> **YOU & MATHS** **Word equality** The half of the cubic root of the difference between five times a number and 12, diminished by 4, is equal to -3. Find the number.

Let us translate the equality into symbols step by step.
The half…

$$\frac{1}{2}$$

…of the cubic root…

$$\frac{1}{2} \cdot \sqrt[3]{}$$

…of the difference…

$$\frac{1}{2} \cdot \sqrt[3]{ - }$$

…between five times a number…

$$\frac{1}{2} \cdot \sqrt[3]{5x - }$$

…and 12,…

$$\frac{1}{2} \cdot \sqrt[3]{5x - 12}$$

…diminished by 4…

$$\frac{1}{2} \cdot \sqrt[3]{5x - 12} - 4$$

…is equal to -3.

$$\frac{1}{2} \cdot \sqrt[3]{5x - 12} - 4 = -3$$

We do some calculations,

$$\frac{1}{2} \cdot \sqrt[3]{5x - 12} = 1 \rightarrow \sqrt[3]{5x - 12} = 2,$$

and we raise both sides to the third power:

$$5x - 12 = 8 \rightarrow 5x = 20.$$

And finally we get:

$$x = 4.$$