

Name _____
 Adv Geo - _____

AMDG
 10.1-10.5 Review

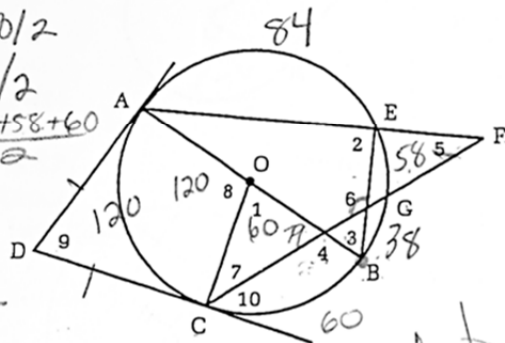
Ms. Kresovic
 Date _____

In problems 1-10, find the measure of each angle. Refer to the diagram and the information given.

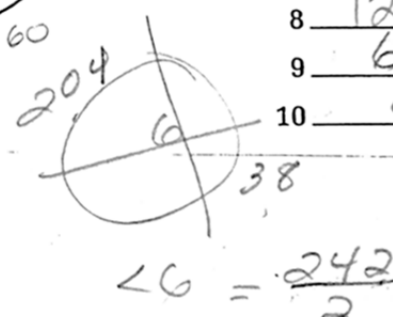
Given: $\odot O$
 \overline{AB} is a diameter,
 \overline{DA} and \overline{DC} are tangents.
 $\angle C = 120^\circ$, $\angle E = 84^\circ$, $\angle G = 58^\circ$

$42 + 27 + 30 = 101$
 $61 + 30 = 91$
 $120 - 58 = 62$
 $\frac{62}{2} = 31$

- 1 $\angle 1$
- 2 $\angle 2 = 180/2$
- 3 $\angle 3 = 84/2$
- 4 $\angle 4 = \frac{84 + 58 + 60}{2}$
- 5 $\angle 5$
- 6 $\angle 6$
- 7 $\angle 7 = \frac{180 - 139}{2}$
- 8 $\angle 8$
- 9 $\angle 9$
- 10 $\angle 10 = \frac{98}{2} = 45 + 4$



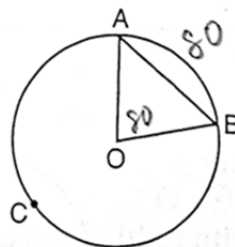
- 1 60'
- 2 90'
- 3 42'
- 4 101'
- 5 31'
- 6 121'
- 7 41'
- 8 120'
- 9 60'
- 10 49'



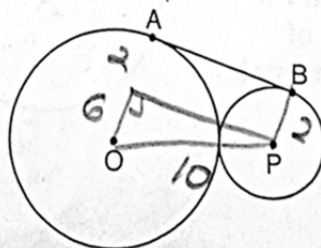
In problems 5-7, refer to the diagram and the information given.

Given: $\odot O$, $m\widehat{AB} = 80$

- 11) 5 Find $m\angle AOB$.
- 12) 6 Find $m\angle A$. $2x + 80 = 180$
- 13) 7 Find $m\widehat{ACB}$. $360 - 80 = 280$
- 14) 8 Given: $\odot P$ and $\odot O$ with a common external tangent, \overline{AB}
 $OA = 8$
 $PB = 2$
 $OP = 10$



- 5 80
- 6 50
- 7 280

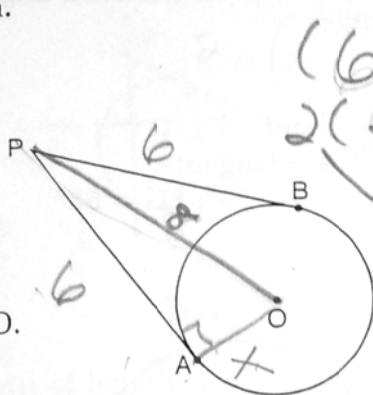


Find AB.

- 8 8

In problems 9 and 10, refer to the diagram and the information given.

Given: \overline{PA} and \overline{PB} are tangent to $\odot O$ at A and B respectively.
 $PA = 6$
 $PO = 8$



Handwritten work for problem 9:
 $(6 \text{ OA } 8)$
 $2(3 - 4)$
 $9 + x^2 = 16$
 $x^2 = \frac{7}{7}$
 $x = \sqrt{7}$

15) 9 Find the radius of $\odot O$.

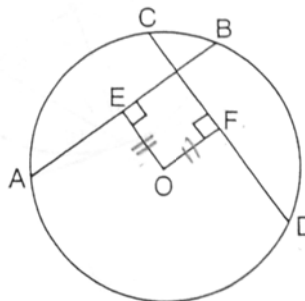
16) 10 Find PB.

9 2√7

10 6

17) In problems 11–15, complete the proof.

