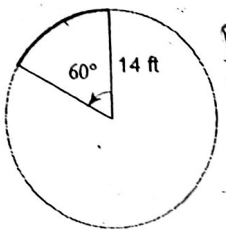
NCM3 Unit 6 Reasoing w/ Geometry Part 2 Name Key ID: 1

WS1: Arc Length and Area of a Sector

Date _____ Period ____

Find the length of each arc. Round your answers to the nearest tenth.

1)

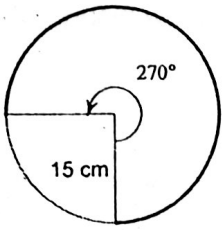


Arc length $= \frac{60}{360} \cdot 2\pi(14)$

$= \frac{14}{3}\pi$

$= 14.7$ ft

2)

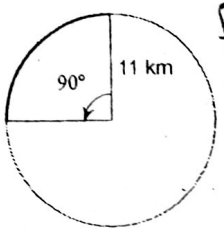


Arc length $= \frac{270}{360} \cdot 2\pi(15)$

$= \frac{45}{2}\pi$

$= 70.7$ cm

3)

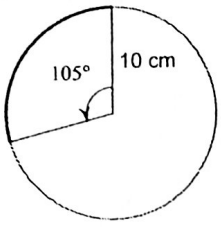


Arc length $= \frac{90}{360} \cdot 2\pi(11)$

$= \frac{1}{2}\pi$

$= 17.3$ km

4)



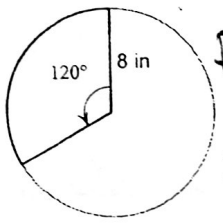
Arc length $= \frac{105}{360} \cdot 2\pi(10)$

$= \frac{35}{6}\pi$

$= 18.3$ cm

Find the area of each sector. Round your answers to the nearest tenth.

5)

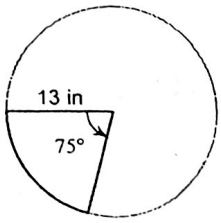


Area of sector $= \frac{120}{360} \cdot \pi(8)^2$

$= \frac{64}{3}\pi$

$= 67.0$ in^2

6)

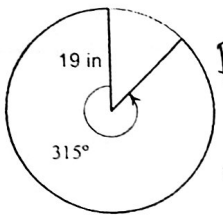


Area of sector $= \frac{75}{360} \cdot \pi(13)^2$

$= \frac{845}{24}\pi$

$= 110.6$ in^2

7)

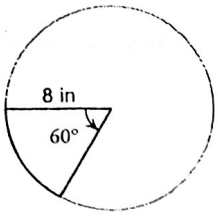


Area of sector $= \frac{315}{360} \cdot \pi(19)^2$

$= \frac{2527}{8}\pi$

$= 992.4$ in^2

8)



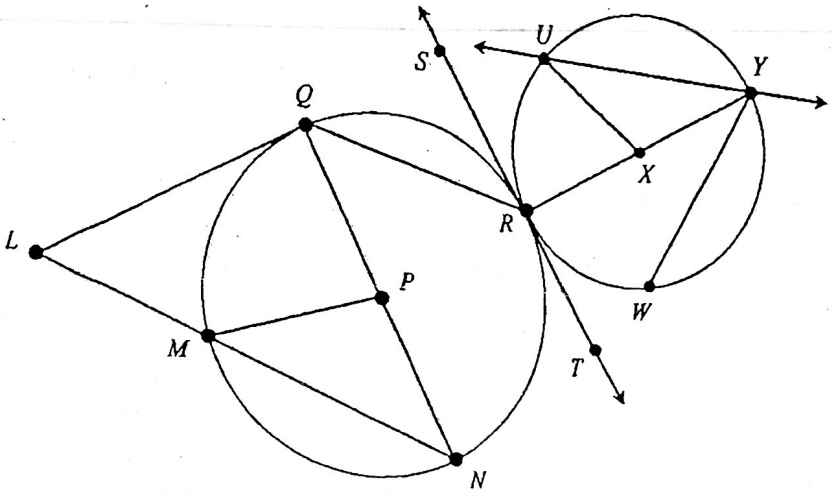
Area of sector $= \frac{60}{360} \cdot \pi(8)^2$

$= \frac{32}{3}\pi$

$= 33.5$ in^2

Name that Circle Part!

Directions: Use the diagram below along with the bank to classify each circle part. Parts may be used more than once.



Parts of Circles

Center
Radius
Chord
Diameter
Secant
Tangent
Point of Tangency
Minor Arc
Major Arc
Semicircle
Central Angle
Inscribed Angle

1. $\overline{LQ}$ Tangent
2. $\overline{WY}$ Chord
3. $\angle NQR$ Inscribed angle
4. X Center
5. $\overset{\frown}{RWU}$ Major arc
6. $\overline{ST}$ Tangent
7. $\overline{PN}$ Radius
8. $\angle UXY$ Central angle
9. $\overset{\frown}{MQ}$ Minor arc
10. $\overline{QN}$ Diameter
11. R Point of tangency
12. $\overline{UY}$ Chord ($\overleftrightarrow{UY}$ - Secant)
13. $\overset{\frown}{QRN}$ Semicircle
14. $\angle MPQ$ Central angle
15. $\overline{QR}$ Chord
16. $\angle UYR$ Inscribed angle
17. $\overset{\frown}{WY}$ Minor arc
18. $\overline{LN}$ Secant
19. $\overline{UX}$ Radius
20. $\overset{\frown}{RUY}$ Semicircle

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