

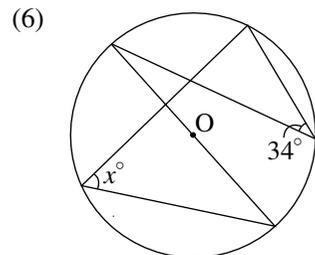
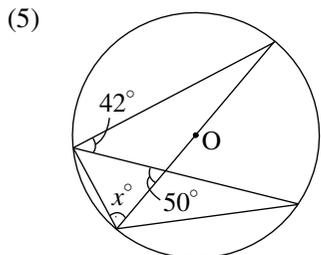
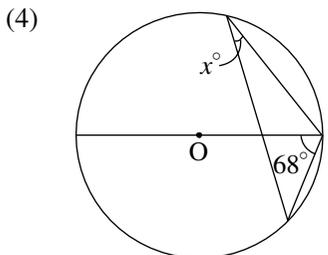
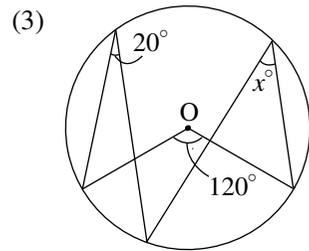
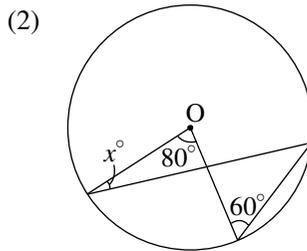
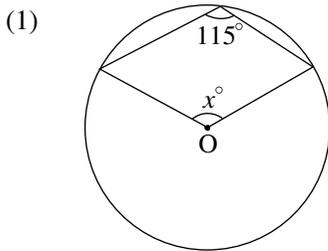
基礎力トレーニング問題		§ 19	円と角
中1	クラス：	氏名	

流れ ①実施日の記入→②解き方・解答を記入→③丸付け→④間違った問題はどこで間違えたか
 ・どうすればよかったかを赤ペンでチェックしておく

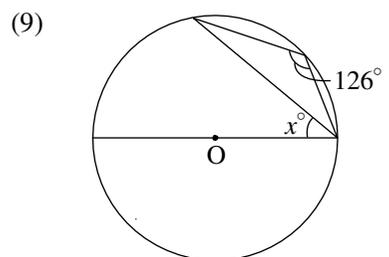
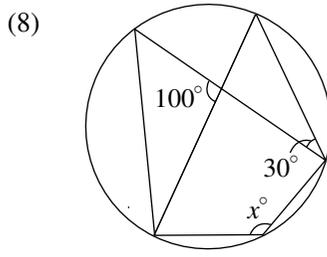
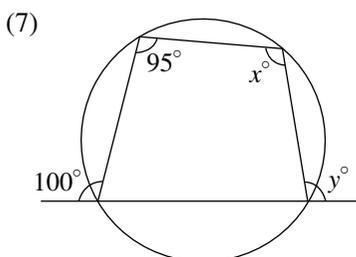
【学習方法】 毎日実施すること！日々の積み重ねが学力向上のカギ！

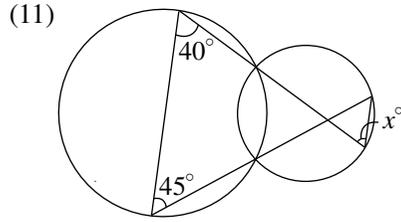
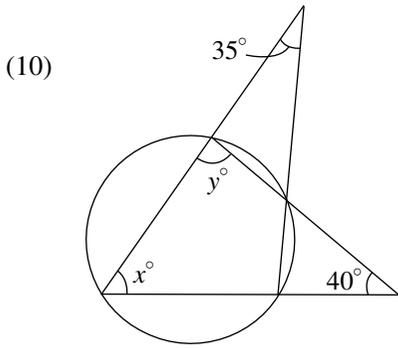
- ・宿題提出用紙に、実施日・途中式も記入し解答します。
- ・1日分を毎日5分以内の時間で解く。(5分を超える場合も全問解答し、所要時間のに記入) …5分を超えた日は翌日に再度取り組み、5分以内の解答を目指す。
- ・解答で丸付けをし、間違った問題はどこで間違えたのかを赤ペンで記しましょう。

