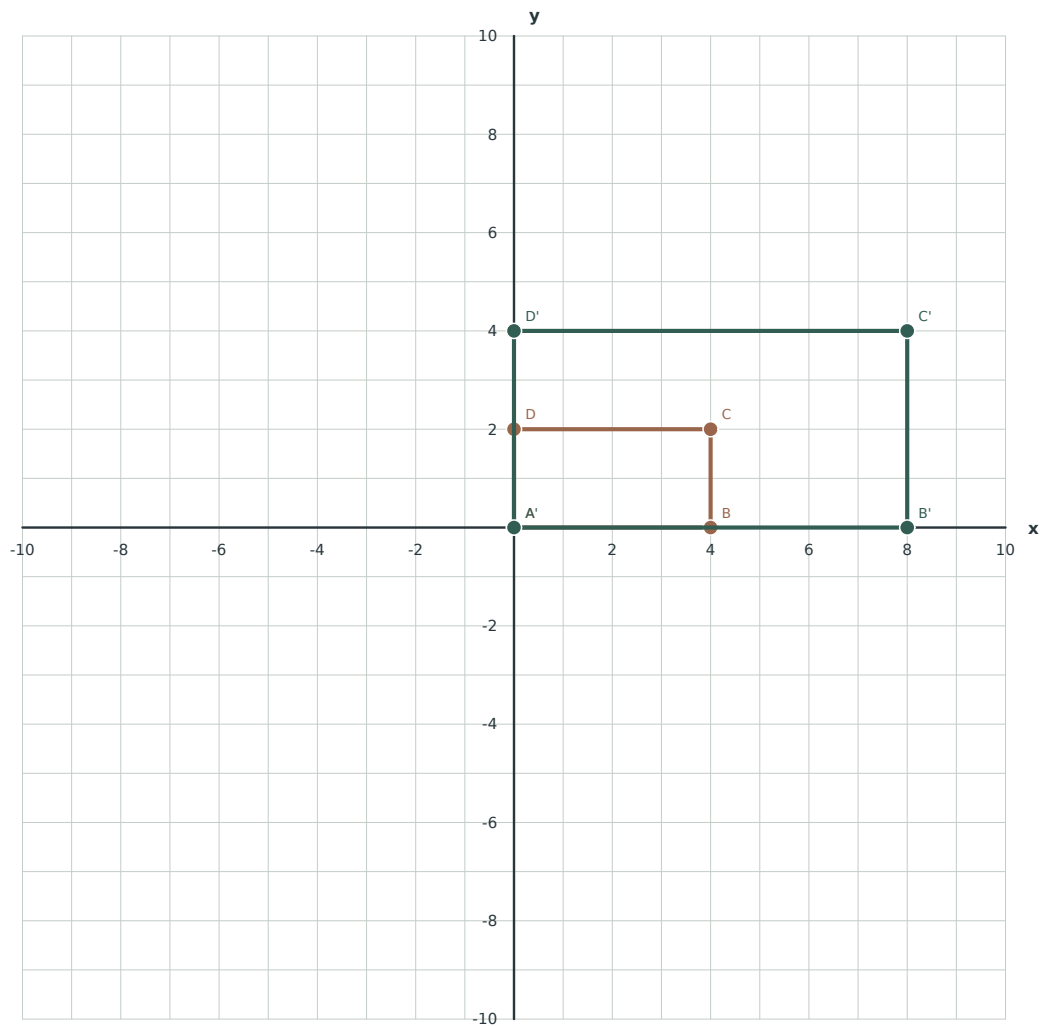


Double a rectangle

Vertices in order: A(0, 0); B(4, 0); C(4, 2); D(0, 2).

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(0, 0); B(8, 0); C(8, 4); D(0, 4).

