Grade Book Detail

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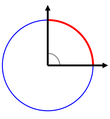
7.1

Started: February 12, 2021, 8:20 am
Last change: February 14, 2021, 6:31 pm
Total time questions were on-screen: 40 minutes.

Showing Scored Attempts | Show Last Attempts | Show Review Attempts

Consider the angle shown below whose rays subtend an arc along a circle centered at the angle's vertex.



a. What is the measure of the subtended arc in units of $\frac{1}{4}$ of the circle's circumference?

1 ✔ Preview

b. What is the measure of the subtended arc in units of $\frac{1}{8}$ of the circle's circumference?

2 ✔ Preview

c. What is the measure of the subtended arc in units of $\frac{1}{16}$ of the circle's circumference?

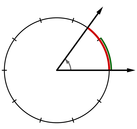
4 ✔ Preview

Show Answer
Show Answer
Show Answer

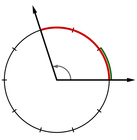
Question 1: 3 out of 3 in 1 attempt(s)

Three angles are shown below. For each angle, determine the measure of the arc subtended by the angle's ray in units of $1/10^{th}$ of the circumference of the given circle.

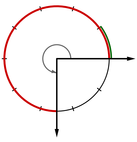
a. Measurement of the arc depicted in the diagram below in tenths of the circumference of the given circle: 1.5 ✔
Preview



b. Measurement of the arc depicted in the diagram below in tenths of the circumference of the given circle: 3 ✔
Preview



c. Measurement of the arc depicted in the diagram below in tenths of the circumference of the given circle: 7.5 ✔
Preview



Show Answer
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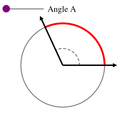
Question 2: 3 out of 3 in 4 attempt(s)

The applet below allows you to view three different angles. Use the slider at the top-left of the applet to switch the angle that is shown. **Each angle has a radian measure that is a whole number.**

Recall that a full rotation around the circle counter-clockwise is 2π *radians.*



a. Use the slider to view Angle A. What is the radian measure of Angle A?

2 ✔ radians

b. Use the slider to view Angle B. What is the radian measure of Angle B?

5 ✔ radians

c. Use the slider to view Angle C. What is the radian measure of Angle C?

6 ✔ radians

Show Answer
Show Answer
Show Answer

Question 3: 3 out of 3 in 6 attempt(s)

Suppose an angle has a measure of 95 degrees.

Tip: Watch the video at the end.

a. If a circle is centered at the vertex of the angle, then the arc subtended by the angle's rays is 95 ✔ times as long as $1/360^{th}$ of the circumference of the circle.

b. A circle is centered at the vertex of the angle, and $1/360^{th}$ of the circumference is 0.09 cm long. What is the length of the arc subtended by the angle's rays?

8.55 ✔ cm Preview

c. Another circle is centered at the vertex of the angle. The arc subtended by the angle's rays is 38 cm long.

- $1/360^{th}$ of the circumference of the circle is 0.4 ✔ cm long. Preview
- Therefore the circumference of the circle is 144 ✔ cm. Preview

Show Answer
Show Answer
Show Answer
Show Answer

Question 4: 4 out of 4 in 5 attempt(s)

Tip: For each question, draw a picture, marking the lengths and angles given.

a. A circle is centered at the vertex of an angle, and the angle's rays subtend an arc that is 110.2 cm long. $1/360^{th}$ of the circumference of the circle is 0.76 cm long. What is the measure of this angle in degrees?

145 ✔ degrees Preview

b. A circle with a circumference of 360 cm is centered at the vertex of an angle, and the angle's rays subtend an arc that is 244 cm long. What is the measure of this angle in degrees?

Hint: What portion of the circumference of the circle is this ray? How many degrees are in a circle?

244 ✔ degrees Preview

Show Answer
Show Answer

Question 5: 2 out of 2 in 2 attempt(s)

Recall that there are 2π radians in one full rotation and 360 degrees in one full rotation.

a. Suppose an angle has a measure of 2.1 radians.

i. This angle (with a measure of 2.1 radians) is what percent of a full rotation?

33.44 ✔ % Preview

ii. Use your work in part (i) to determine the measure of the angle *in degrees*.

120.38 ✔ degrees Preview

b. If an angle has a measure of x radians, what is the measure of the angle in degrees?

360/6.28x ✔ degrees Preview

c. Write a function f that determines the degree measure of an angle in terms of the radian measure of the angle, x.

$f(x) =$ 180/pi*x ✔ Preview

Show Answer
Show Answer
Show Answer
Show Answer

Question 6: 4 out of 4 in 4 attempt(s)

Recall that there are 2π radians in one full rotation and 360 degrees in one full rotation.

a. Suppose an angle has a measure of 1.9 degrees.

i. This angle (with a measure of 1.9 degrees) is what percent of a full rotation?

0.527 ✔ % Preview

ii. Use your work in part (i) to determine the measure of the angle *in radians*.

0.03316 ✔ radians Preview

b. If an angle has a measure of z degrees, what is the measure of the angle in radians?

(z*pi)/180 ✔ radians Preview

c. Write a function g that determines the radian measure of an angle in terms of the degree measure of the angle, z.

$g(z) =$ pi/180*z ✔ Preview

Show Answer
Show Answer
Show Answer
Show Answer

Question 7: 4 out of 4 in 13 attempt(s)

Total: 23/23

Categorized Score Breakdown

Category	Points Earned / Possible (Percent)
	19 / 19 (100 %)