

**YOU & MATHS** **Irrational area** Find the area of a triangle with a base of  $2\sqrt{2}$  cm and a height of  $\sqrt[3]{3}$  cm.

The well-known formula for the area of the triangle is:

$$\text{area} = \frac{b \cdot h}{2}.$$

We know  $b = 2\sqrt{2}$  and  $h = \sqrt[3]{3}$ , so:

$$\text{area} = \frac{2\sqrt{2} \cdot \sqrt[3]{3}}{2} = \sqrt{2} \cdot \sqrt[3]{3} = \sqrt[6]{2^3} \cdot \sqrt[6]{3^2} = \sqrt[6]{72}.$$

The area is  $\sqrt[6]{72}$  cm<sup>2</sup>.