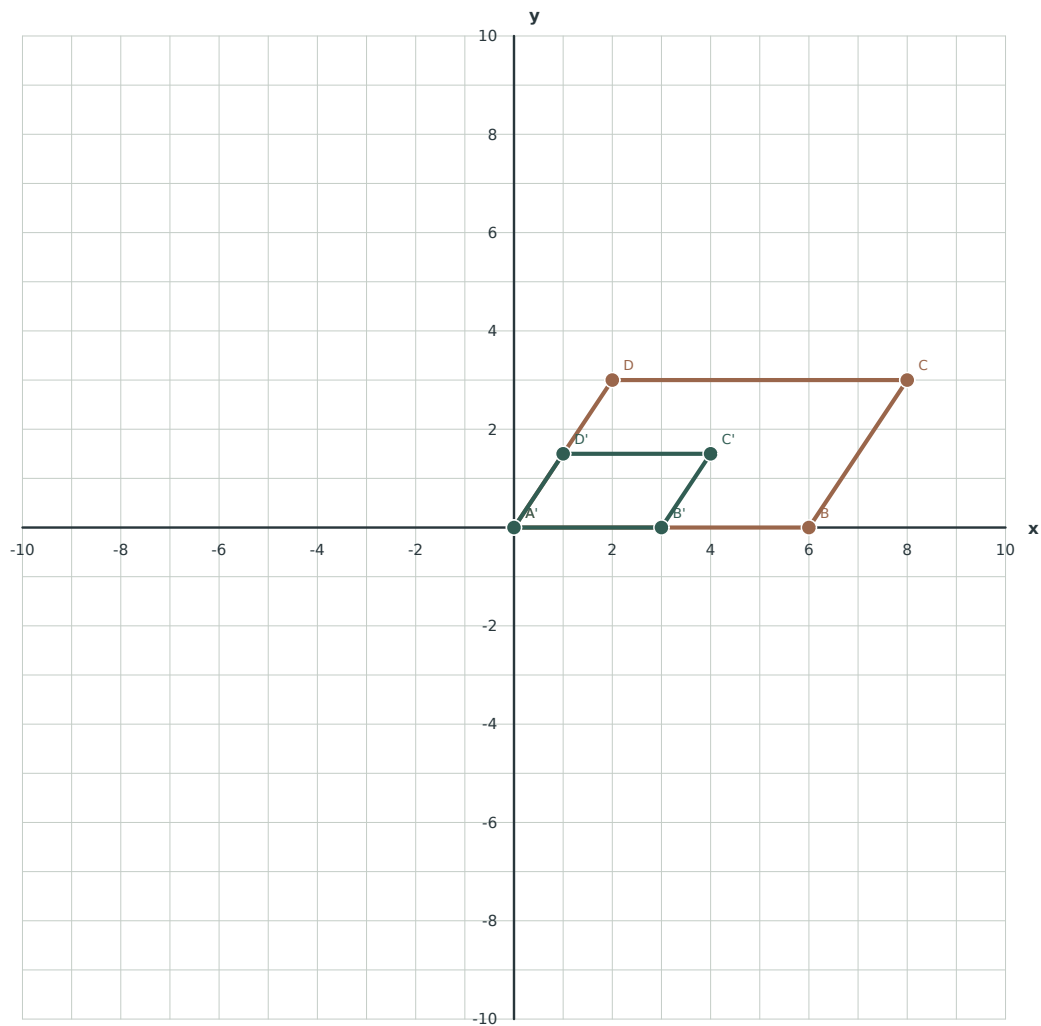
Length ratio = 2; area ratio = 4. Area: 8 to 32 square units.

Half-size parallelogram

Vertices in order: A(0, 0); B(6, 0); C(8, 3); D(2, 3).

Dilate about (0, 0) by scale factor $\frac{1}{2}$. 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 $\frac{1}{2}$.

Image vertices: A(0, 0); B(3, 0); C(4, $\frac{3}{2}$); D(1, $\frac{3}{2}$).

