

## Square Roots & Cube Roots

Find each square root OR cube root

①  $\sqrt{121}$

②  $\sqrt[3]{8}$

③  $-\sqrt[3]{125}$

④  $\sqrt{\frac{100}{81}}$

⑤  $\sqrt[3]{-27}$

⑥  $\sqrt{-16}$

Solve each equation.

⑦  $x^2 = 25$

⑧  $144 = w^2$

⑨  $m^3 = -8$

⑩  $\frac{8}{27} = k^3$

### Application

- ⑪ the volume of a cube is calculated by raising the side length to the 3rd power. the formula: volume = (side)<sup>3</sup> or  $V = s^3$ . if the volume of a cube is  $125 \text{ in}^3$ , then what is its side length?

Answers:

①  $\pm 11$

② 2

③ -5

④  $\frac{10}{9}$

⑤ -3

⑥ no real root

⑦  $x = \pm 5$

⑧  $w = \pm 12$

⑨  $m = -2$

⑩  $k = \frac{2}{3}$

⑪ 5 in