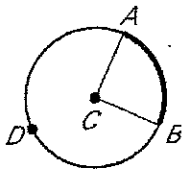
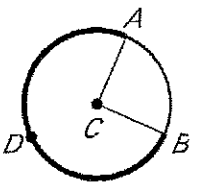
Name Key
Period _____

Secondary Math II
Unit 11 Day 2 Arc Measure

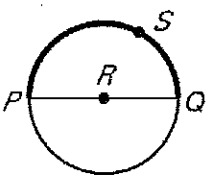
Name the arc shown in bold.

1. 

$\overset{\frown}{AB}$

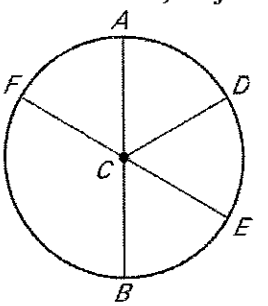
2. 

$\overset{\frown}{ADB}$

3. 

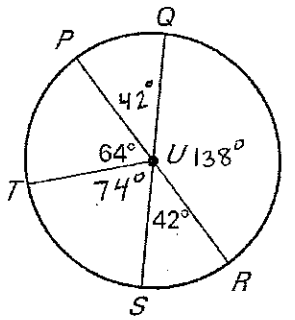
$\overset{\frown}{PSQ}$

$\overline{AB}$ and $\overline{FE}$ are diameters of $\odot C$. Determine whether the given arc is a *minor arc*, *major arc*, or *semicircle*.



4. $\overset{\frown}{AE}$ minor
5. $\overset{\frown}{AEB}$ semicircle
6. $\overset{\frown}{FDE}$ semicircle
7. $\overset{\frown}{DFB}$ major
8. $\overset{\frown}{FA}$ minor
9. $\overset{\frown}{BE}$ minor
10. $\overset{\frown}{BDA}$ semicircle
11. $\overset{\frown}{FB}$ minor

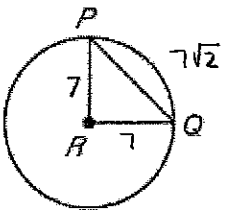
In the figure, $\overline{PR}$ and $\overline{QS}$ are diameters of $\odot U$. Find the measure of the indicated arc.



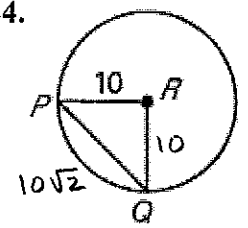
13. $m\overset{\frown}{PQ}$ 42°
14. $m\overset{\frown}{ST}$ 74°
15. $m\overset{\frown}{TPS}$ 286°
16. $m\overset{\frown}{RT}$ 116°
17. $m\overset{\frown}{RQS}$ 318°
18. $m\overset{\frown}{QR}$ 138°
19. $m\overset{\frown}{PQS}$ 222°
20. $m\overset{\frown}{TQR}$ 244°
21. $m\overset{\frown}{PS}$ 138°
22. $m\overset{\frown}{PTR}$ 180°

$\overset{\frown}{PQ}$ has a measure of 90° in ⊙ R Find the length of $\overline{PQ}$.

23.

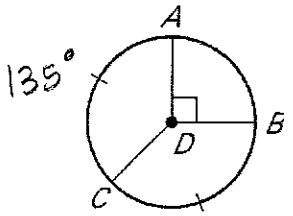


24.

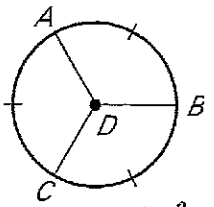


Find the indicated arc measure.

25. $m\overset{\frown}{AC}$

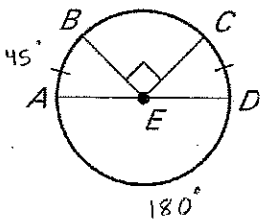


26. $m\overset{\frown}{ACB}$



240°

27. $m\overset{\frown}{DAB}$

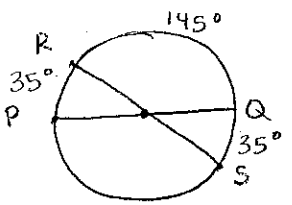


225°

Two diameters of ⊙T are $\overline{PQ}$ and $\overline{RS}$. Find the given arc measure if $m\overset{\frown}{PR} = 35°$.

28. $m\overset{\frown}{PS}$

145°



29. $m\overset{\frown}{PSR}$

325°

30. $m\overset{\frown}{PRQ}$ 180°

31. $m\overset{\frown}{PRS}$ 215°

Name _____

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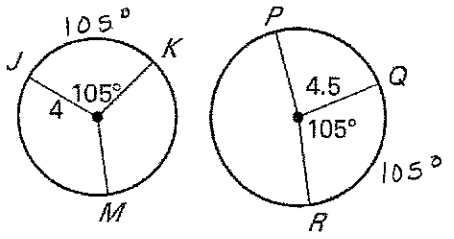
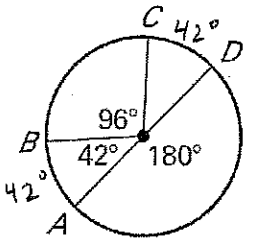
Tell whether the given arcs are congruent.