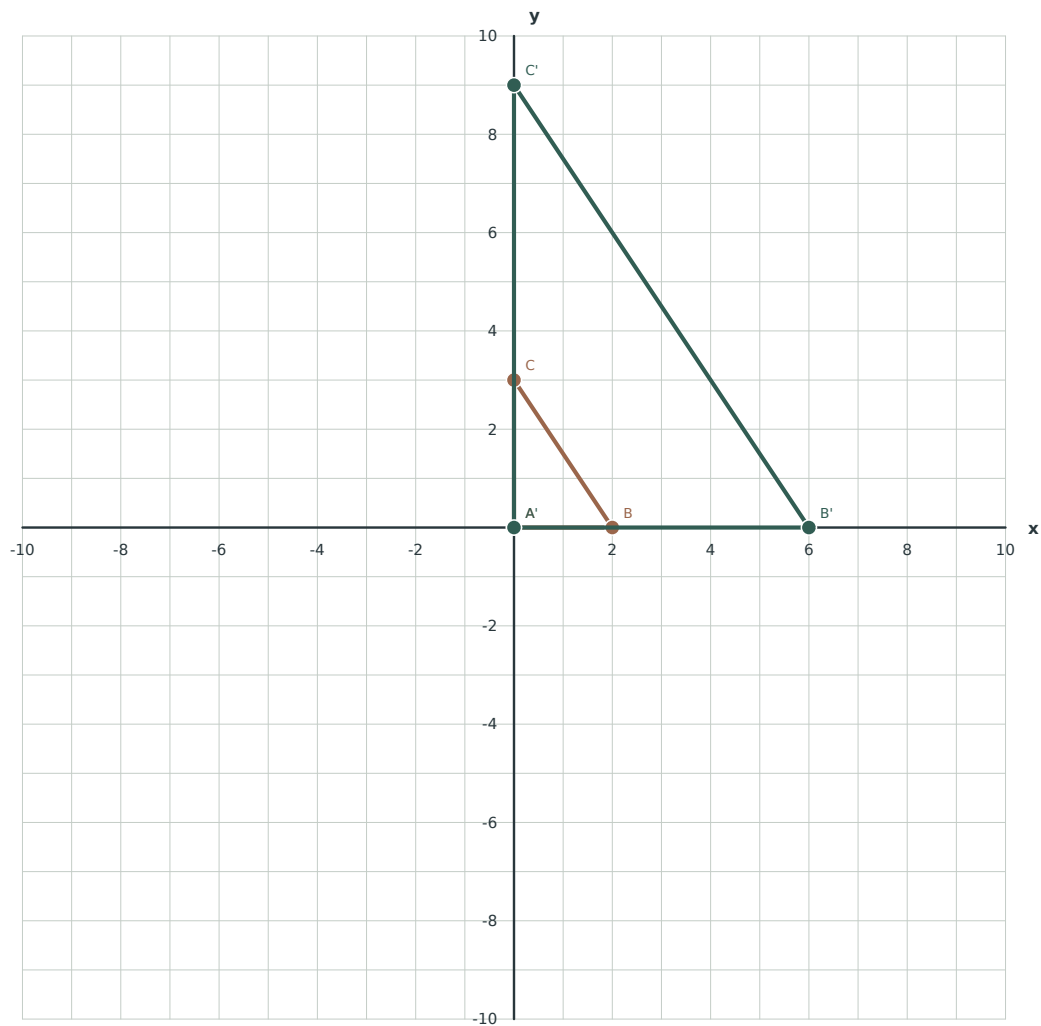
Length ratio = $\frac{1}{2}$; area ratio = $\frac{1}{4}$. Area: 18 to $\frac{9}{2}$ square units.

Triple a triangle

Vertices in order: A(0, 0); B(2, 0); 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(0, 0); B(6, 0); C(0, 9).

