Solve problems involving the circumference and area of a circle...

solve problems involving the circumference and area of a circle using formulas and appropriate units

Learning intention

- solve problems involving the circumference and area of a circle using formulas and appropriate units

Teach and model

- deducing that the area of a circle is between 2 radius squares and 4 radius squares, and using 3\timesradius^2 as a rough estimate for the area of a circle
- investigating the area of circles using a square grid or by rearranging a circle divided into smaller and smaller sectors or slices to resemble a close approximation of a...
- applying the formulas for the area and circumference of a circle to solve practical problems, and using one of the measures of radius, diameter, circumference or area to...

Check understanding

- Explain the main idea in solve problems involving the circumference and area of a circle... 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.