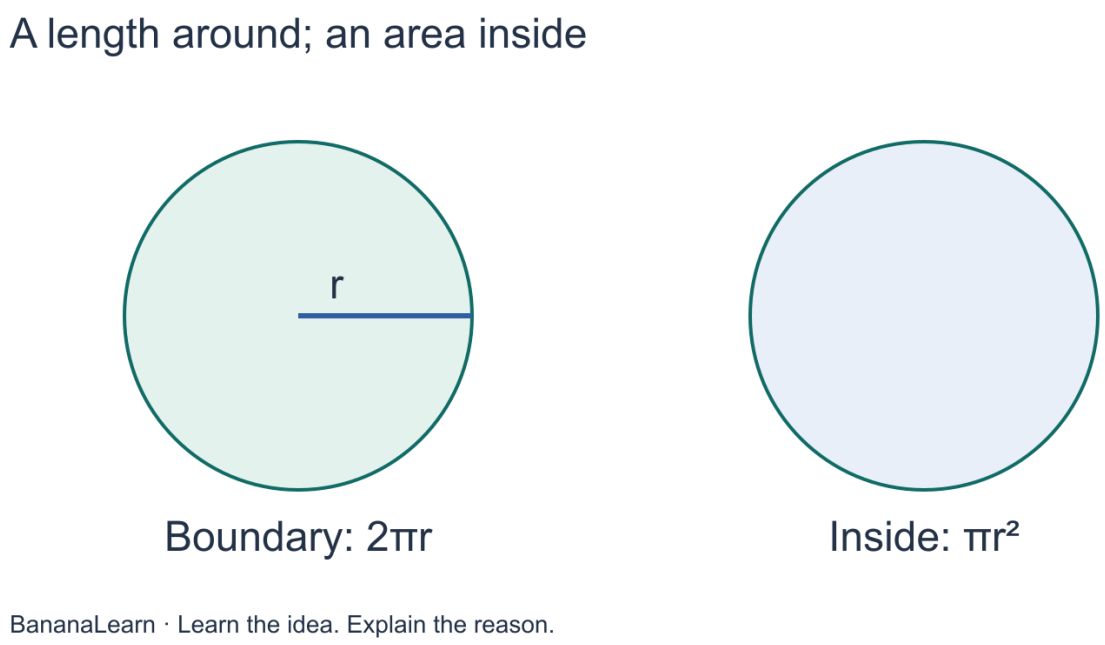
Circle circumference and area: fence or cover?

Grade 7 · Practice and answer pack

A circular garden needs edging around it and grass inside it. These are two different measurements, even though they describe the same circle.

Circumference is the distance around a circle: C = 2πr = πd. Area is the space inside: A = πr². The diameter d is twice the radius r.

Independent BananaLearn resource. Not an official exam paper or endorsed assessment.



The circumference is the boundary length. The area measures the enclosed surface; their units differ.

Matching complete guide

bananalearn.com/learn/grade-7-circle-circumference-and-area.html

Try before looking at the answers

Name (optional): _____ Date: _____

Show your method or explain your choice. Work through a short group at a time. Questions are original practice, not a complete syllabus assessment.

1. Diameter 8 m: radius?

2. Radius 3 cm: exact circumference?

3. Radius 4 cm: exact area?

4. Radius doubles: what happens to area?

5. Diameter 6 m: edging using π ≈ 3.14?

6. Diameter 14 cm: exact circumference?

7. Diameter 14 cm: exact area?

8. $C=20\pi$ m. Find radius.

9. $A=81\pi$ cm². Find diameter.

10. A circle's radius triples. Area factor?

11. Semicircle radius 4 cm: complete perimeter?

12. Ring with outer radius 5 cm and inner radius 3 cm: area?

13. Which needs square metres: fencing or covering a pond?

Answers and reasoning

Compare the explanation as well as the answer. If a method is unclear, revisit the matching guide and try a changed example.

1. Diameter 8 m: radius?

4 m

Radius is half the diameter.

2. Radius 3 cm: exact circumference?

6π cm

Use $2\pi r$.

3. Radius 4 cm: exact area?

16π cm²

Square the radius, then multiply by π.

4. Radius doubles: what happens to area?

It becomes four times as large

$(2r)^2 = 4r^2$.

5. Diameter 6 m: edging using π ≈ 3.14?

18.84 m

Edging is circumference: πd.

6. Diameter 14 cm: exact circumference?

14π cm

$C=\pi d$.

7. Diameter 14 cm: exact area?

49π cm²

Radius is 7 cm, so $A=\pi \times 7^2$.

8. C=20π m. Find radius.

10 m

$2\pi r=20\pi$.

9. A=81π cm². Find diameter.

18 cm

Radius is 9 cm; double it.

10. A circle’s radius triples. Area factor?

9

$(3r)^2=9r^2$.

11. Semicircle radius 4 cm: complete perimeter?

4π+8 cm

Half the circumference plus diameter.

12. Ring with outer radius 5 cm and inner radius 3 cm: area?

16π cm²

$25\pi-9\pi=16\pi$.

13. Which needs square metres: fencing or covering a pond?

Covering

Fencing uses length; covering uses area.

Check understanding

• Are you measuring around, inside or a partial boundary?

• Did you convert diameter to radius for area?

• Are your units and approximation instructions correct?