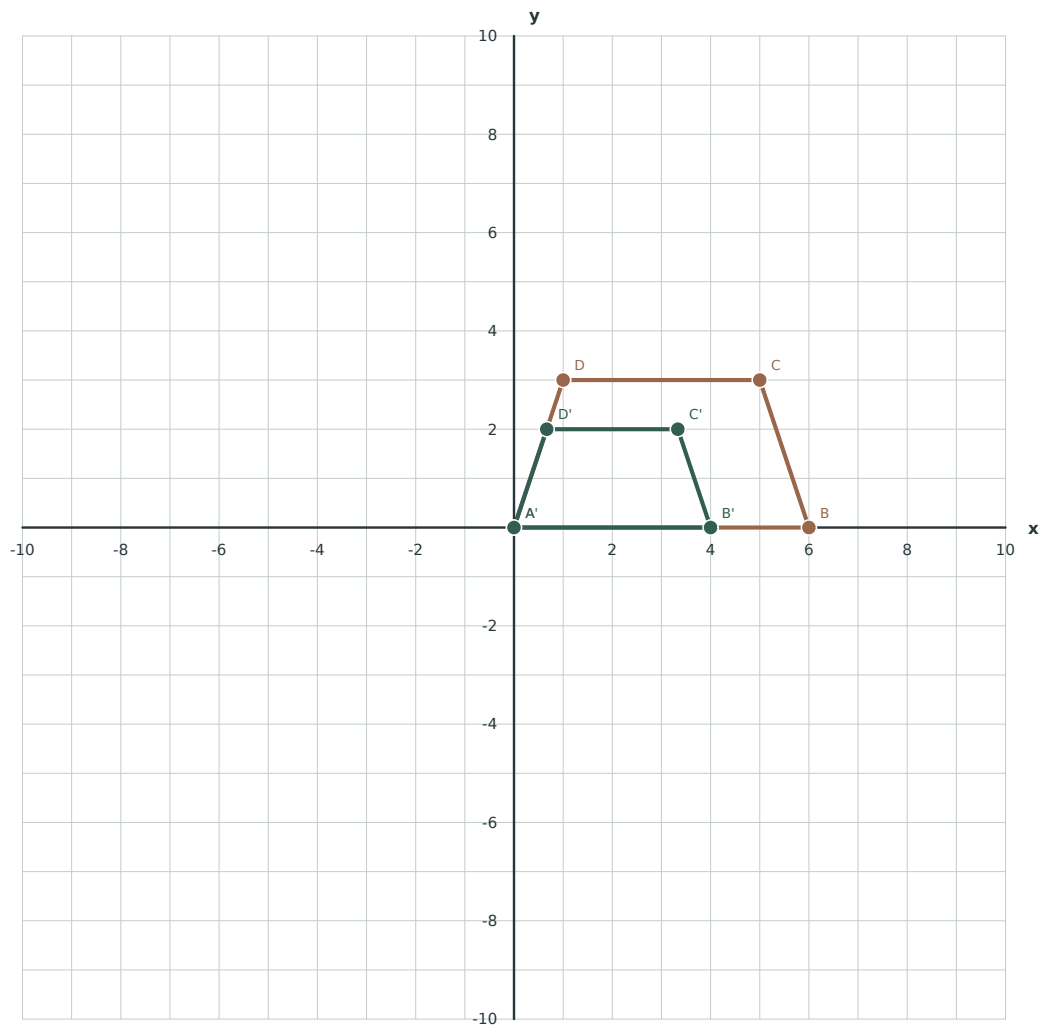
Length ratio = 3; area ratio = 9. Area: 3 to 27 square units.

Two-thirds trapezoid

Vertices in order: A(0, 0); B(6, 0); C(5, 3); D(1, 3).

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(4, 0); C($\frac{10}{3}$, 2); D($\frac{2}{3}$, 2).

Length ratio = $\frac{2}{3}$; area ratio = $\frac{4}{9}$. Area: 15 to $\frac{20}{3}$ square units.