第1日 次の各図で、 x の値を求めよ。

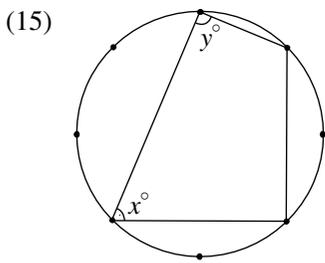
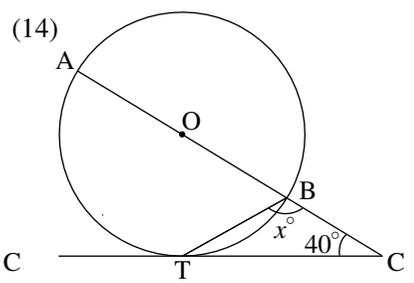
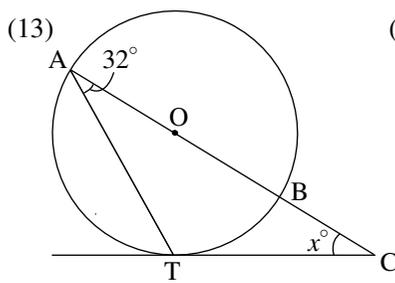
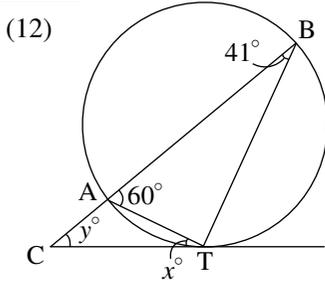


第2日

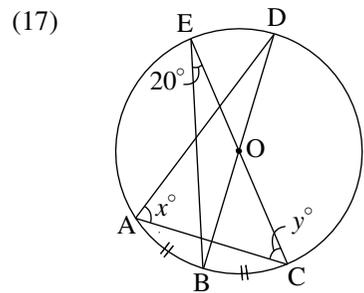
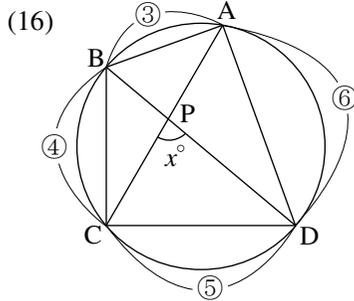




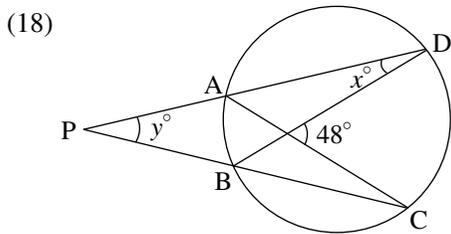
第3日 次の各図で、点Tが接点のとき、 x の値を求めよ.



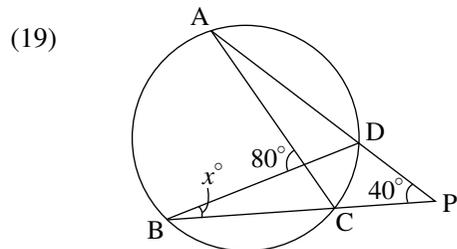
円周上の点は 8 等分点



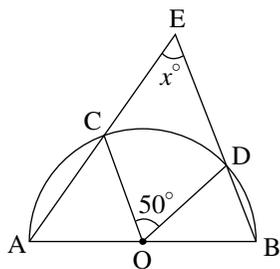
第4日 次の各図で、 x , y の値を求めよ.



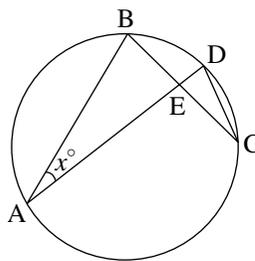
$\widehat{AB} : \widehat{CD} = 1 : 3$



(20)

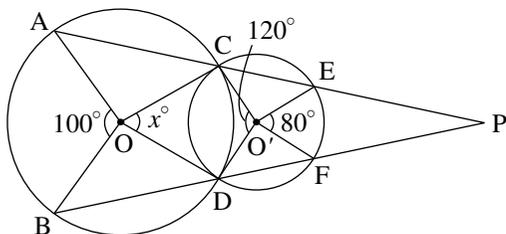


(21)

