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## Main Ideas/

 QuestionsArc Length Characteristics

## Notes

Circumference - The $\qquad$ AROUND a circle *You can think of this as the PERIMETER of a circle.

Formula: $r=$

Remember - twinkle, twinkle, little star, circumference equals 2 pi r.

Examples

Find the circumference in terms of pi and a decimal rounded to the tenths.
1)
2)

3)


Find the radius for \#7-\#8 using the given circumference.
7) circumference $=71 \pi$ in
8) circumference $=59.1 \mathrm{~km}$
9) A circle has a circumference of $24 \pi$. What is the length of the diameter?
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## Main Ideas/

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Arc Length - The physical $\qquad$ of an arc
***Arc length DOES NOT equal arc $\qquad$ !!*** ***Arc length is just a piece of the $\qquad$ !!***

## Funny way to remember:

 Arc Length = Pie $\qquad$
## Formula:



$$
\frac{\text { Arc Length }}{\text { Circumference }(2 \pi r)}=\frac{\text { Central Angle }(\theta)}{\text { Whole Circle in degrees }\left(360^{\circ}\right)}
$$

## Examples

Find the arc length of the wanted arc.
1)

2)


Find the angle of the given arc.
3)

4)

$\qquad$

## Main Ideas/ Questions

Examples

Find the radius of the given arc.
5)

6)

7) A circle has an arc whose measure is $80^{\circ}$ and whose length is $88 \pi$. What is the diameter of the circle?
8) Find the measure of the central angle of a circle if its minor arc length is 14 cm and the radius is 18 cm .
9) A pendulum is 30 inches long. When the pendulum swings it travels along the arc of a circle and covers a distance 50.65 inches. What is the angle that the pendulum is swinging?
10) A clock is at 5 o'clock. If the radius of the hour hand is 5 inches long, what is the distance that the hour hand traveled?

