

Pre Cal 6 1 Part 1 Arc Lenth, Rotation and Angular Displacement

Lesson 171 | Trigonometry | Arc length, sectors and angular speed

https://www.youtube.com/watch?v=c_t4iStevB0

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

A circle has radius 11 cm and central angle $7\pi/6$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

02

A circle has radius 7 cm and central angle $6\pi/10$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

03

A circle has radius 11 cm and central angle $6\pi/14$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

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Name: _____ Date: _____ Show your reasoning.

04

A circle has radius 6 cm and central angle $4\pi/10$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

05

A circle has radius 7 cm and central angle $6\pi/4$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

06

A circle has radius 11 cm and central angle $2\pi/8$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

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01

A circle has radius 11 cm and central angle $7\pi/6$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=77/6\pi \text{ cm. } A=(1/2)r^2\theta=847/12\pi \text{ cm}^2.$$

02

A circle has radius 7 cm and central angle $6\pi/10$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=21/5\pi \text{ cm. } A=(1/2)r^2\theta=147/10\pi \text{ cm}^2.$$

03

A circle has radius 11 cm and central angle $6\pi/14$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=33/7\pi \text{ cm. } A=(1/2)r^2\theta=363/14\pi \text{ cm}^2.$$

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04

A circle has radius 6 cm and central angle $4\pi/10$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=12/5\pi \text{ cm. } A=(1/2)r^2\theta=36/5\pi \text{ cm}^2.$$

05

A circle has radius 7 cm and central angle $6\pi/4$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=21/2\pi \text{ cm. } A=(1/2)r^2\theta=147/4\pi \text{ cm}^2.$$

06

A circle has radius 11 cm and central angle $2\pi/8$ radians. Find the corresponding arc length and sector area (allow swept sectors greater than a full turn).

$$s=r\theta=11/4\pi \text{ cm. } A=(1/2)r^2\theta=121/8\pi \text{ cm}^2.$$