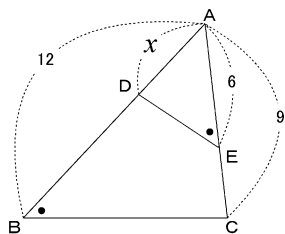


相似の利用

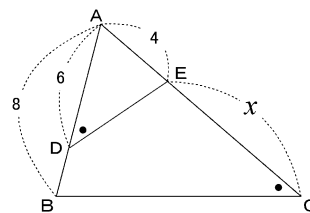
例題 次の図で、 x の値を求めよ。

(1) ($\angle ABC = \angle AED$)



答

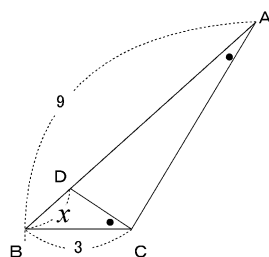
(2) ($\angle ACB = \angle ADE$)



答

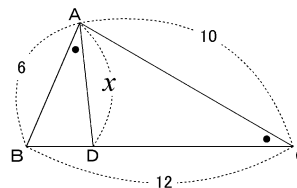
練習 次の図で、 x の値を求めよ。

(1) ($\angle BAC = \angle BCD$)



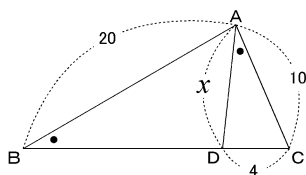
答

(3) ($\angle ACB = \angle DAB$)



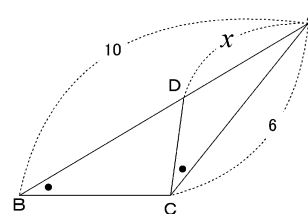
答

(2) ($\angle ABC = \angle DAC$)



答

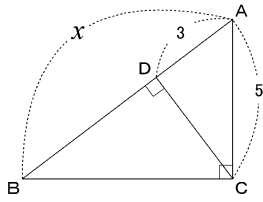
(4) ($\angle ABC = \angle ACD$)



答

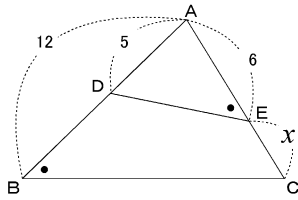
練習 次の図で, x の値を求めよ。

(1) ($\angle ACB = \angle ADC = 90^\circ$)



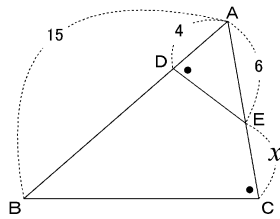
答

(2) ($\angle ABC = \angle AED$)



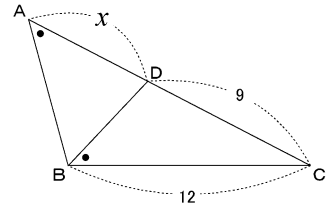
答

(3) ($\angle ACB = \angle ADE$)



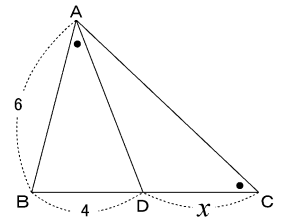
答

(4) ($\angle BAC = \angle DBC$)



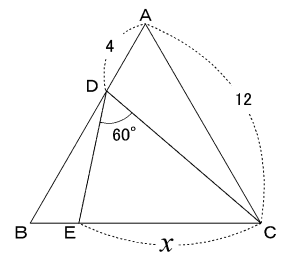
答

(5) ($\angle ACB = \angle DAB$)



答

(6) $\triangle ABC$ は正三角形



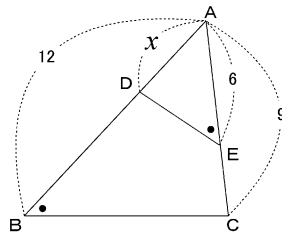
答

相似の利用

例題 次の図で, x の値を求めよ。

(1) ($\angle ABC = \angle AED$)

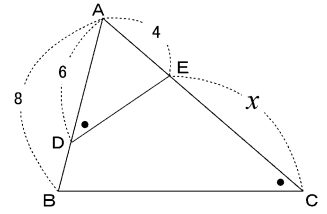
★
 $6:12 = x:9$
 $1:2 = x:9$
 $2x = 9$
 $x = \frac{9}{2}$



答 $x = \frac{9}{2}$

(2) ($\angle ACB = \angle ADE$)

