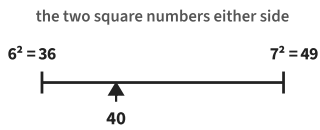


Estimating Roots

ANSWERS

1

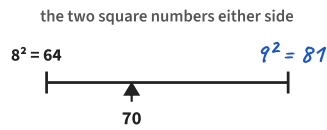
Estimate $\sqrt{40}$ to 1 decimal place.



Answer 6.3

2

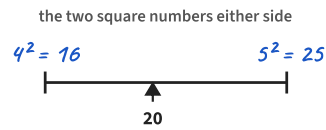
Estimate $\sqrt{70}$ to 1 decimal place.



Answer 8.4

3

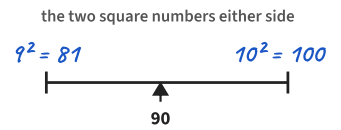
Estimate $\sqrt{20}$ to 1 decimal place.



Answer 4.5

4

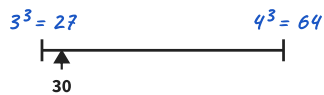
Estimate $\sqrt{90}$ to 1 decimal place.



Answer 9.5

5

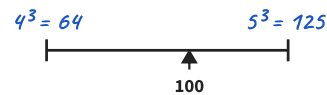
Estimate $\sqrt[3]{30}$ to 1 decimal place.



Answer 3.1

6

Estimate $\sqrt[3]{100}$ to 1 decimal place.



Answer 4.6

7

A square has an area of 70 cm^2 .
Estimate the length of one side to 1 decimal place.

between $\sqrt{64}$ and $\sqrt{81}$, nearer 8
Answer about 8.4 cm

8

Between which two whole numbers does $\sqrt{95}$ lie?

81 and 100
Answer 9 and 10

Estimating Roots *further practice*

ANSWERS

9

Estimate $\sqrt{55}$ to 1 decimal place.

$7^2 = 49, 8^2 = 64, 55$ is 6 of the 15
Answer 7.4

10

Between which two consecutive whole numbers does $\sqrt[3]{200}$ lie?

$5^3 = 125, 6^3 = 216$
Answer 5 and 6

11

Which is bigger, $\sqrt{60}$ or $\sqrt[3]{300}$?
Show how you know.

$\sqrt{60} > 7$, but $\sqrt[3]{300} < 7$
Answer $\sqrt{60}$

12

A cube has a volume of 80 cm^3 .
Estimate the length of one edge to 1 decimal place.

$4^3 = 64, 5^3 = 125, 4.3^3 \approx 79.5$
Answer 4.3 cm

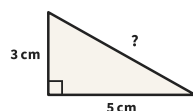
13

$\sqrt{n}$ is between 7 and 8. n is a multiple of 5. Write down all the possible values of n .

$49 < n < 64$
Answer 50, 55, 60

14

Estimate the length of the longest side of this triangle to 1 decimal place.



$3^2 + 5^2 = 34, \sqrt{34}$
Answer 5.8 cm

15

A square car park has an area of 4000 m^2 . Estimate the length of one side to the nearest metre.

$63^2 = 3969, 63.5^2 = 4032.25$
Answer 63 m

16

Kai says $\sqrt{90}$ is about 9.5 because 90 is about halfway between 81 and 100. Is $\sqrt{90}$ bigger or smaller than 9.5? Explain.

$9.5^2 = 90.25$, which is more than 90
Answer Smaller