

Maths 4U

Sixth Grade

Pages 14 - 16

Start

Divide the class into small teams.

Write some math questions on the board and tell the teams that they must work out / find the answers to the questions before the other teams.

- 19^2
- 144 next square number
- $\sqrt{361}$
- 11^4
- 14^2

Once you get all the answers, tell ss to read the questions on page 14 and to write the answers – they are the ones they got in the previous activity.

During

Draw the square root symbol $\sqrt{\quad}$ and ask ss to tell you what it means and how the operation is done.

Invite two ss to read the explanation on page 14, and then ask ss to help you find the answers.

Remind them that it must be a number that, when multiplied by itself, gives you the number given.

Whole class check.

Ask ss if they remember what the opposite operation to square root is.

Explain to ss that they will be shown another way to calculate square roots.

Get some ss reading the explanation.

Tell ss to spot / find key information and to highlight it.

Ex

- **Divide the number by prime numbers.**
- **Do it until it becomes 1.**

Write the math example on page 15 on the board and explain it to ss – use colours so they can identify steps.

$$484 \div 2 = 242$$

$$242 \div 2 = 121$$

$$121 \div 11 = 11$$

$$11 \div 11 = 1$$

2 and **11** are prime numbers.

So...

$$\begin{aligned} 2 \times 2 \times 11 \times 11 &= \\ (2 \times 11) \times (2 \times 11) &= \\ 22 \times 22 &= 484 \end{aligned}$$

Walk ss through working out questions a) and b) on the board.

Then invite two ss to complete questions c) and d) on the board.

Whole class check.

End

Ask ss to look at the math questions on page 16.

Tell them that they must find the square roots first, and then do the adding or subtracting.

Whole class work – write on the board the answers to questions a) to f) on page 16.

Tell ss to do some estimation to find / spot the correct answer to each question.

Then use a calculator app to check / prove answers right – projected.

For the closest tenth, remember that 5 is the key.

It is time for you to decide on the notes for ss to write.

It could be some sentences explaining how square roots can be found or some tip-like sentences explaining the example with the numbers in colours.