

## 44. How to calculate the area of a circle



**Scenario Questions: Round answers to 1 decimal places, use  $\pi = 3.14$**

1. The radius of a circular swimming pool is 5 meters. What is the area of the pool?

2. A circular pizza has a diameter of 12 inches. What is the area of the pizza?

3. The radius of a circular garden is 8 feet. What is the area of the garden?

4. A circular tablecloth with a diameter of 1.5 meters covers the entire table. What is the area of the tablecloth?

5. The radius of a circular patio is 6.5 meters. What is the area of the patio?

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**Scenario Questions: Round answers to 1 decimal place, use  $\pi = 3.14$**

6. Jane has a circular garden with a radius of 5 meters, and Tengfei has a circular garden with a radius of 8 meters. Tengfei believes his garden is 60% larger than Jane's. Is he correct?

7. A small circular swimming pool has a diameter of 12 feet, a larger circular swimming pool has a diameter of 18 feet. The owner of the larger pool claims it is 50% bigger. Is this true?

8. Susan has a circular rug with a radius of 7 feet, and Mike has a circular rug with a radius of 10 feet. Mike says his rug is 75% larger than Susan's. Is he accurate?

9. Aisha has three circular flower beds, each with a radius of 4 feet. Sarah has two circular flower beds, each with a radius of 6 feet. Sarah believes her flower bed area is 50% greater. Is she correct?

10. Peter has a circular pizza with a diameter of 14 inches, Esther has a square pizza with sides of length 18 inches. Esther claims her pizza has 50% more area than Peter's pizza. Is she right?

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## Scenario Questions: **Answers**

1. The radius of a circular swimming pool is 5 meters. What is the area of the pool?

**1. Area = 78.5 square meters**

2. A circular pizza has a diameter of 12 inches. What is the area of the pizza?

**2. Area = 113.0 square inches**

3. The radius of a circular garden is 8 feet. What is the area of the garden?

**3. Area = 201.0 square feet**

4. A circular tablecloth with a diameter of 1.5 meters covers the entire table. What is the area of the tablecloth?

**4. Area = 1.8 square meters**

5. The radius of a circular patio is 6.5 meters. What is the area of the patio?

**5. Area = 132.7 square meters**

6. Jane has a circular garden with a radius of 5 meters, and Tengfei has a circular garden with a radius of 8 meters. Tengfei believes his garden is 60% larger than Jane's. Is he correct?

**6. No, Tengfei's garden is 156% larger than Jane's.**

7. A small circular swimming pool has a diameter of 12 feet, while a larger circular swimming pool has a diameter of 18 feet. The owner of the larger pool claims it is 50% bigger than the smaller one. Is this true?

**7. No, the larger pool is 125% bigger.**

8. Susan has a circular rug with a radius of 7 feet, and Mike has a circular rug with a radius of 10 feet. Mike says his rug is 75% larger than Susan's. Is he accurate?

**8. No, Mike's rug is 104% larger than Susan's.**

9. Aisha has three circular flower beds, each with a radius of 4 feet. Sarah has two circular flower beds, each with a radius of 6 feet. Sarah believes that her total flower bed area is 50% greater than Aisha's. Is she correct?

**9. Yes, Sarah's total flower bed area is exactly 50% greater.**

10. Peter has a circular pizza with a diameter of 14 inches, while Esther has a square pizza with sides of length 18 inches. Esther claims her pizza has 50% more area than Peter's pizza. Is she right?

**10. Yes, Esther's pizza is actually 111% larger.**