Sangaku-inspired geometry

ANSWER KEY

12 exercises | A4 | 2 / 2

Use after completing the practice page. Values are generated by the page's shared engine.

Equivalent exact representations are valid where the prompt allows them. Non-integer results are rounded to two decimals.

1 **Answer: 6**

Radius = 12 ÷ 2 = 6.

2 **Answer: 7**

Radius = 14 ÷ 2 = 7.

3 **Answer: 5**

Radius = 10 ÷ 2 = 5.

4 **Answer: 12**

Radius = 24 ÷ 2 = 12.

5 **Answer: 5.86**

r = side ÷ (2 + √2) ≈ 5.86.

6 **Answer: 4.69**

r = side ÷ (2 + √2) ≈ 4.69.

7 **Answer: 3.51**

r = side ÷ (2 + √2) ≈ 3.51.

8 **Answer: 2.34**

r = side ÷ (2 + √2) ≈ 2.34.

9 **Answer: 42.06**

Difference ≈ 42.06 square units.

10 **Answer: 21.46**

Difference ≈ 21.46 square units.

11 **Answer: 123.61**

Difference ≈ 123.61 square units.

12 **Answer: 85.84**

Difference ≈ 85.84 square units.

Practise interactively and explore the method:

https://goofergames.com/math/world/sangaku

Free for educational use: teachers may print and share the worksheets with their students.