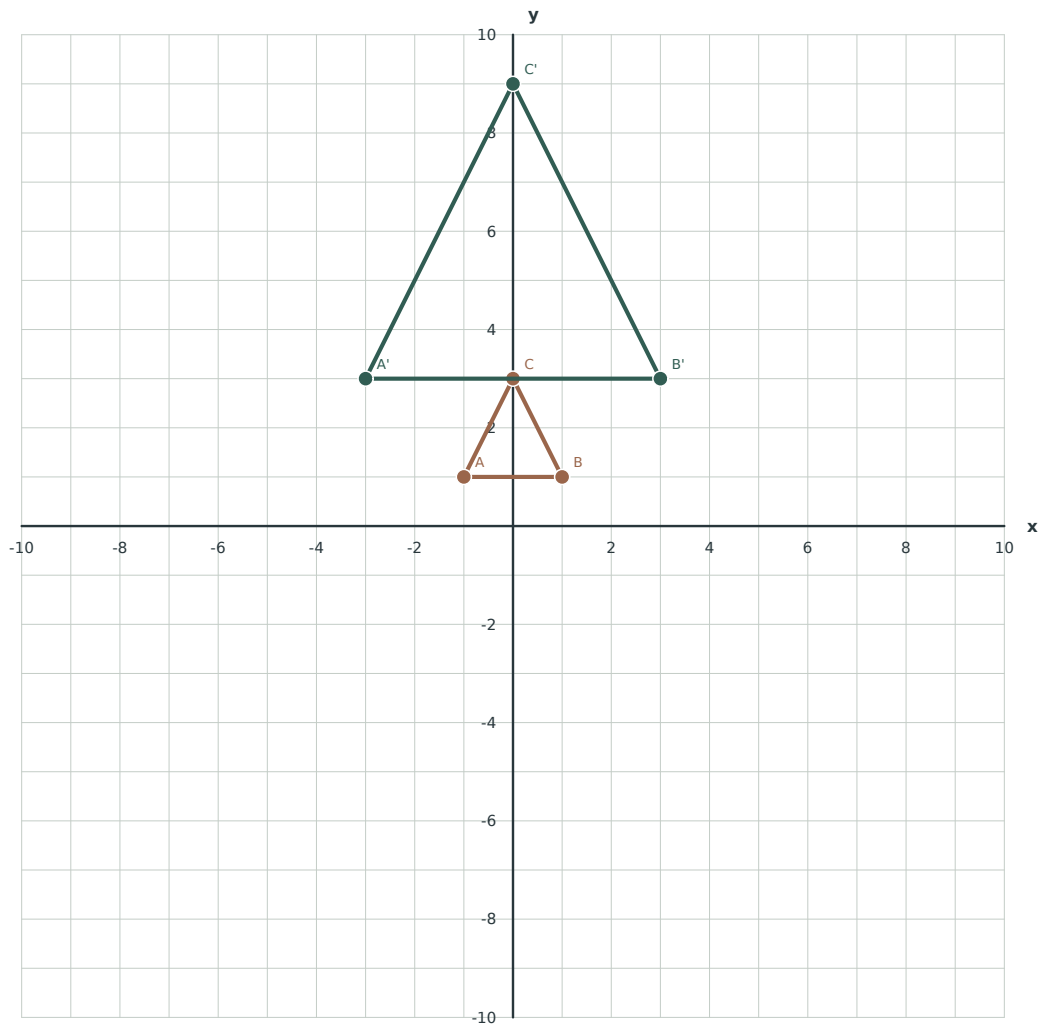
Length ratio = $1/2$; area ratio = $1/4$. Area: 32 to 8 square units.

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).

