Name _____   Date _____

Arc Length and Radian Measure - Guided Lesson Explanation

Explanation#1

A radian is the measure of an angle ø that , when drawn as a central angle, subtends an arc whose length equals the length of the radius of the circle.

$\frac{2\Pi}{5}$ x $\frac{180°}{\Pi}$

= 2 x 36° = 72°

Answer is: 72°

Explanation#2

The length of an arc is simply the length of its "portion" of the circumference. Actually, the circumference itself can be considered an arc length.

Arc length = ø x Π/180°

32° x Π/180°

= 32°Π/180°

= 8°Π/45°

Answer is: 8°Π/45°

Explanation#3

A radian is the measure of an angle ø that , when drawn as a central angle, subtends an arc whose length equals the length of the radius of the circle

$\frac{3\Pi}{6}$ x $\frac{180°}{\Pi}$

= 3 x 30° = 90°

Answer is: 90°