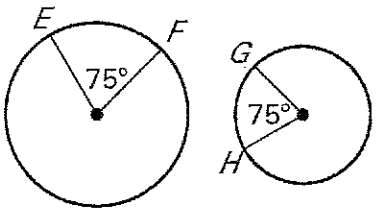
32. $\overset{\frown}{JK}$ and $\overset{\frown}{QR}$ NO



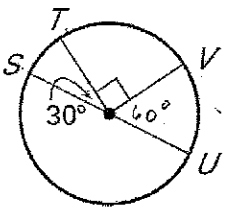
33. $\overset{\frown}{AB}$ and $\overset{\frown}{CD}$ yes



34. $\overset{\frown}{EF}$ and $\overset{\frown}{GH}$ NO

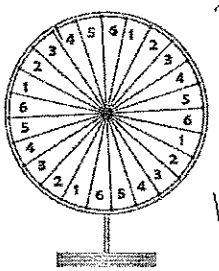


35. $\overset{\frown}{STV}$ (120°) and $\overset{\frown}{UVT}$ (150°) NO



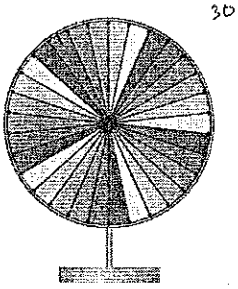
Game Shows **Each game show wheel shown is divided into congruent sections. Find the measure of each arc.**

36. 24



15°

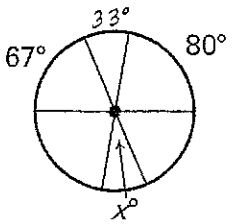
37. 30



12°

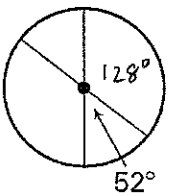
Find the value of *x*.

38.



33°

39.



$(3x + 44)°$

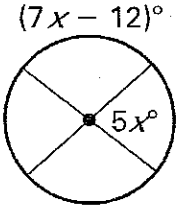
$3x+44+52=180°$

$3x+96=180°$

$3x=84$

$x=28$

40. $(7x - 12)°$



$5x+7x-12=180$

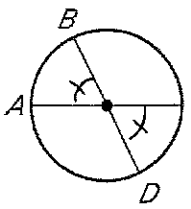
$12x-12=180$

$12x=192$

$x=16$

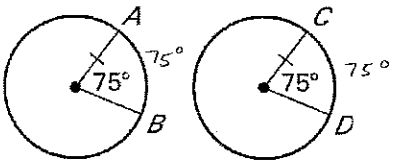
Tell whether $\overset{\frown}{AB} \cong \overset{\frown}{CD}$. *Explain.*

41.



yes

42.

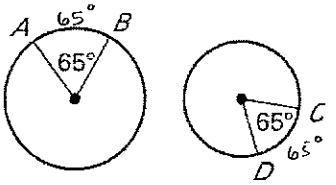


yes

≅ central angles

43.

NO

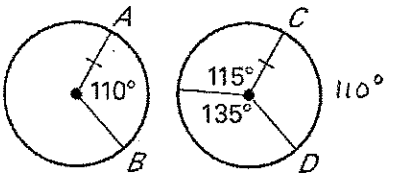


≅ central ∠'s

arc measure ≅

arc length are not ≅ because circles are not ≅

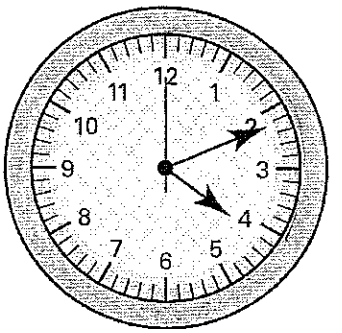
44.



yes

≅ central angles

Keeping Time **In the clock face shown at the right the positions of the numbers determine congruent arcs along the circle.**



45. What is the measure of the arc between any two consecutive numbers?

30° 360/12

46. An arc is traced out by the end of the second hand as it moves from the 12 to the 4. Is it a *minor arc* or a *major arc*?

minor arc

47. Starting at the 2, what number does the end of the second hand reach as it completes a semicircle?

8

48. When the second hand moves from the 8 to the 3, what is the measure of the arc?

210°

49. The second hand moves from the 3 to the 7. What is the measure of the corresponding major arc?

120° 240° major