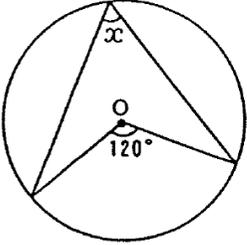
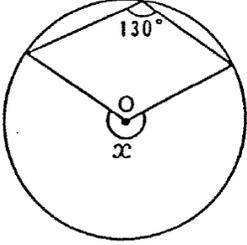
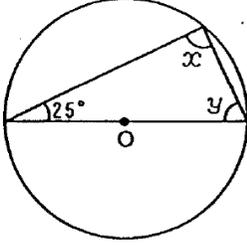
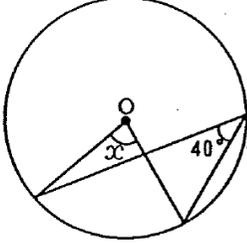
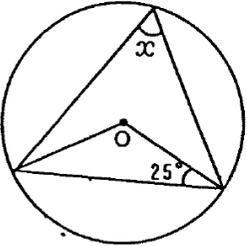
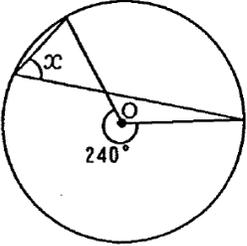
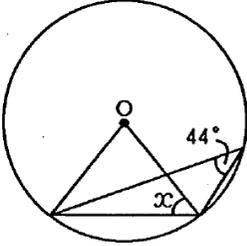
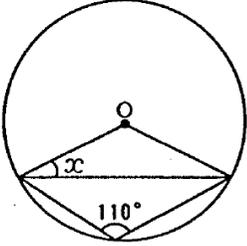
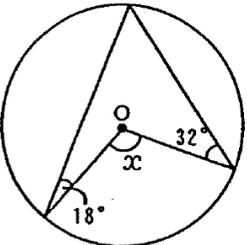
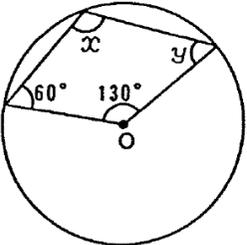
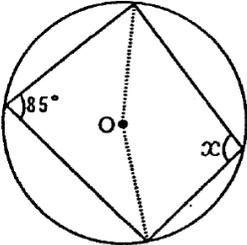
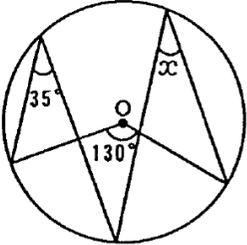
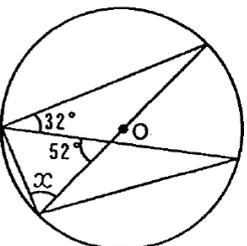
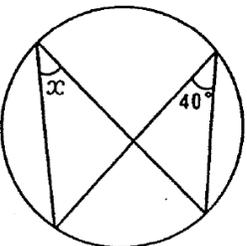
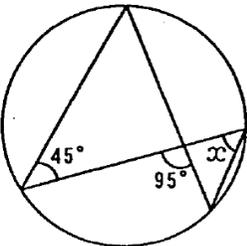
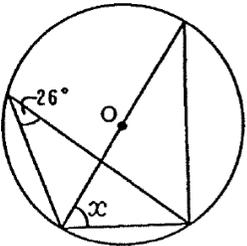
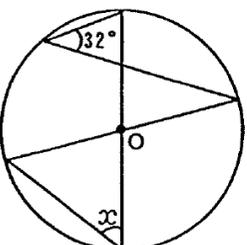
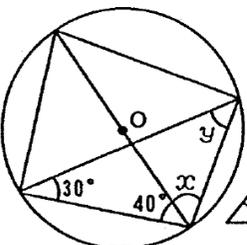
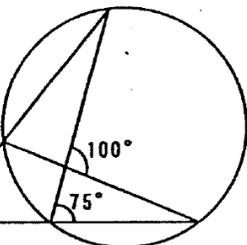
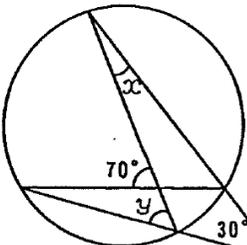


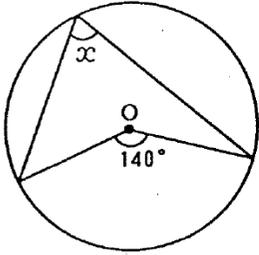
多くの問題がありますので、どんどん解いてください。1分考えて手がつかないものは飛ばして飛ばし構いません。解説を聞いてより価値が生まれるように、全体に取り組むことを主眼にしてください。