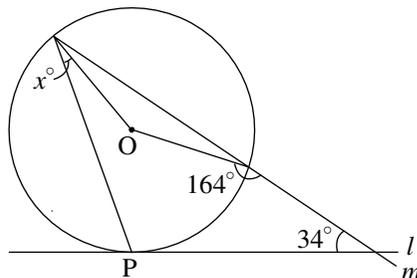


$AB=AE, \widehat{AB} : \widehat{BD} : \widehat{DC}=3 : 1 : 1$

(22)



第5日 (23) 右の図において、円Oは直線 l と点Pで接し、直線 m と2点で交わっている。
このとき、 x の値を求めよ。



基礎力トレーニング 解答		§ 19	円と角
中1	クラス：	氏名	

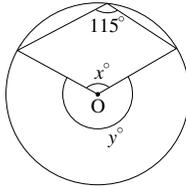
【 解答 】

- (1) $x=130$ (2) $x=20$ (3) $x=40$ (4) $x=22$ (5) $x=82$
 (6) $x=56$

[解説] (1) 右図で,

$$y = 115 \times 2 = 230$$

$$x = 360 - 230 = 130$$



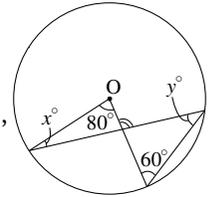
(2) 右図で,

$$y = 40$$

外角の定理より,

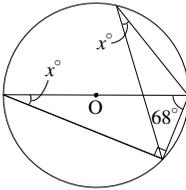
$$x + 80 = 40 + 60$$

$$x = 20$$



(4) 右図で,

$$x = 90 - 68 = 22$$

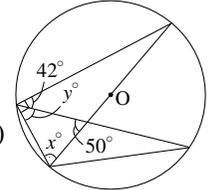


(5) 右図で,

$$y = 90 - 42 - 48$$

$$x = 180 - (50 + 48)$$

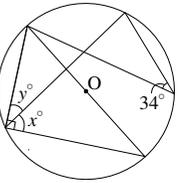
$$= 82$$



(6) 右図で,

$$y = 34$$

$$x = 90 - 34 = 56$$



- (7) $x=100, y=95$ (8) $x=130$ (9) $x=36$ (10) $x=52.5, y=87.5$
 (11) $x=40$

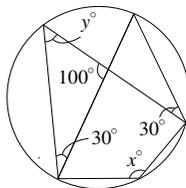
[解説] (8) 右図で,

$$y = 180 - x$$

$$30 + 100 + y = 180$$

$$30 + 100 + 180 - x = 180$$

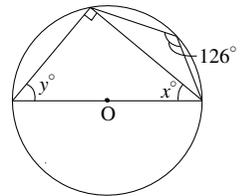
$$x = 130$$



(9) 右図で,

$$y = 180 - 126 = 54$$

$$x = 90 - 54 = 36$$



(10) 右図で,

$$w = x, z = x + 35$$

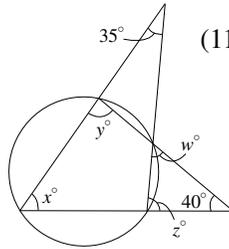
よって,

$$w + z + 40 = 180$$

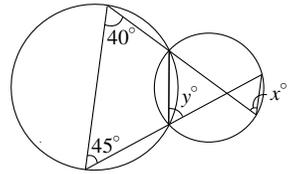
$$x + x + 35 + 40 = 180$$

$$x = 52.5$$

$$y = z = 52.5 + 35 = 87.5$$



(11) 下図で, $y = 40$ より, $x = 40$



(12) $x = 41, y = 19$

(13) $x = 26$

(14) $x = 115$

(15) $x = 67.5, y = 90$

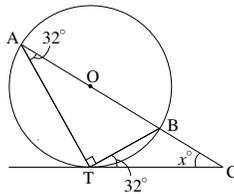
(16) $x = 80$

(17) $x = 70, y = 50$

[解説] (13) 下図で,

$$\angle BTC = \angle BAT = 32^\circ$$

$$x = 180 - (90 + 32 + 32) = 26$$



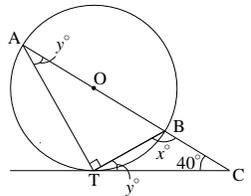
(14) 右図で,

$$y = 180 - (40 + x)$$

$$90 + y = x$$

$$90 + 140 - x = x$$

$$x = 115$$



(15) $x = 180 \times \frac{3}{8} = 67.5$

$$y = 180 \times \frac{4}{8} = 90$$

(16) $\widehat{AB} : \widehat{BC} : \widehat{CD} : \widehat{DA} = 3 : 4 : 5 : 6$ より, それぞれの弧に対する円周角を $3t, 4t, 5t, 6t$ とおく.

