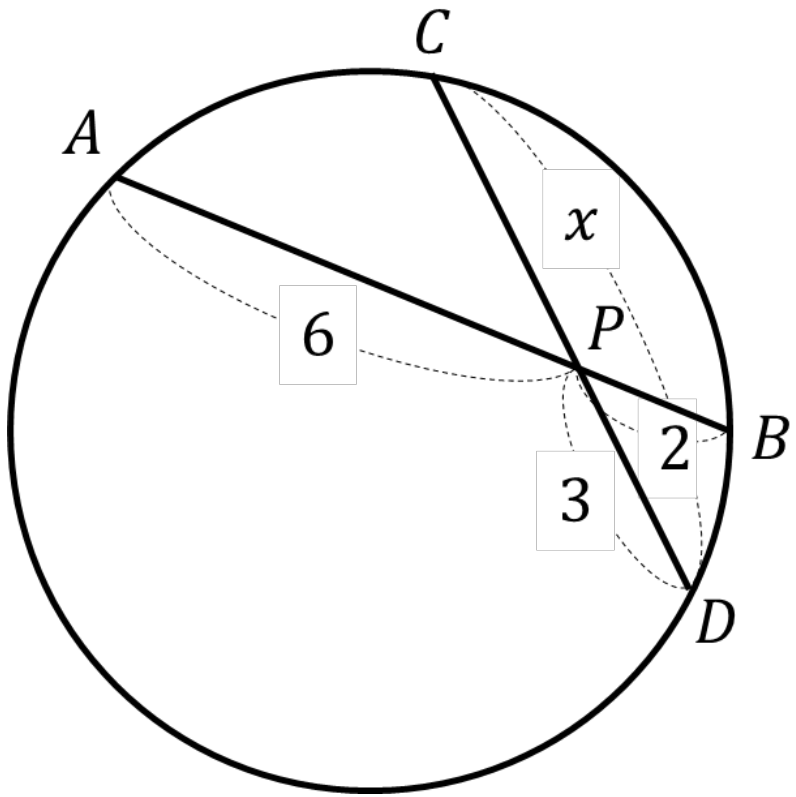
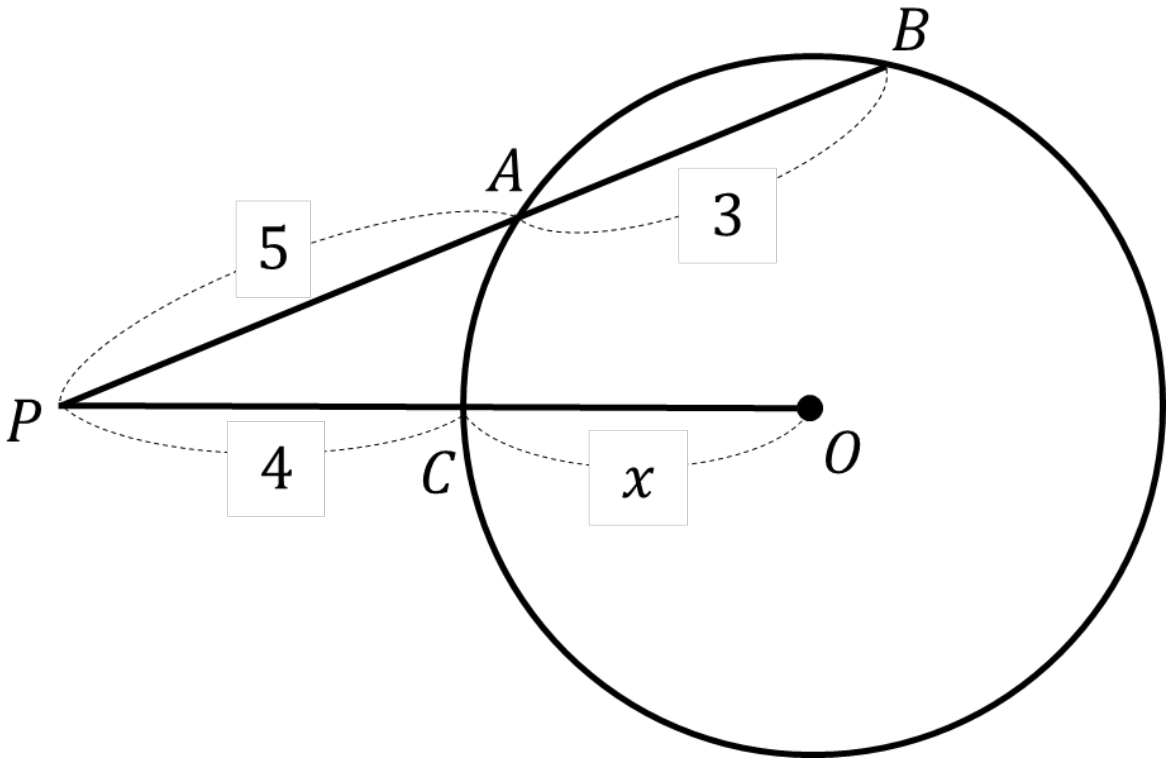
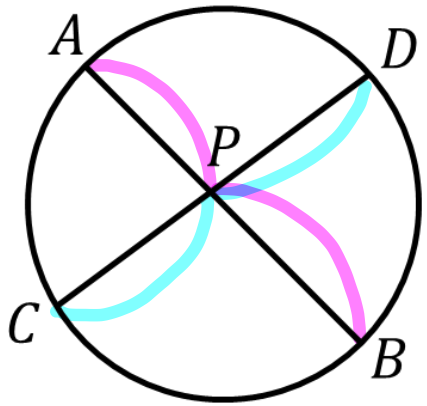
図形の性質　～方べきの定理～