中3数学/円と円周角①

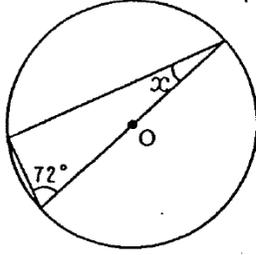
氏名 _____

①	②	③	④
			
⑤	⑥	⑦	⑧
			
⑨	⑩	⑪	⑫
			
⑬	⑭	⑮	⑯
			
⑰	⑱	⑳	
			

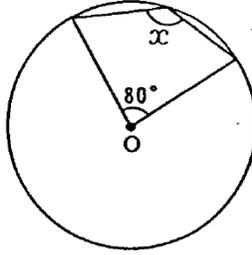
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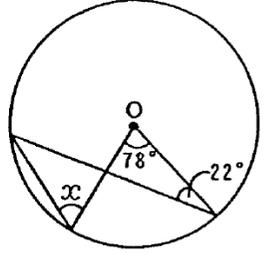
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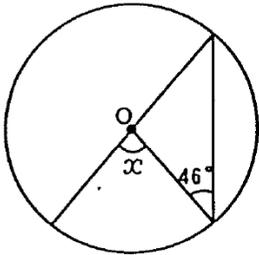
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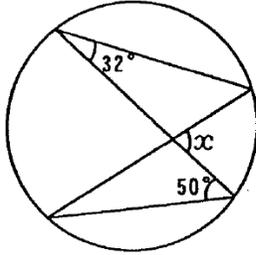
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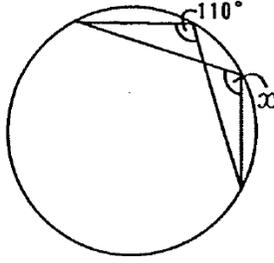
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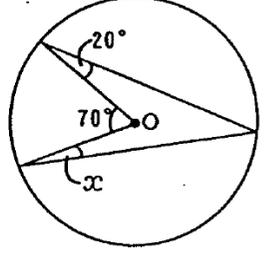
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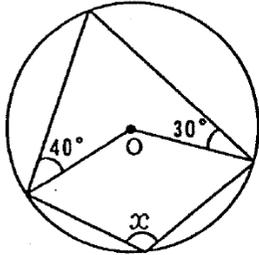
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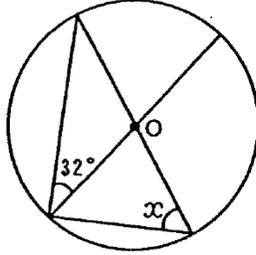
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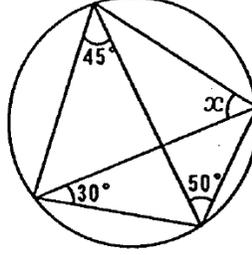
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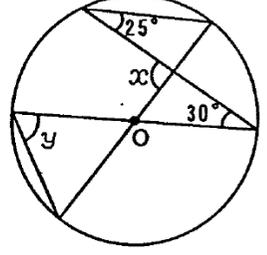
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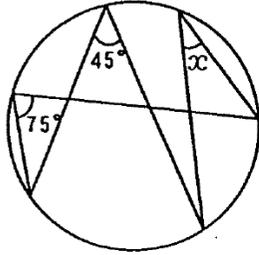
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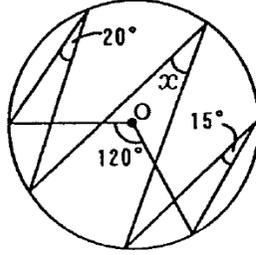
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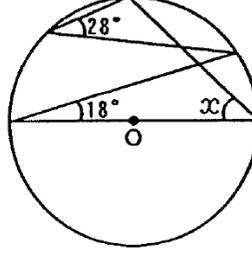
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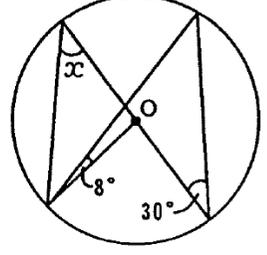
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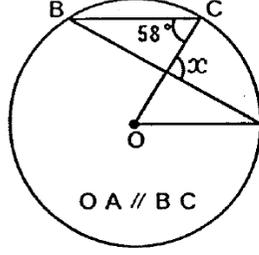
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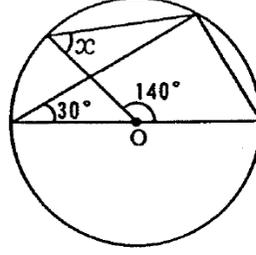
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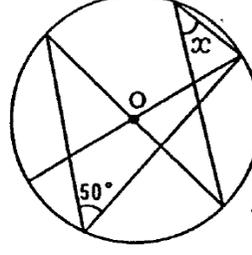
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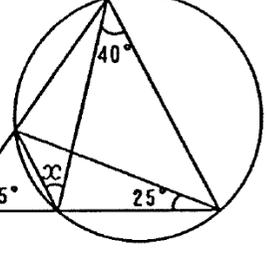
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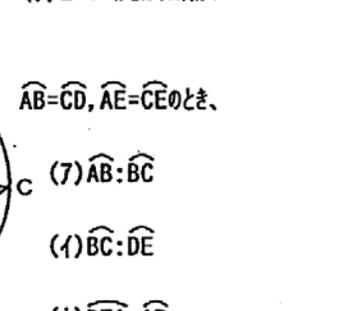
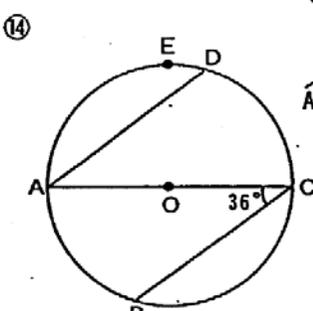
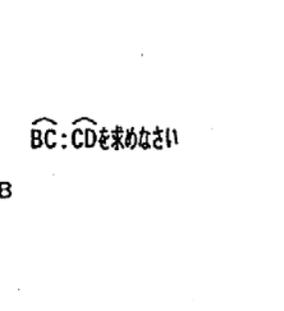
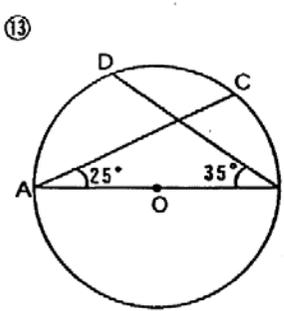
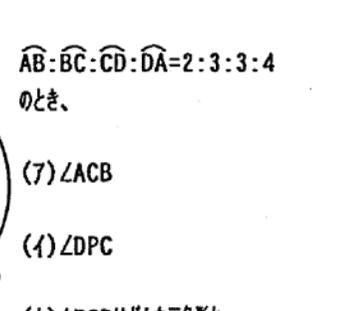
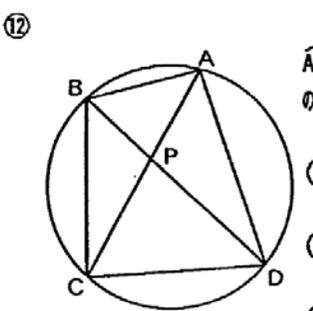
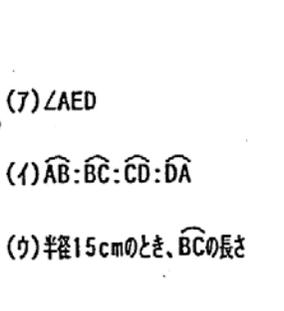
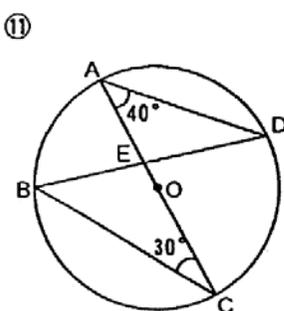
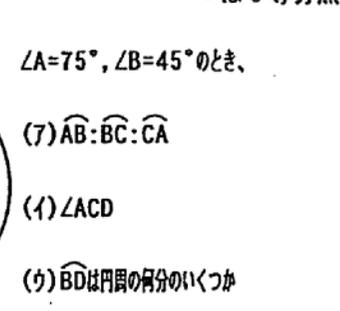
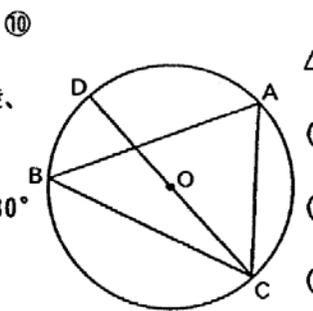
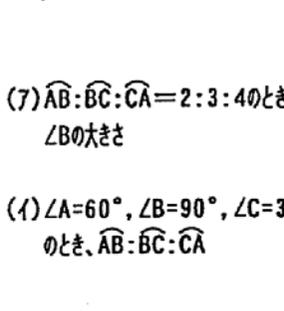
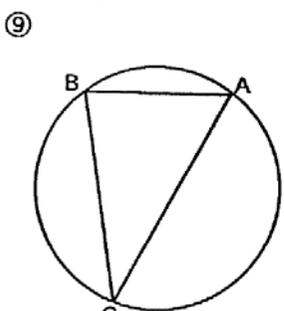
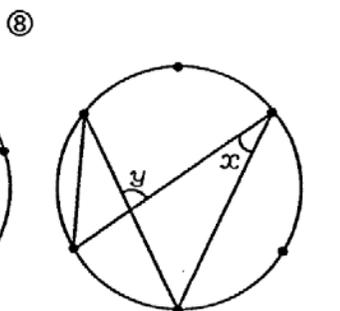
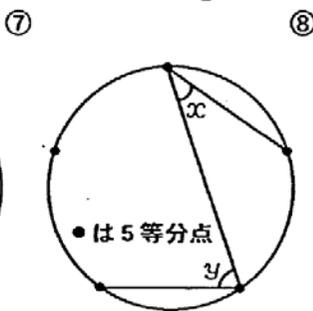
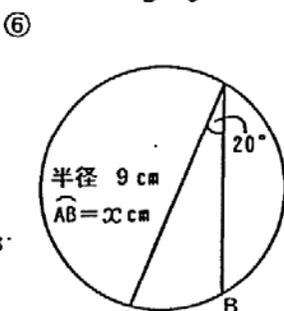
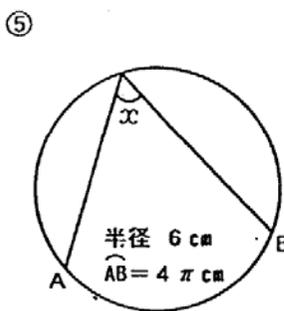
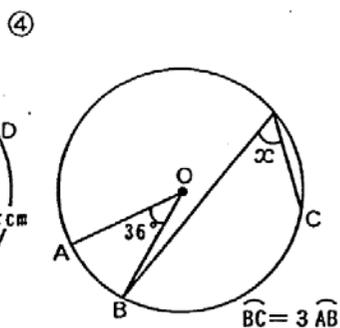
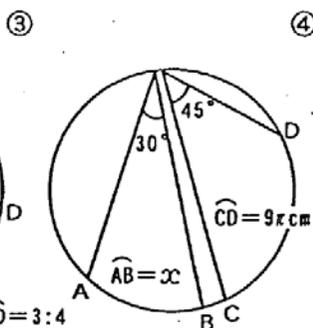
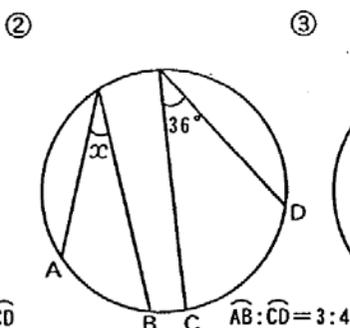
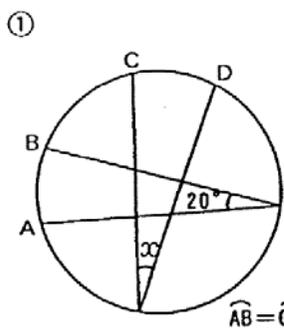


