

Irrational numbers in applied contexts, including square roots and π

recognise irrational numbers in applied contexts, including square roots and π

Learning intention

- recognise irrational numbers in applied contexts, including square roots and π

Teach and model

- recognising that the real number system includes irrational numbers which can be approximately located on the real number line; for example, the value of π lies...
- using digital tools to systematically explore contexts or situations that use irrational numbers, such as finding the length of the hypotenuse in a right-angled triangle with...
- investigating the golden ratio in art and design, and historical approximations to π in different societies

Check understanding

- Explain the main idea in irrational numbers in applied contexts, including square roots and π using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.