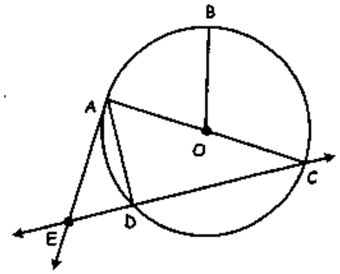
Geometry

Unit 11 Review Circles

Name Key
Date ________ Period ________

Matching: Use circle O to name the following parts. Put the *CAPITAL* letter of the correct answer on the line. None of the choices will be used more than once.

B	1] $\overline{AC}$	A] radius
F	2] $\overleftrightarrow{CD}$	B] diameter
E	3] $\overline{AD}$	C] inscribed angle
D	4] $\angle AOB$	D] central angle
C	5] $\angle CAD$	E] chord
J	6] $\widehat{ADC}$	F] secant
G	7] $\overrightarrow{AE}$	G] tangent
H	8] $\widehat{BC}$	H] minor arc
A	9] $\overline{OA}$	I] major arc
I	10] $\widehat{BDC}$	J] semicircle



31.42 11] If the radius of a circle is 5, what is the circumference?

$C = 2\pi r$ $\quad 2\pi(5)$ $\quad 10\pi = 31.42$

25.46 12] If the circumference is 80, what is the diameter?

≈ 25.46

61.09 13] If the radius of a circle is 14, and the measure of arc ABC = 250°, find the length of arc ABC.

$\frac{length}{2\pi r} = \frac{measure}{360}$ $\quad 360x = 7000\pi$ $\quad x = 61.0865$

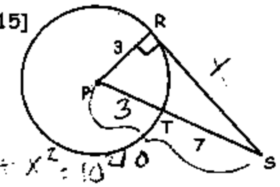
8205.84 14] If the diameter of a moon is 2548 km and an orbiting lunar station is circling 32 km above the lunar surface, find the distance traveled by the lunar station in one orbit.

Circumference $\quad 2\pi r \quad 2\pi(1306) \quad 2612\pi \quad C = 8205.84$

$1274 + 32 = 1306$

For problems 15 - 32, find the indicated value. Assume that lines that appear to be tangent are tangent.

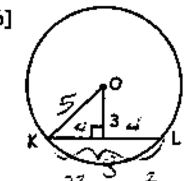
15]



$3^2 + x^2 = 10^2$ $\quad 9 + x^2 = 100$ $\quad x^2 = 91$ $\quad x = \sqrt{91}$ $\quad 9.539$

RS = 9.54

16]

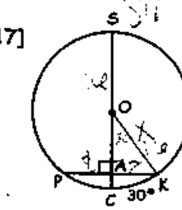


$3^2 + x^2 = 5^2$ $\quad 9 + x^2 = 25$ $\quad x^2 = 16$ $\quad x = 4$

OK = 5

KL = 8

17]

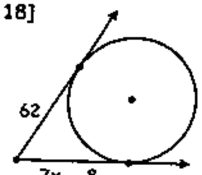


$\sin\theta = \frac{opp}{hyp}$ $\quad \sin 30 = \frac{?}{x}$ $\quad x = 16$ $\quad 16 \times 2 = 32$

AK = 8

SC = 32

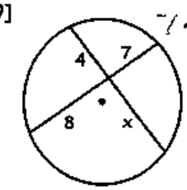
18]



$62 = 7x - 8$ $\quad 70 = 7x$ $\quad x = 10$

x = 10

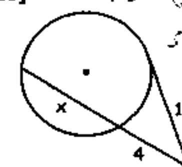
19]



$7 \cdot 8 = 4x$ $\quad 56 = 4x$ $\quad x = 14$

x = 14

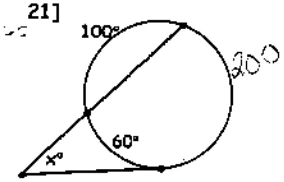
20]



$13^2 = 4(x+4)$ $\quad 153 = 4x$ $\quad x = 38.25$

x = 38.25

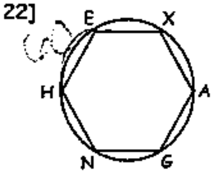
21]



x = 70°

$x = \frac{1}{2}(200 - 60)$ $\quad \frac{1}{2}(140)$ $\quad x = 70$

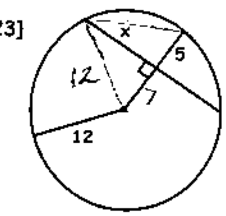
22]



HEXAGN is a regular hexagon.

m$\widehat{HE}$ = 60°

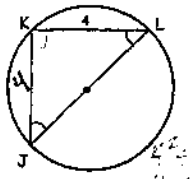
23]



x = 9.75

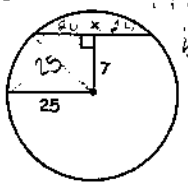
$7^2 + x^2 = 12^2$ $\quad 49 + x^2 = 144$ $\quad x^2 = 95$ $\quad x = 9.746794$

24]



JL = 5.6616 x = 48

25]



$7^2+b^2=25^2$

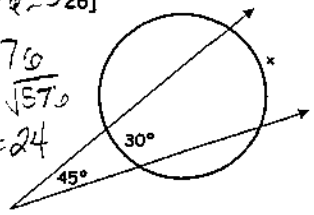
$49+b^2=625$

$b^2=576$

$b=\sqrt{576}$

$b=24$

26]



$45=\frac{1}{2}(x-30)$

$45=\frac{1}{2}x-15$

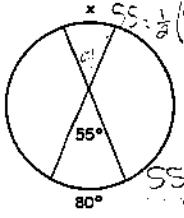
$60=\frac{1}{2}x$

$x=120$

x = 120°

Circumference = 17.77

27]



$55=\frac{1}{2}(80+x)$

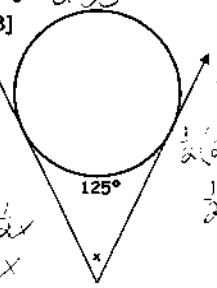
$55=40+\frac{1}{2}x$

$15=\frac{1}{2}x$

$x=30$

x = 30°

28]



$360-125=235$

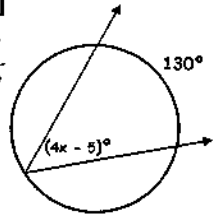
$\frac{1}{2}(235-125)$

$\frac{1}{2}(110)$

55

x = 55°

29]



$4x-5=\frac{1}{2}(130)$

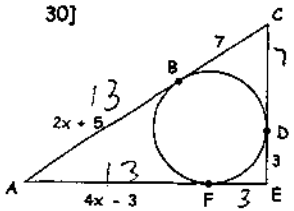
$4x-5=65$

$4x=70$

$x=17.5$

x = 17.5

30]



x = 4

Perimeter = 46

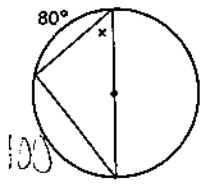
$2x+5=4x-3$

$8=2x$

$x=4$

13 + 3 + 7 + 3 + 3 + 7 = 46

31]

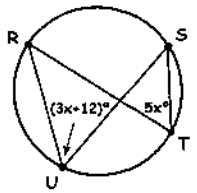


x = 50°

$x=\frac{1}{2}(100)$

$x=50$

32]



$3x+12=5x$

$12=2x$

$x=6$

x = 6