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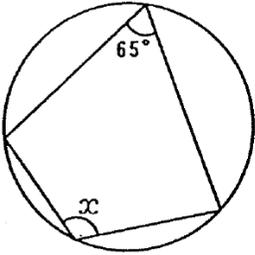


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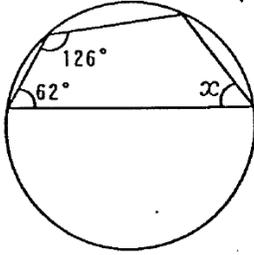




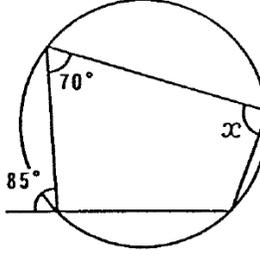
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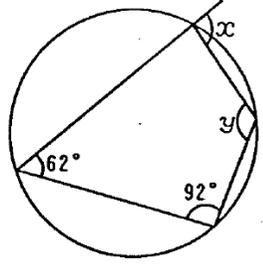
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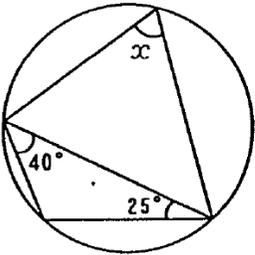
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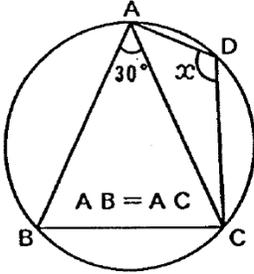
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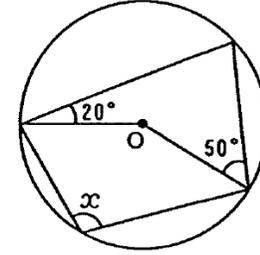
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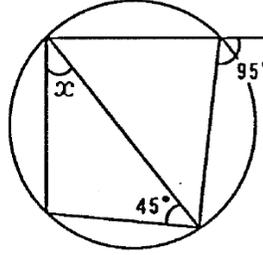
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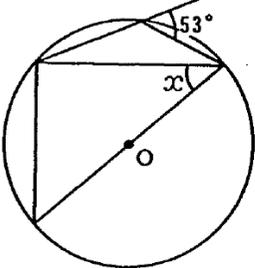
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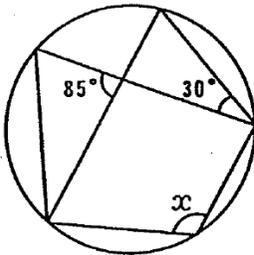
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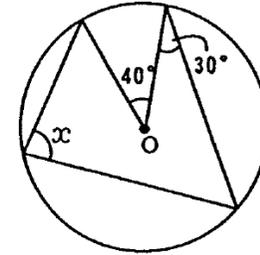
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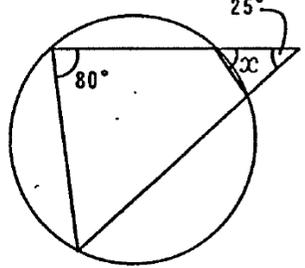
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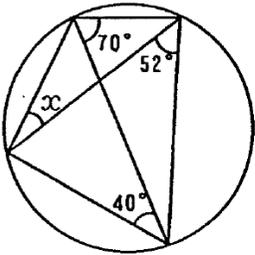
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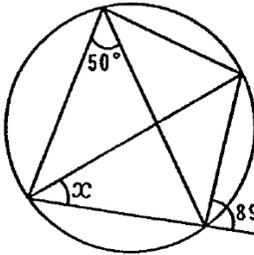
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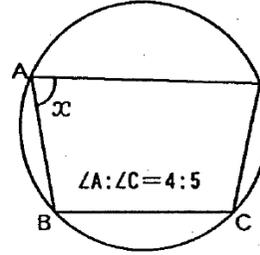
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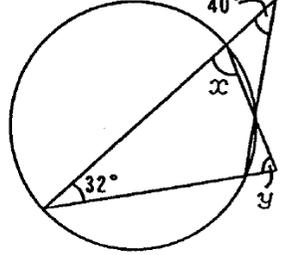
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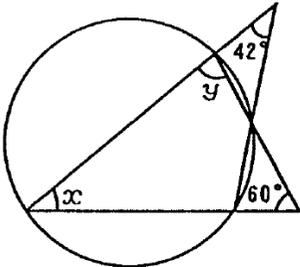
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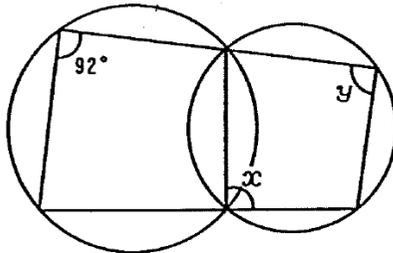
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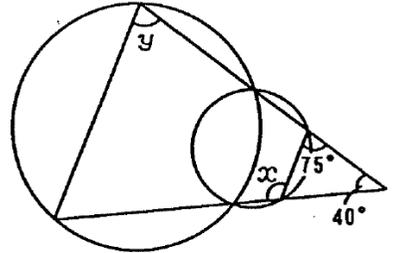
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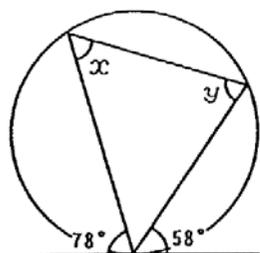
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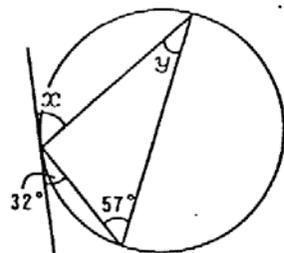
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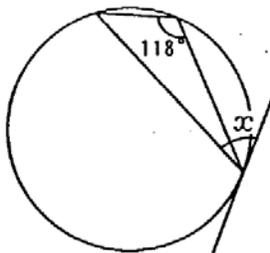
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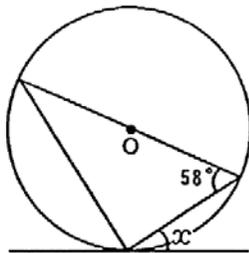
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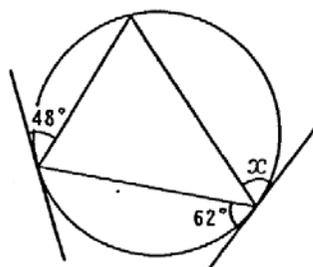
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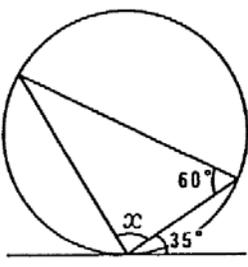
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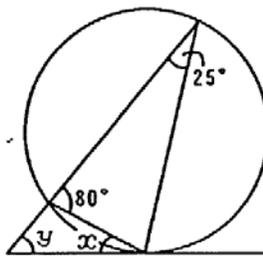
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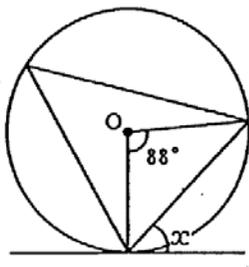
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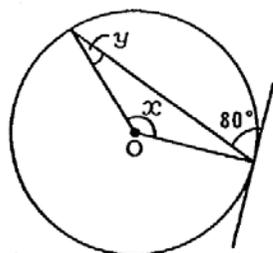
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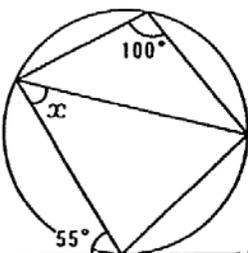
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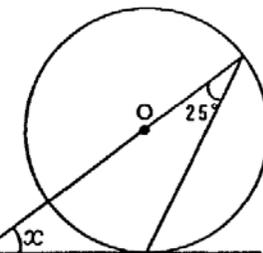
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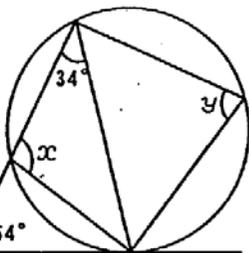
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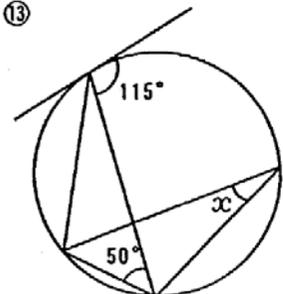
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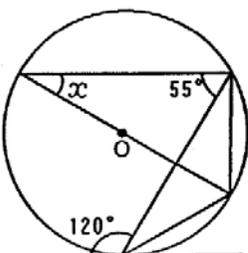
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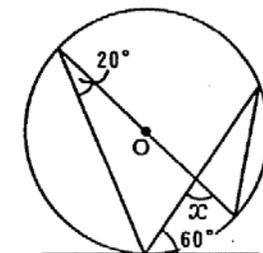
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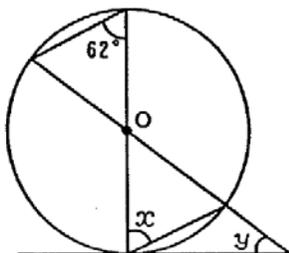
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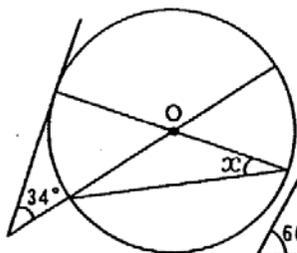
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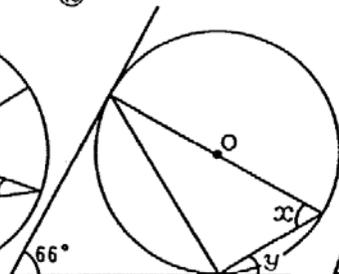
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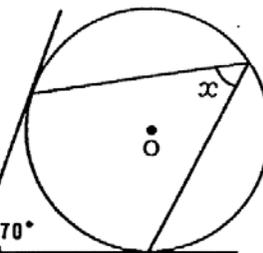
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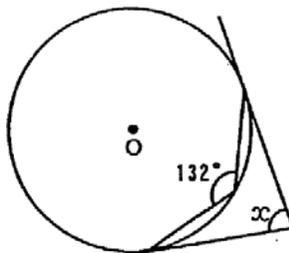
⑱