★
 $6:(4+x) = 4:8$
 $6:(4+x) = 1:2$
 $4+x = 12$
 $x = 8$

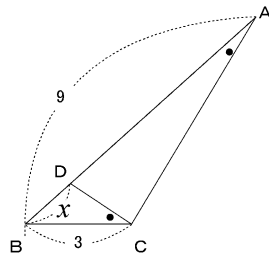


答 $x = 8$

練習 次の図で, x の値を求めよ。

(1) ($\angle BAC = \angle BCD$)

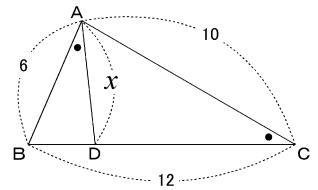
★
 $3:9 = x:3$
 $1:3 = x:3$
 $3x = 3$
 $x = 1$



答 $x = 1$

(3) ($\angle ACB = \angle DAB$)

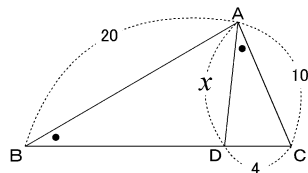
★
 $6:12 = x:10$
 $1:2 = x:10$
 $2x = 10$
 $x = 5$



答 $x = 5$

(2) ($\angle ABC = \angle DAC$)

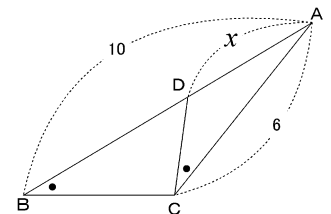
★
 $x:20 = 4:10$
 $x:20 = 2:5$
 $5x = 40$
 $x = 8$



答 $x = 8$

(4) ($\angle ABC = \angle ACD$)

★
 $6:10 = x:6$
 $3:5 = x:6$
 $5x = 18$
 $x = \frac{18}{5}$

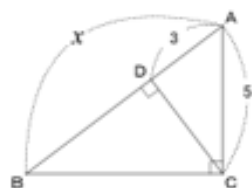


答 $x = \frac{18}{5}$

練習 次の図で、 x の値を求めよ。

(1) ($\angle ACB = \angle ADC = 90^\circ$)

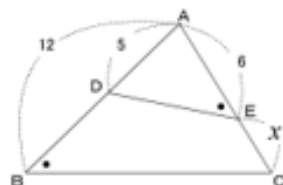
★
 $5 : x = 3 : 5$
 $3x = 25$
 $x = \frac{25}{3}$



答 $x = \frac{25}{3}$

(2) ($\angle ABC = \angle AED$)

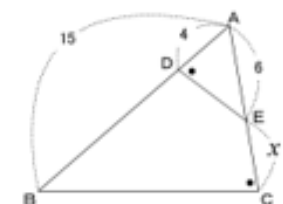
★
 $6 : 12 = 5 : (x+6)$
 $1 : 2 = 5 : (x+6)$
 $x+6 = 10$
 $x = 4$



答 $x = 4$

(3) ($\angle ACB = \angle ADE$)

★
 $6 : 15 = 4 : (x+6)$
 $2 : 5 = 4 : (x+6)$
 $2x+12 = 20$
 $2x = 8$
 $x = 4$



答 $x = 4$

(4) ($\angle BAC = \angle DBC$)

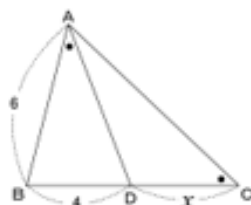
★
 $12 : (9+x) = 9 : 12$
 $12 : (9+x) = 3 : 4$
 $27 + 3x = 48$
 $3x = 21$
 $x = 7$



答 $x = 7$

(5) ($\angle ACB = \angle DAB$)

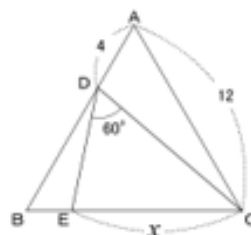
★
 $6 : (4+x) = 4 : 6$
 $6 : (4+x) = 2 : 3$
 $8 + 2x = 18$
 $2x = 10$
 $x = 5$



答 $x = 5$

(6) $\triangle ABC$ は正三角形

★
 $BD = 12 - 4 = 8$
 $BE = 12 - x$
 $8 : 12 = (12 - x) : 4$
 $2 : 3 = (12 - x) : 4$
 $36 - 3x = 8$
 $-3x = -28$
 $x = \frac{28}{3}$



答 $x = \frac{28}{3}$