

## NCERT Solutions for Class 10 Maths Chapter 12 Areas Related to Circles

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### **Chapter 12 Areas Related to Circles**

#### **NCERT Solutions for Class 10 Maths Chapter 12 Areas Related to Circles Exercise 12.1**

##### **Question 1.**

The radii of two circles are 19 cm and 9 cm respectively. Find the radius of the circle which has circumference equal to the sum of the circumferences of the two circles.

**Solution:**

Radius ( $r_1$ ) of 1<sup>st</sup> circle = 19 cm

Radius ( $r_2$ ) of 2<sup>nd</sup> circle = 9 cm

Let radius of 3<sup>rd</sup> circle be  $r$

Circumference of 1<sup>st</sup> circle =  $2\pi r_1 = 2\pi (19) = 38\pi$  cm

Circumference of 2<sup>nd</sup> circle =  $2\pi r_2 = 2\pi (9) = 18\pi$  cm

Circumference of 3<sup>rd</sup> circle =  $2\pi r$

Given that

Circumference of 3<sup>rd</sup> circle = circumference of 1<sup>st</sup> circle + circumference of 2<sup>nd</sup> circle

$$2\pi r = 38\pi + 18\pi = 56\pi \text{ cm}$$

$$r = \frac{56\pi}{2\pi} = 28$$

So, radius of circle which has circumference equal to the sum of the circumference of given two circles is 28 cm.

<https://drive.google.com/drive/folders/1F8hZrYJJwna00Xg2tkgPQSiao4p3f1J->