⑲



⑳



①

- ① $x=60$
- ② $x=260$
- ③ $x=90$ $y=65$
- ④ $x=80$
- ⑤ $x=65$
- ⑥ $x=60$
- ⑦ $x=46$
- ⑧ $x=20$
- ⑨ $x=100$
- ⑩ $x=115$ $y=55$
- ⑪ $x=95$
- ⑫ $x=30$
- ⑬ $x=70$
- ⑭ $x=40$
- ⑮ $x=50$
- ⑯ $x=64$
- ⑰ $x=58$
- ⑱ $x=60$ $y=50$
- ㉑ $x=50$
- ㉒ $x=20$ $y=50$

②

- ① $x=70$
- ② $x=18$
- ③ $x=140$
- ④ $x=61$
- ⑤ $x=92$
- ⑥ $x=82$
- ⑦ $x=110$
- ⑧ $x=15$
- ⑨ $x=110$
- ⑩ $x=58$
- ⑪ $x=55$
- ⑫ $x=80$ $y=65$
- ⑬ $x=30$
- ⑭ $x=25$
- ⑮ $x=44$
- ⑯ $x=38$
- ⑰ $x=87$
- ⑱ $x=50$
- ㉑ $x=40$
- ㉒ $x=35$

③

- ① $x=20$
- ② $x=27$
- ③ $x=6x$
- ④ $x=54$
- ⑤ $x=60$
- ⑥ $x=2x$
- ⑦ $x=36$ $y=72$
- ⑧ $x=30$ $y=90$
- ⑨ (7) 80
- (イ) 1:2:3
- ⑩ (7) 4:5:3
- (イ) 45
- (ウ) $\frac{1}{2}$
- ⑪ (7) 110
- (イ) 3:6:4:5
- (ウ) $10x$
- ⑫ (7) 30
- (イ) 75
- (ウ) 直角二等辺三角形
- ⑬ 5:6
- ⑭ (7) 2:3 (イ) 6:1 (ウ) 3:2

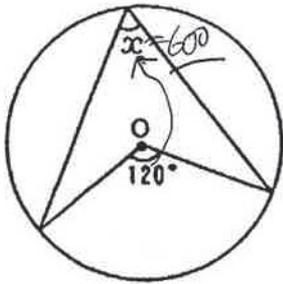
④

- ① $x=115$
- ② $x=54$
- ③ $x=85$
- ④ $x=92$ $y=118$
- ⑤ $x=65$
- ⑥ $x=105$
- ⑦ $x=110$
- ⑧ $x=40$
- ⑨ $x=37$
- ⑩ $x=115$
- ⑪ $x=80$
- ⑫ $x=75$
- ⑬ $x=18$
- ⑭ $x=39$
- ⑮ $x=80$
- ⑯ $x=72$ $y=76$
- ⑰ $x=39$ $y=81$
- ⑱ $x=92$ $y=88$
- ㉑ $x=115$ $y=75$

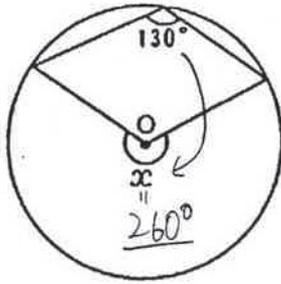
⑤

- ① $x=58$ $y=78$
- ② $x=57$ $y=32$
- ③ $x=62$
- ④ $x=32$
- ⑤ $x=70$
- ⑥ $x=85$
- ⑦ $x=25$ $y=55$
- ⑧ $x=44$
- ⑨ $x=160$ $y=10$
- ⑩ $x=45$
- ⑪ $x=40$
- ⑫ $x=98$ $y=82$
- ⑬ $x=15$
- ⑭ $x=25$
- ⑮ $x=70$
- ⑯ $x=62$ $y=34$
- ⑰ $x=28$
- ⑱ $x=57$ $y=33$
- ㉑ $x=55$
- ㉒ $x=84$