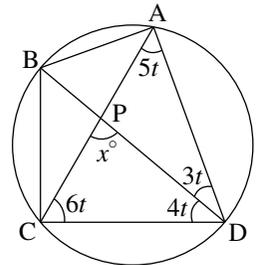
右図で $\triangle ACD$ より,

$$3t + 4t + 5t + 6t = 180$$

$$t = 10$$

よって, $\triangle ADP$ で外角の定理より,

$$x = 5t + 3t = 80$$



(17) $\angle BAC = \angle BEC = 20^\circ$

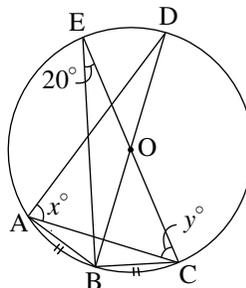
$$\angle BAD = 90^\circ$$

よって,

$$x = 90 - 20 = 70$$

$\widehat{AB} : \widehat{BC}$ より, $\angle BCA = 20^\circ$

$$y = 70 - 20 = 50$$



- (18) $x=12, y=24$ (19) $x=20$ (20) $x=65$ (21) $x=20$ (22) $x=60$

[解説] (18) $\angle ADB : \angle DAC = 1 : 3 \Leftrightarrow x : \angle DAC = 1 : 3 \Leftrightarrow \angle DAC = 3x$

$$x + 3x = 48 \Leftrightarrow x = 12$$

$$3x - x = y \Leftrightarrow y = 24$$

(19) $\angle CAD = \angle CBD = x^\circ, \angle ACB = 80^\circ - x^\circ$ より,

$$80 - x - x = 40 \Leftrightarrow x = 20$$

(20) $\angle CAD = 25^\circ, \angle ADB = 90^\circ$ より,

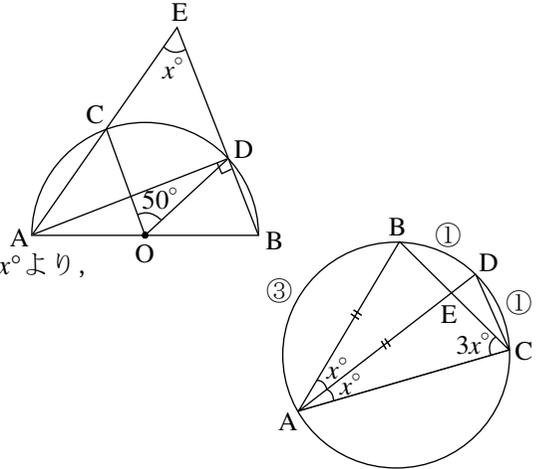
$$x = 90 - 25 = 65$$

(21) $\angle DAC = \angle BAD = x^\circ, \angle BCA = 3x^\circ$ より,

$$\angle AEB = x + 3x = 4x^\circ$$

$\triangle ABE$ より,

$$x + 4x + 4x = 180 \Leftrightarrow x = 20$$



(22) 円 O' において, \widehat{CD} の円周角は $120 \div 2 = 60^\circ$, \widehat{EF} の円周角は $80 \div 2 = 40^\circ$ より,

$$\angle CPD = 60 - 40 = 20^\circ$$

円 O において, \widehat{AB} の円周角は $100 \div 2 = 50^\circ$, \widehat{CD} の円周角は $x \div 2 = \frac{x^\circ}{2}$

より,

$$50 - \frac{x}{2} = 20 \Leftrightarrow x = 60$$

(23) $x=20$

[解説] $\angle OBA = 180 - 164 = 16^\circ = \angle OAB$ より,

$$\angle AOB = 180 - 16 \times 2 = 148^\circ$$

$$\angle APB = 74^\circ$$

$\angle BPC = \angle PAB = x^\circ + 16^\circ$ より, $\triangle APC$ で,

$$x + 16 + x + 16 + 74 + 34 = 180$$

$$x = 20$$