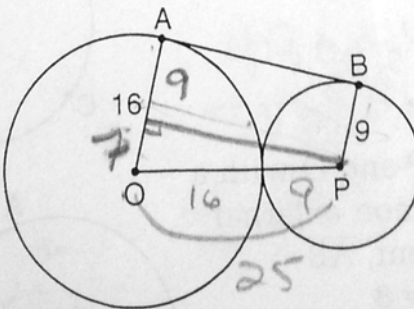
18) 11–15 Given: $\odot O$, $\overline{EO} \perp \overline{AB}$
 $\overline{FO} \perp \overline{CD}$, $\overline{OE} \cong \overline{OF}$
 Prove: $\overline{AC} \cong \overline{BD}$



Statements	Reasons
1 $\odot O$, $\overline{EO} \perp \overline{AB}$, $\overline{FO} \perp \overline{CD}$, $\overline{OE} \cong \overline{OF}$	1 Given
2 $\overline{AE} \cong \overline{CE}$	2 = DIST $\Rightarrow \cong$ CHDS
3 $\overline{AB} \cong \overline{CD}$	3 \cong CHDS $\Rightarrow \cong$ ARCS
4 $\overline{CB} \cong \overline{BC}$	4 Rcf
5 $\overline{AC} \cong \overline{BD}$	5 SUBTRACT
6	6

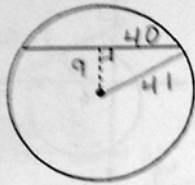
19) 2 Given: Externally tangent \odot s O and P with radii of 16 and 9

Find the length of the common external tangent \overline{AB} .



2 24

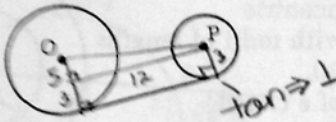
- 20) 23 Find, to the nearest ~~cm~~, the circumference of a circle in which an 80-cm chord is 9 cm from the center.



$r = 41 \Rightarrow d = 82$

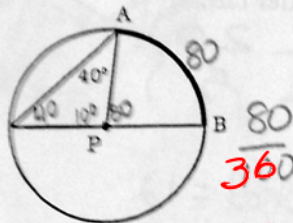
23 82π

- 21) 24 $\odot O$ with radius 6
 $\odot P$ with radius 3
The length of the common external tangent seg. is 12.
Find the distance between the two circles.



24 13

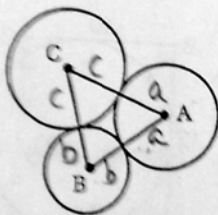
- 22) part
whole
25 If a point is chosen at random on $\odot P$, what is the probability that it is on arc AB?



25 $= \frac{80}{360} = \boxed{\frac{2}{9}}$

- 23) 26 $AC = 14$
 $AB = 10$
 $CB = 18$
Find the length of the radius of the largest circle.

$\frac{28}{4} = 7$



26 $a = 3$
 $b = 7$
 $c = 11$

$2(a+b+c) = 42$

$a+b+c = 21$

$c = 11$

$a+b+c = 21$

$14+b = 21$

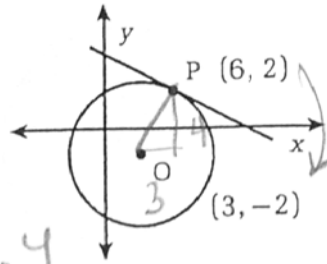
$b = 7$

$\frac{21}{3} = a$

Solve problems 28 and 29 by referring to the diagram.

24)

28 Find the length of the radius of $\odot O$.



28 5

25)

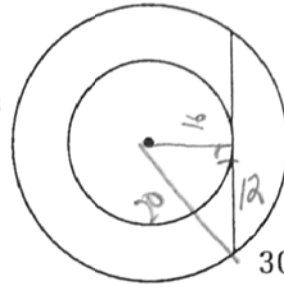
29 Find the slope of the tangent to $\odot O$ at P. $\frac{2+2}{6-3} = \frac{4}{3}$

29 $-\frac{3}{4}$

26)

30 Given: Two concentric circles with radii of lengths 16 and 20.

Find the length of a chord of the larger circle that is tangent to the smaller circle.

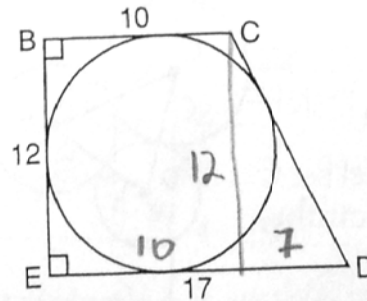


30 24

$$\begin{aligned} & (16 \quad 20) \\ & 4(4 \quad 3 \quad 5) \\ & \frac{1}{2} \text{chd} = 12 \end{aligned}$$

27)

3 In the circumscribed quadrilateral, find CD.



3 $\sqrt{193}$

$$\begin{aligned} 7^2 + 12^2 &= DC^2 \\ 49 + 144 & \\ 193 & \\ \sqrt{193} & \end{aligned}$$