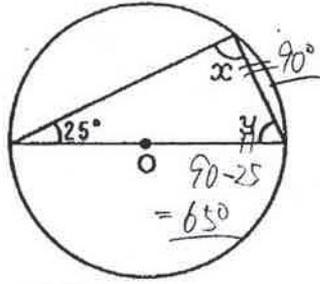
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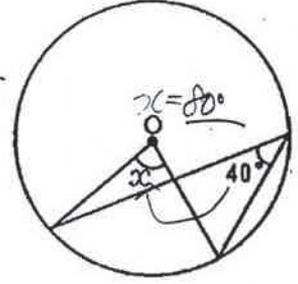
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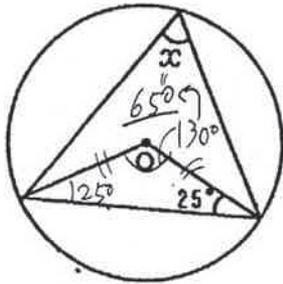
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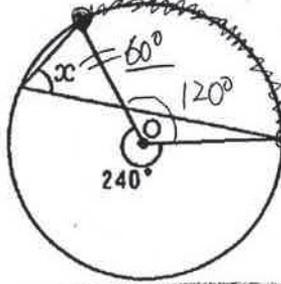
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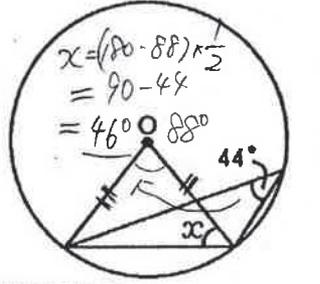
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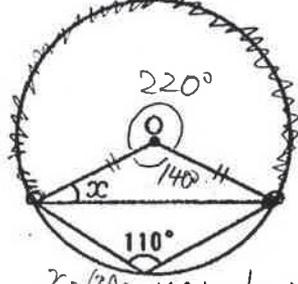
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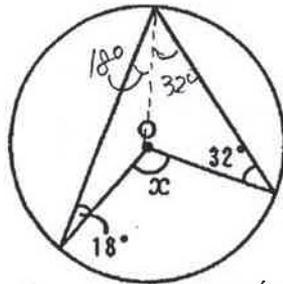
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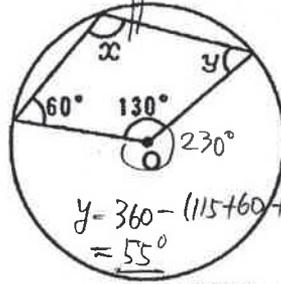
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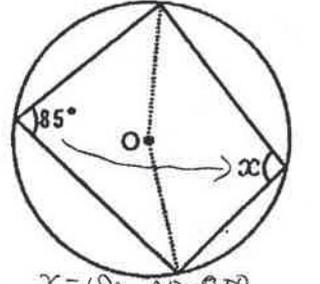
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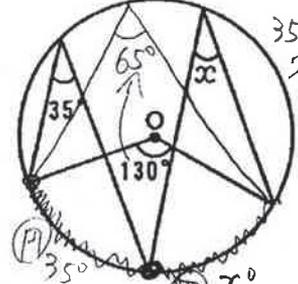
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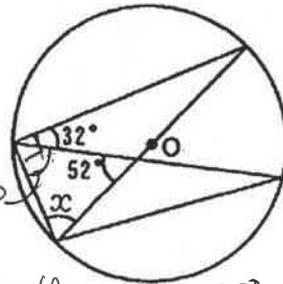
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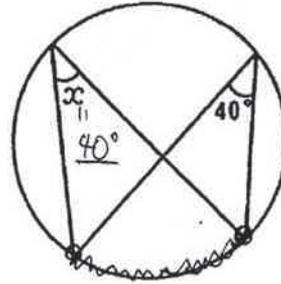
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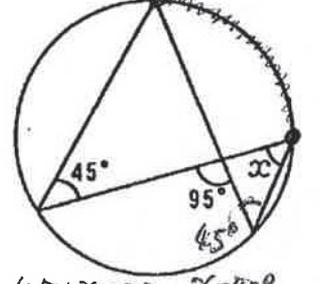
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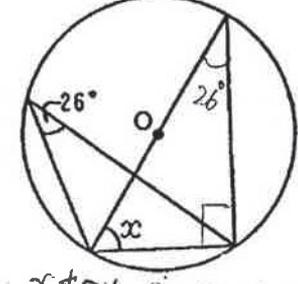
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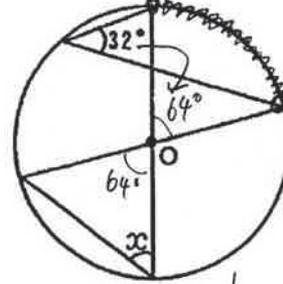
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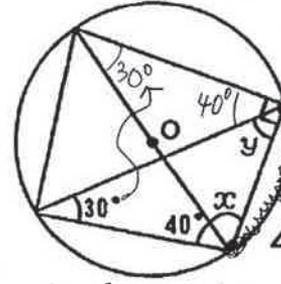
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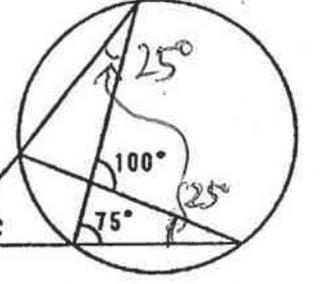
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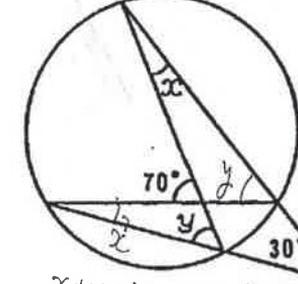
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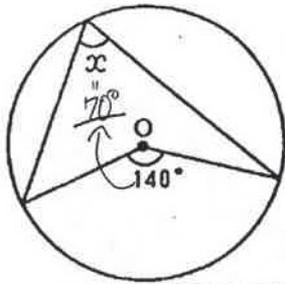
⑲



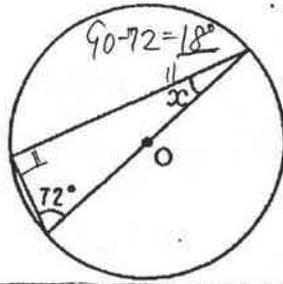
⑳



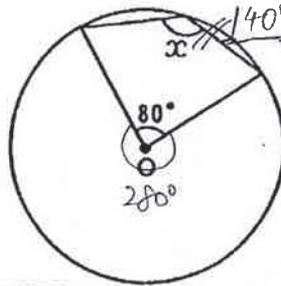
①



②

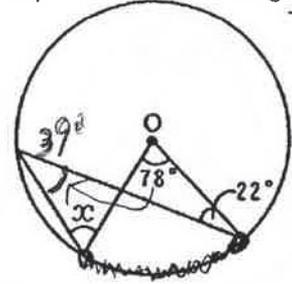


③

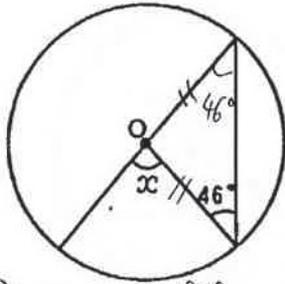


④

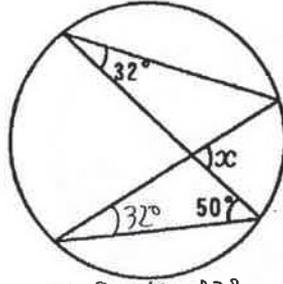
$39 + x = 78 + 22 \therefore x = 61^\circ$



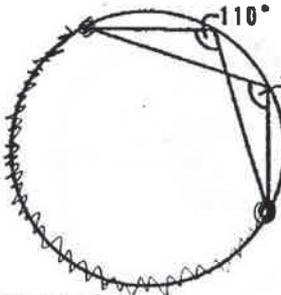
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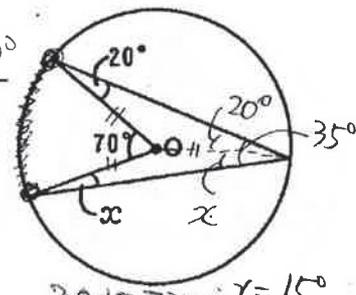
⑥



