

2021 The Heart and the Soul of Central Angle, Intercepted Arc and Arc Length (Geometry...

Lesson 060 | Geometry | Arc length, sectors and angular speed • Circles, chords and equations

<https://www.youtube.com/watch?v=AdLWDdZod3g>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

A circle has radius 9 cm and central angle $5\pi/6$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

02

Write the equation of a circle with center (4,10) and radius 3. Find its x-extremes and y-extremes.

03

A circle has radius 3 cm and central angle $3\pi/14$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

2021 The Heart and the Soul of Central Angle, Intercepted Arc and Arc Length (Geometry...

Lesson 060 | Geometry | Arc length, sectors and angular speed • Circles, chords and equations

<https://www.youtube.com/watch?v=AdLWDdZod3g>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

04

Write the equation of a circle with center (8,10) and radius 2. Find its x-extremes and y-extremes.

05

A circle has radius 9 cm and central angle $5\pi/3$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

06

Write the equation of a circle with center (-5,14) and radius 3. Find its x-extremes and y-extremes.

2021 The Heart and the Soul of Central Angle, Intercepted Arc and Arc Length (Geometry...

Lesson 060 | Geometry | Arc length, sectors and angular speed • Circles, chords and equations

<https://www.youtube.com/watch?v=AdLWDdZod3g>

Original practice aligned to the saved video title.

01

A circle has radius 9 cm and central angle $5\pi/6$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=15/2\pi \text{ cm. } A=(1/2)r^2\theta=135/4\pi \text{ cm}^2.$$

02

Write the equation of a circle with center (4,10) and radius 3. Find its x-extremes and y-extremes.

$$(x-(4))^2+(y-10)^2=9. \text{ Left/right: } (1,10), (7,10); \text{ bottom/top: } (4,7), (4,13).$$

03

A circle has radius 3 cm and central angle $3\pi/14$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=9/14\pi \text{ cm. } A=(1/2)r^2\theta=27/28\pi \text{ cm}^2.$$

2021 The Heart and the Soul of Central Angle, Intercepted Arc and Arc Length (Geometry...

Lesson 060 | Geometry | Arc length, sectors and angular speed • Circles, chords and equations

<https://www.youtube.com/watch?v=AdLWDdZod3g>

Original practice aligned to the saved video title.

04

Write the equation of a circle with center (8,10) and radius 2. Find its x-extremes and y-extremes.

$(x-8)^2 + (y-10)^2 = 4$. Left/right: (6,10), (10,10); bottom/top: (8,8), (8,12).

05

A circle has radius 9 cm and central angle $5\pi/3$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$s = r\theta = 15\pi$ cm. $A = (1/2)r^2\theta = 135/2\pi$ cm².

06

Write the equation of a circle with center (-5,14) and radius 3. Find its x-extremes and y-extremes.

$(x+5)^2 + (y-14)^2 = 9$. Left/right: (-8,14), (-2,14); bottom/top: (-5,11), (-5,17).