

9.4

① $3^2 + MY^2 = 5^2$

$MY = 4$

$XY = 4 \cdot 2 = 8$

② $MQ = 12$

$12^2 + OM^2 = 13^2$

$OM = 5$

③ $9^2 + 9^2 = OR^2$

$\sqrt{162} = OR$

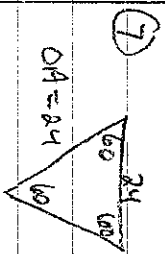
$9\sqrt{2} = OR$

④ $M1 = \frac{110}{2} = 55$

⑤ $300 - 120 = 240$

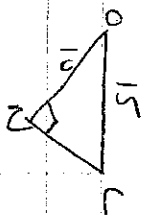
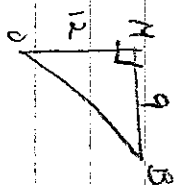
$\frac{240}{3} = 80$

⑥ $\frac{90}{2} = 45$



⑧ $EF = 6 \cdot 2 = 12$

⑨



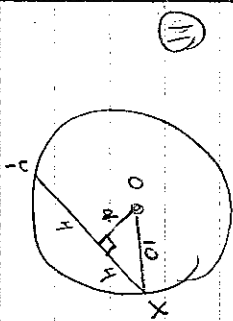
$9^2 + 12^2 = OB^2$

$15 = OB$

$10^2 + ON^2 = 15^2$

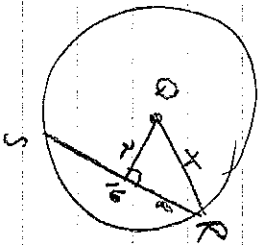
$ON = \sqrt{125} = 5\sqrt{5}$

$CD = 5\sqrt{5} \cdot 2 = 10\sqrt{5}$



$4^2 + d^2 = 10^2$

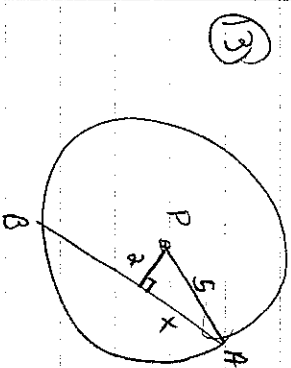
$d = \sqrt{84} = 2\sqrt{21}$



$8^2 + 2^2 = X^2$

$\sqrt{68} = X$

$2\sqrt{17} = X$



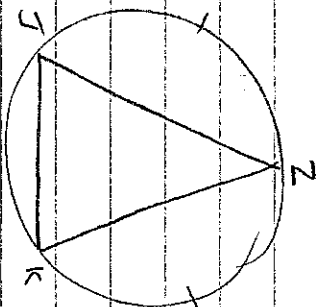
$2^2 + X^2 = 5^2$

$X = \sqrt{21}$

$AB = 2\sqrt{21}$

14

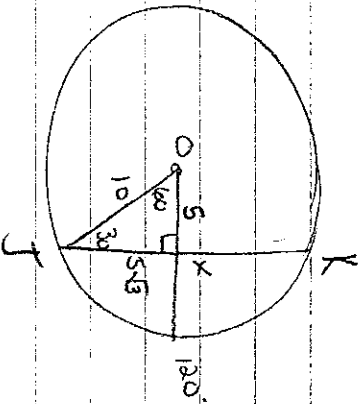
Given: $\widehat{JZ} \cong \widehat{KZ}$
Prove: $\angle J \cong \angle K$



1. $\widehat{JZ} \cong \widehat{KZ}$
2. $\widehat{JZ} \cong \widehat{KZ}$
3. $\angle J \cong \angle K$

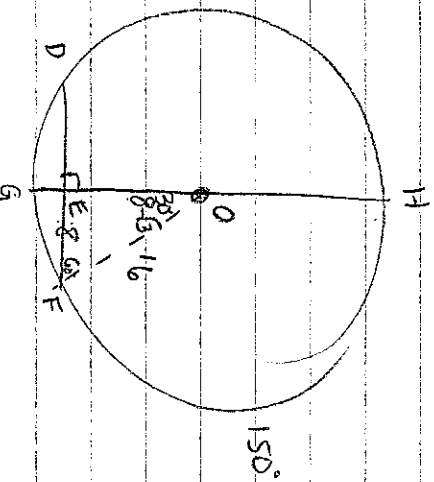
1. Given
2. \cong arcs $\rightarrow \cong$ chords
3. isosc. Δ Thm