⑦



⑧



⑨

$x = 46 \times 2 = 92^\circ$

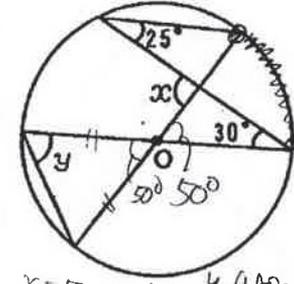
⑩

$x = 32 + 50 = 82^\circ$

⑪

$x = 180 - (45 + 50 + 70) = 55^\circ$

⑫



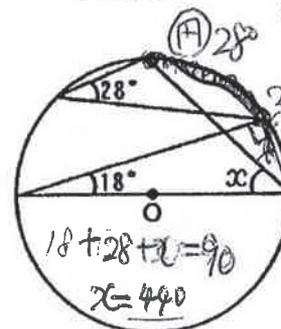
⑬

$45 + x = 75 \therefore x = 30^\circ$

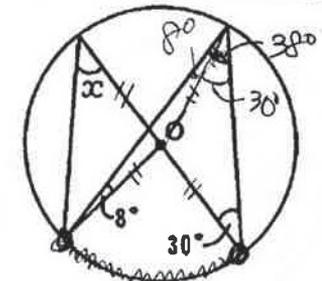
⑭

$20 + x + 15 = 60 \therefore x = 25^\circ$

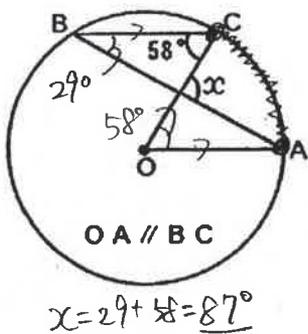
⑮



⑯

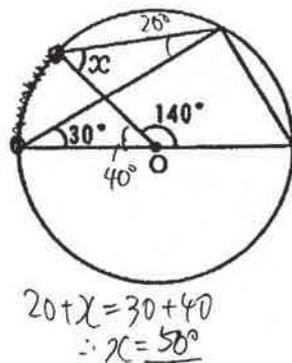


⑰



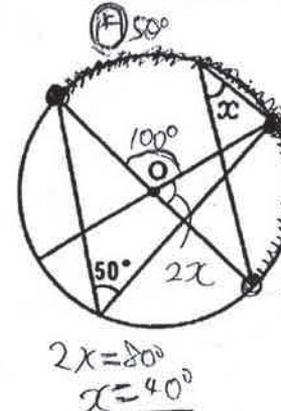
$x = 29 + 58 = 87^\circ$

⑱



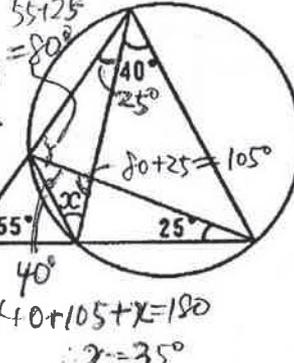
$20 + x = 30 + 40 \therefore x = 50^\circ$

⑲



$2x = 80 \therefore x = 40^\circ$

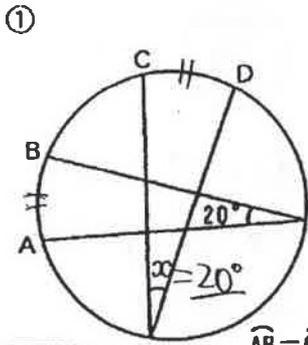
⑳



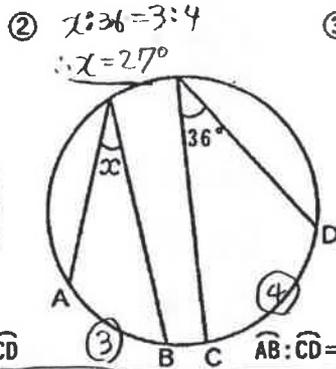
$40 + 105 + x = 180 \therefore x = 35^\circ$

中3数学/円と円周角③

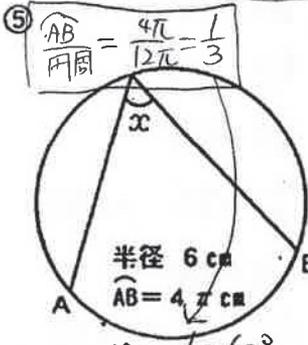
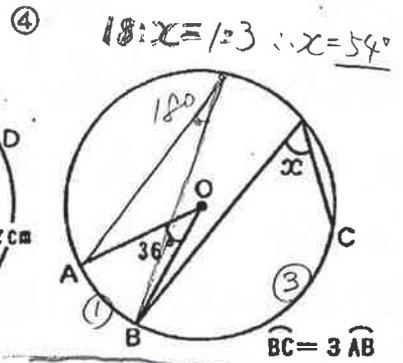
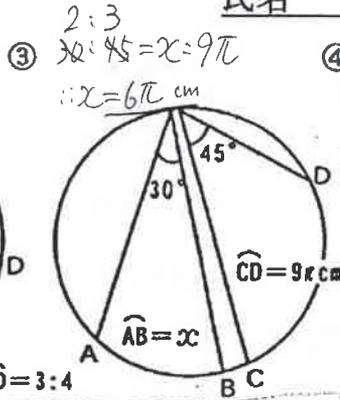
氏名 _____



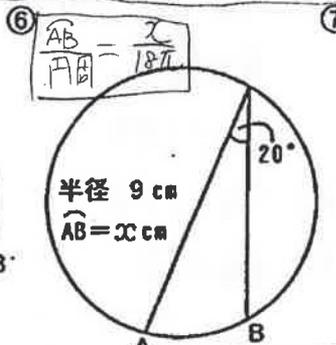
$\widehat{AB} = \widehat{CD}$



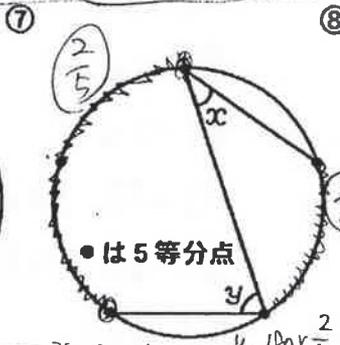
③ $\widehat{AB}:\widehat{CD}=3:4$



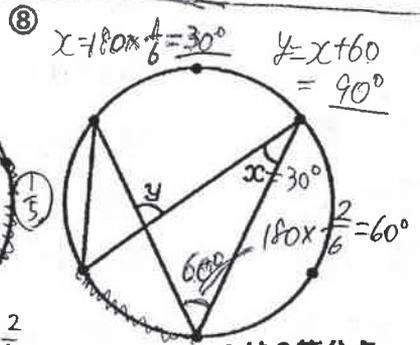
$x = 180 \times \frac{1}{3} = 60^\circ$



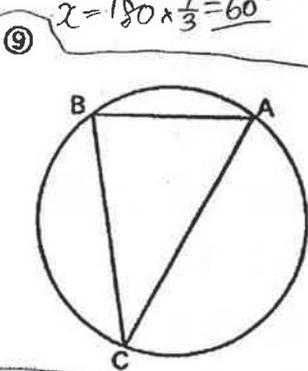
$18\pi \times \frac{x}{18\pi} = 2\pi$
 $x = 2\pi \text{ (cm)}$



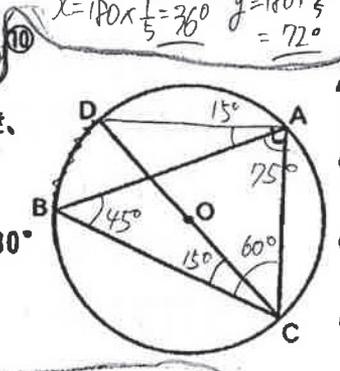
$x = 180 \times \frac{1}{5} = 36^\circ$
 $y = 180 \times \frac{2}{5} = 72^\circ$



●は6等分点

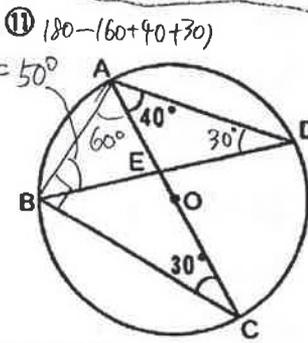


(7) $\widehat{AB}:\widehat{BC}:\widehat{CA} = 2:3:4$ のとき、
 $\angle B$ の大きさ $= 180 \times \frac{4}{9} = 80^\circ$
(1) $\angle A = 60^\circ, \angle B = 90^\circ, \angle C = 30^\circ$ のとき、 $\widehat{AB}:\widehat{BC}:\widehat{CA} = 30^\circ:60^\circ:90^\circ = 1:2:3$

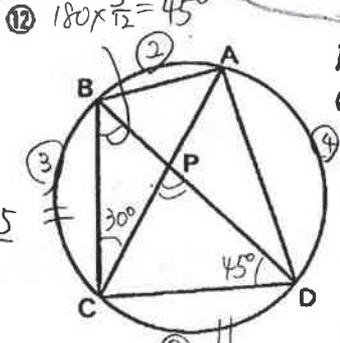


$\angle A = 75^\circ, \angle B = 45^\circ$ のとき、

(7) $\widehat{AB}:\widehat{BC}:\widehat{CA} = 60^\circ:75^\circ:15^\circ = 4:5:3$
(1) $\angle ACD = 60 - 15 = 45^\circ$
(2) \widehat{BD} は円周の何分の1つか
 $\frac{15^\circ}{180^\circ} = \frac{1}{12}$

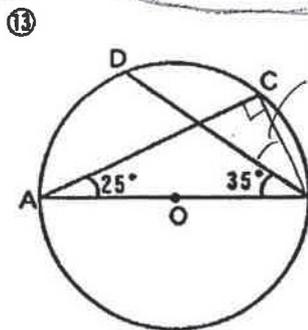


(7) $\angle AED = 180 - (40 + 30) = 110^\circ$
(1) $\widehat{AB}:\widehat{BC}:\widehat{CD}:\widehat{DA} = 30^\circ:60^\circ:40^\circ:50^\circ = 3:6:4:5$
(2) 半径 15 cm のとき、 \widehat{BC} の長さ $2\pi \times 15 \times \frac{60}{360} = 10\pi \text{ (cm)}$

