

Question 1 (2 Marks)

Work out the value of $\left(\frac{8}{27}\right)^{\frac{4}{3}}$

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Question 2 (4 Marks)

Three solid shapes **A**, **B** and **C** are similar.

The surface area of shape **A** is 4cm^2

The surface area of shape **B** is 25cm^2

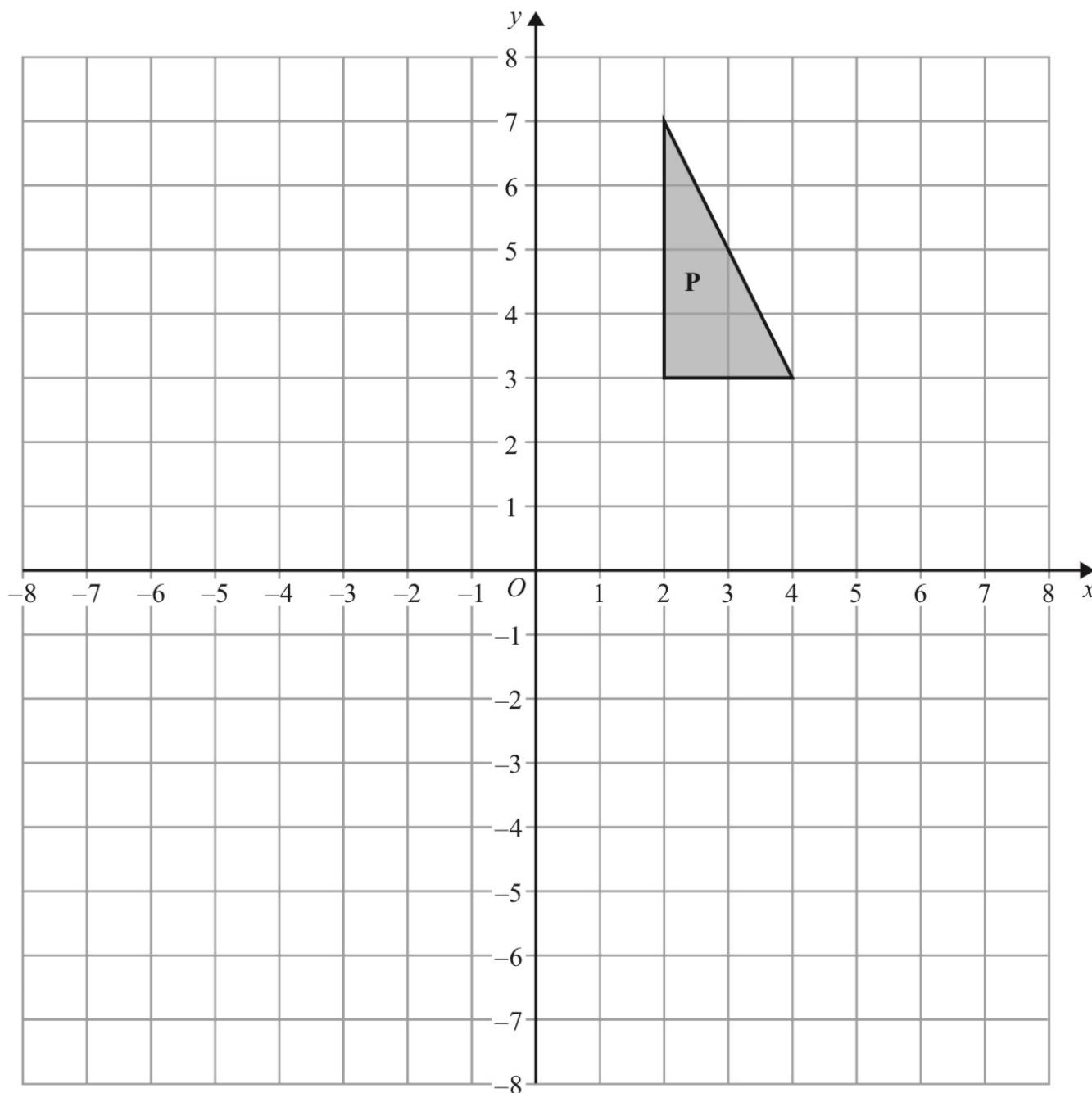
The ratio of the volume of shape **B** to the volume of shape **C** is $27:64$

Work out the ratio of the height of shape **A** to the height of shape **C**.

Give your answer in its simplest form.

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Question 3 (2 Marks)



Enlarge shape P by scale factor $-\frac{1}{2}$ with centre of enlargement (0, 0).

Label your image Q.

Question 4 (4 Marks)

Prove that the square of an odd number is always 1 more than a multiple of 4

Question 5 (3 Marks)

The straight line L_1 has equation $y = 3x - 4$

The straight line L_2 is perpendicular to L_1 and passes through the point $(9, 5)$

Find an equation of line L_2

(Total 15 Marks)