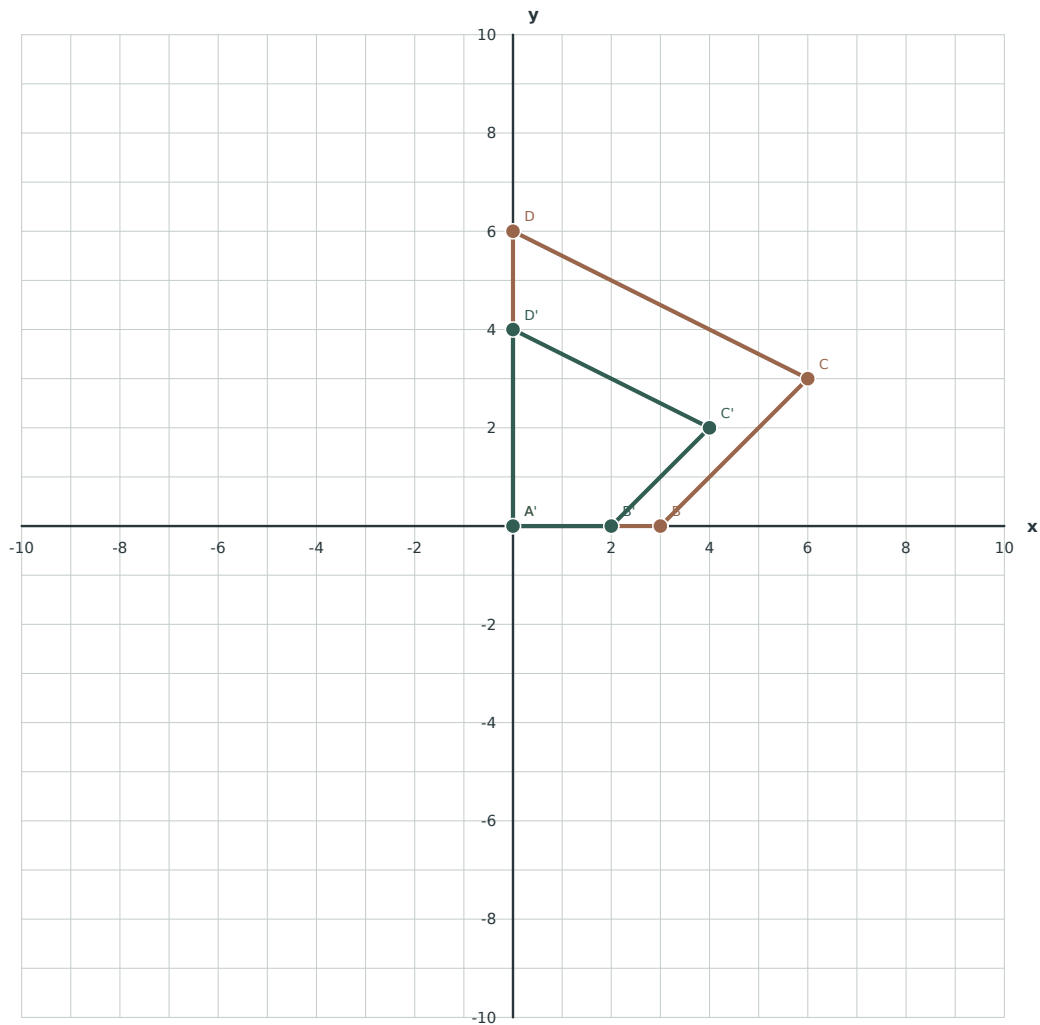
Length ratio = 3; area ratio = 9. Area: 2 to 18 square units.

Two-thirds quadrilateral

Vertices in order: A(0, 0); B(3, 0); C(6, 3); D(0, 6).

Dilate about (0, 0) by scale factor $\frac{2}{3}$. 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 $\frac{2}{3}$.

Image vertices: A(0, 0); B(2, 0); C(4, 2); D(0, 4).

Length ratio = $\frac{2}{3}$; area ratio = $\frac{4}{9}$. Area: $\frac{45}{2}$ to 10 square units.