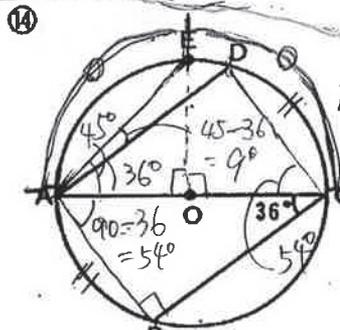


$\widehat{AB}:\widehat{BC}:\widehat{CD}:\widehat{DA} = 2:3:3:4$ のとき、

(7) $\angle ACB = 120 \times \frac{2}{12} = 30^\circ$
(1) $\angle DPC = 45 + 30 = 75^\circ$
(2) $\triangle BCD$ はどんな三角形か $\angle B = \angle D = 45^\circ$ より $\angle C = 90^\circ$ 2 $CB = CD$ の直角二等辺三角形



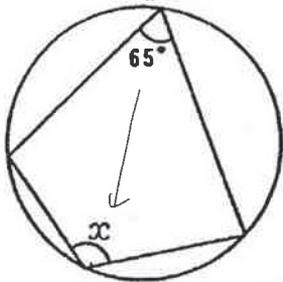
$90 - (25 + 35) = 30^\circ$
 $\widehat{BC}:\widehat{CD}$ を求めなさい
 $= 25^\circ:30^\circ = 5:6$



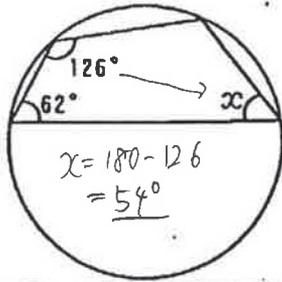
$\widehat{AB} = \widehat{CD}, \widehat{AE} = \widehat{CE}$ のとき、

(7) $\widehat{AB}:\widehat{BC} = 36^\circ:54^\circ = 2:3$
(1) $\widehat{BC}:\widehat{DE} = 54^\circ:9^\circ = 6:1$
(2) $\widehat{DEA}:\widehat{AB} = 54^\circ:36^\circ = 3:2$

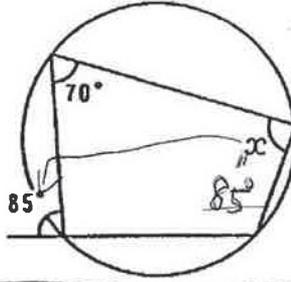
① $x = 180 - 65 = 115^\circ$



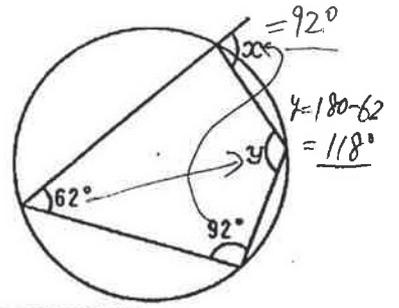
②



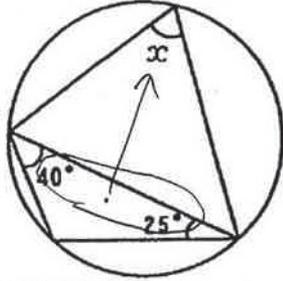
③



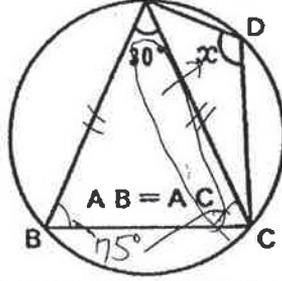
④



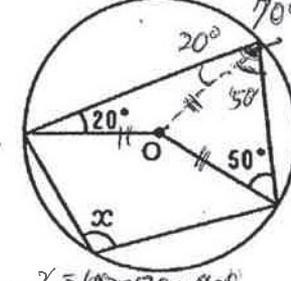
⑤ $x = 40 + 25 = 65^\circ$



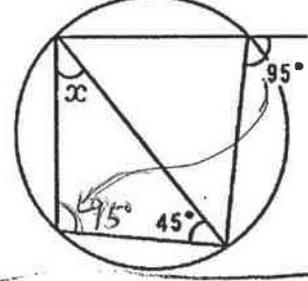
⑥ $x = 30 + 75 = 105^\circ$



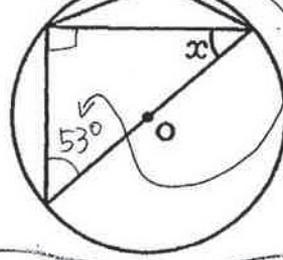
⑦



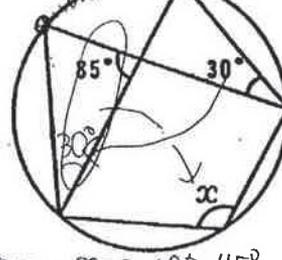
⑧ $x = 180 - (95 + 45) = 40^\circ$



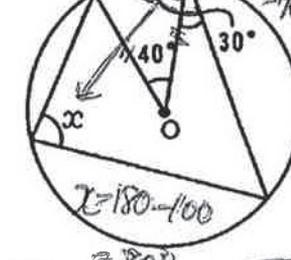
⑨ $x = 90 - 53 = 37^\circ$



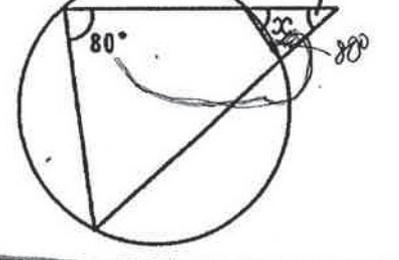
⑩



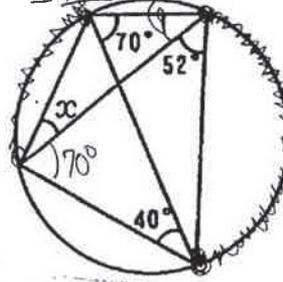
⑪



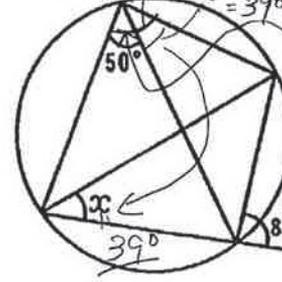
⑫ $x = 180 - (80 + 25) = 75^\circ$



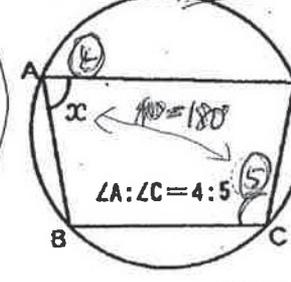
⑬ $x = 180 - (90 + 52 + 70) = 18^\circ$



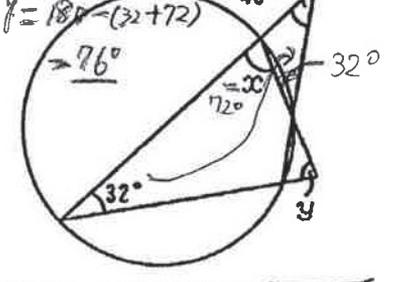
⑭



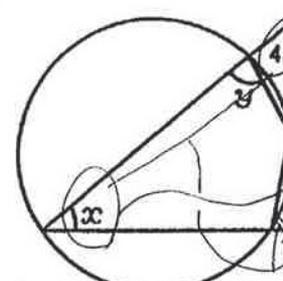
⑮



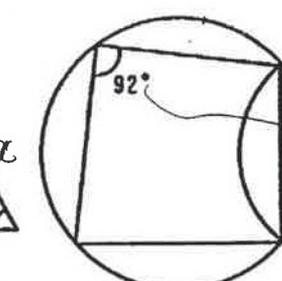
⑯ $x = 40 + 32 = 72^\circ$



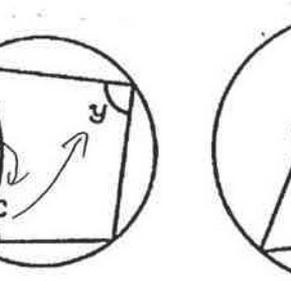
⑰



⑱



⑲



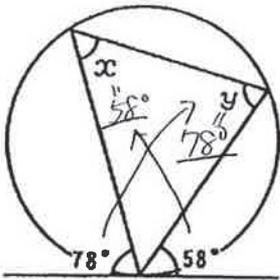
$x + (x + 42) + 60 = 180$
 $x = 39^\circ$