15



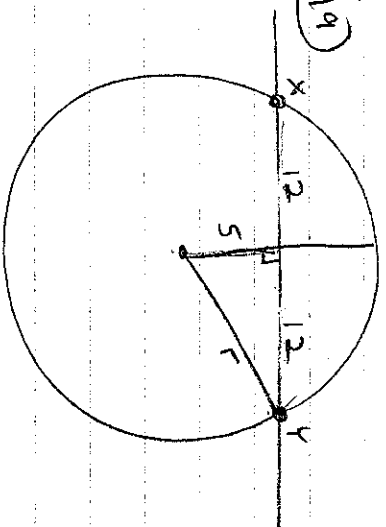
$$KJ = 10\sqrt{3}$$

16



$$180 - 150 = 30 \rightarrow 30-60-90 \Delta$$

$$\text{rad} = 16 \rightarrow HG = 32$$

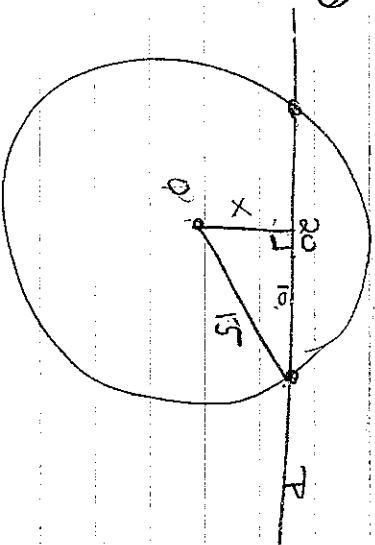


$$XY = 24$$

$$5^2 + 12^2 = r^2$$

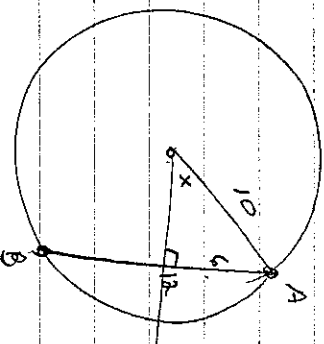
$$\sqrt{169} = r = 13$$

$$d = 2(13)$$



$$10^2 + x^2 = 16^2$$

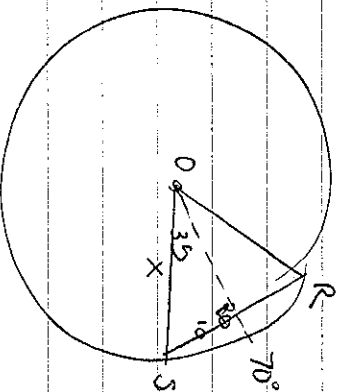
$$x = \sqrt{125} = 5\sqrt{5}$$



$$\sin x = \frac{6}{10}$$

$$x \approx 37^\circ$$

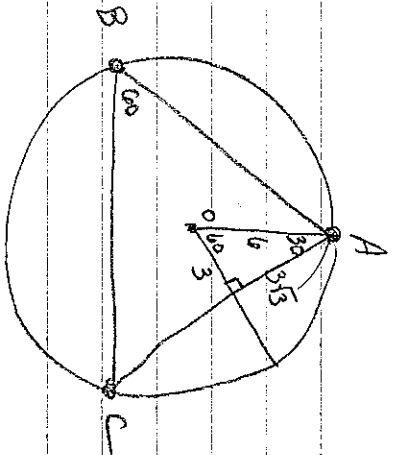
$$m\widehat{AB} \approx 74^\circ$$



$$\sin 35 = \frac{10}{x}$$

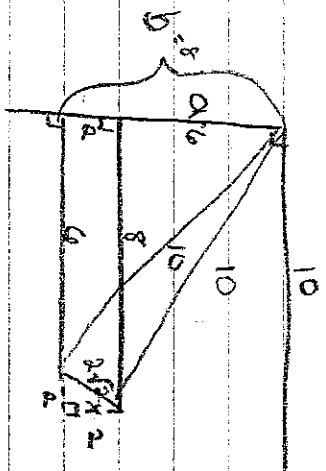
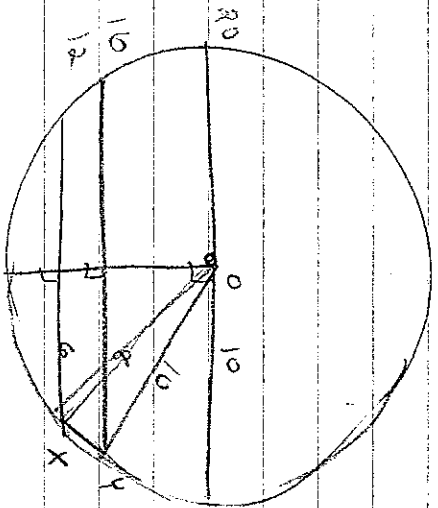
$$17.4 \approx x$$

25



$$3\sqrt{3} \cdot 2 = 6\sqrt{3} \cdot 3 = 18\sqrt{3}$$

27



$$a^2 + 8^2 = 10^2$$

$$a = 6$$

$$b^2 + a^2 = 10^2$$

$$b = 8$$