$y = x + 42$
 $y = 81^\circ$

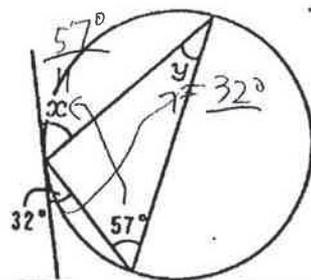
$x = 92^\circ$
 $y = 180 - 92 = 88^\circ$

$x = 75 + 40 = 115^\circ$
 $y = 75^\circ$

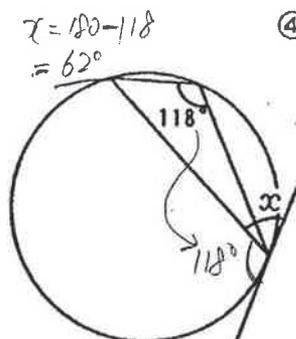
①



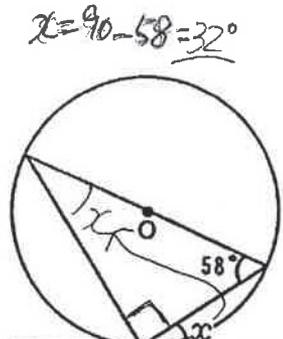
②



③

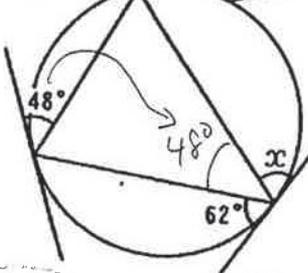


④



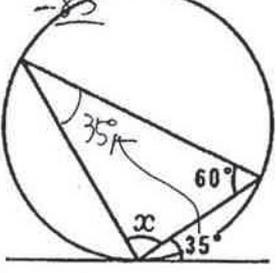
⑤

$x = 180 - (48 + 62) = 72^\circ$



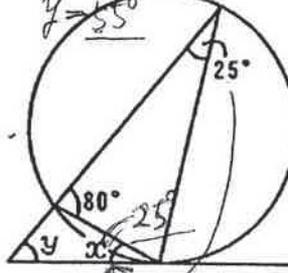
⑥

$x = 180 - (35 + 60) = 85^\circ$



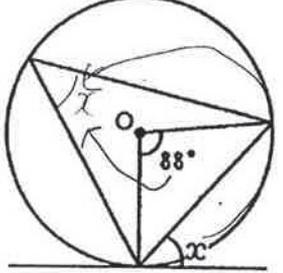
⑦

$y + 25 = 80$
 $y = 55$

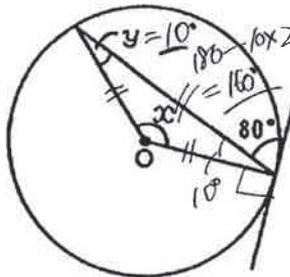


⑧

$x = 88 \times \frac{1}{2} = 44^\circ$

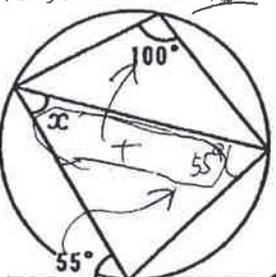


⑨

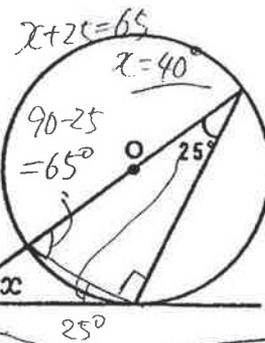


⑩

$x + 55 = 100$ $x = 45^\circ$

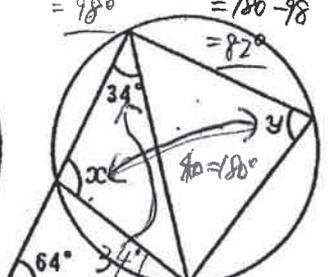


⑪

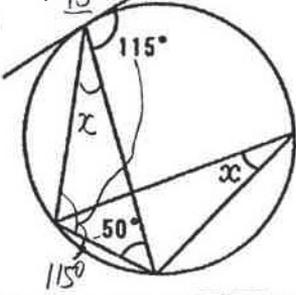


⑫

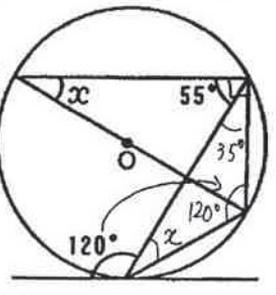
$x = 64 + 34 = 98^\circ$ $y = 180 - x = 180 - 98 = 82^\circ$



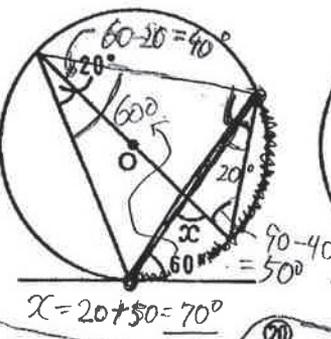
⑬ $x = 180 - (115 + 50) = 15^\circ$



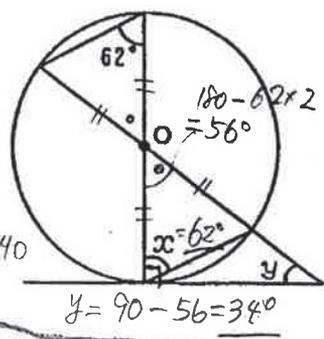
⑭ $x = 180 - (35 + 120) = 25^\circ$



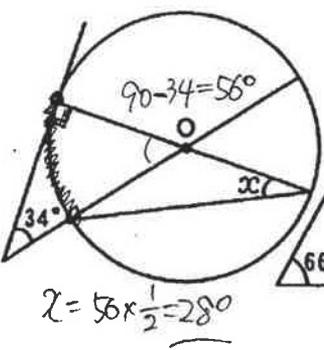
⑮



⑯

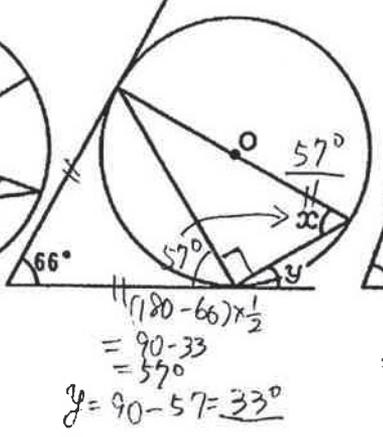


⑰



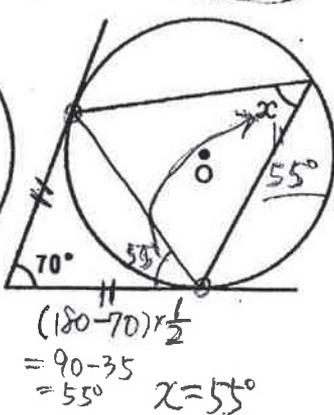
$x = 56 \times \frac{1}{2} = 28^\circ$

⑱



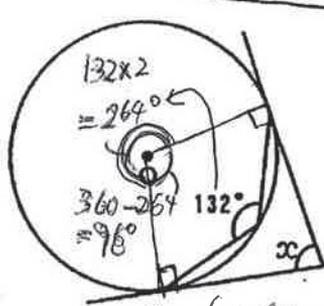
$(180 - 66) \times \frac{1}{2} = 90 - 33 = 57^\circ$
 $y = 90 - 57 = 33^\circ$

⑲



$(180 - 70) \times \frac{1}{2} = 90 - 35 = 55^\circ$ $x = 55^\circ$

⑳



$x = 180 - 96 = 84^\circ$ ($96 + 90 \times 2 + x = 360$)