下の図において，x の値を求めなさい。

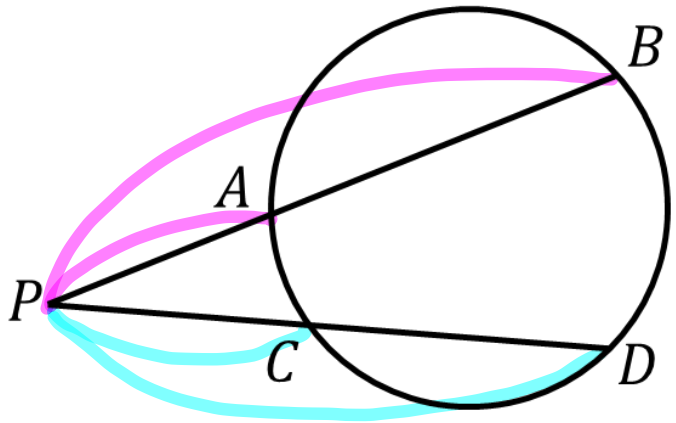




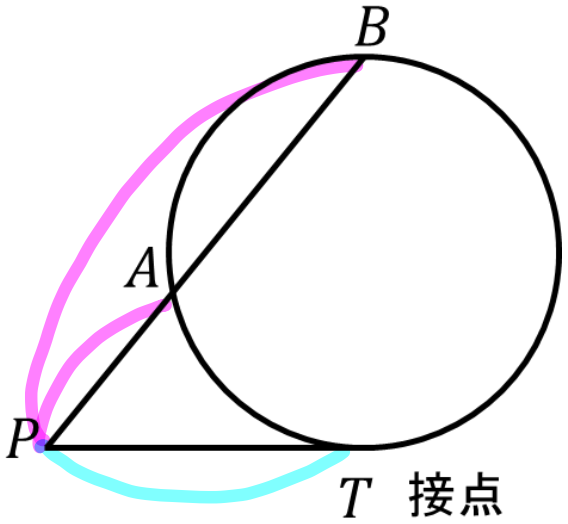
《方べきの定理》



$$PA \cdot PB = PC \cdot PD$$



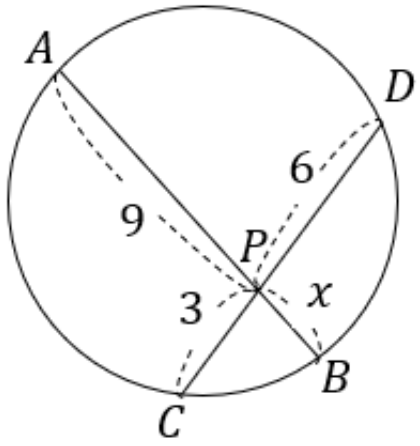
$$PA \cdot PB = PC \cdot PD$$



$$PA \cdot PB = PT^2$$

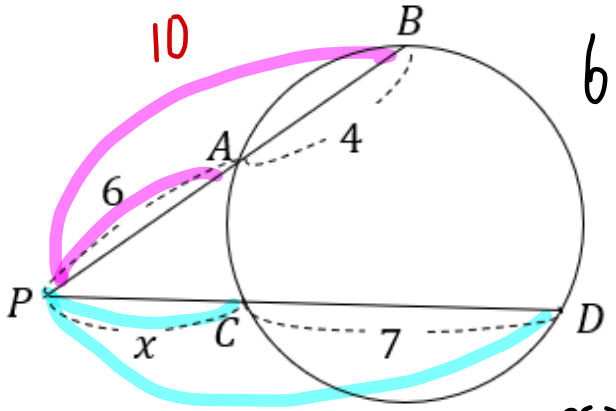
例題

下の図において，x を求めなさい。



$9x = 18$

$x = 2$



$6 \cdot 10 = x(x+7)$

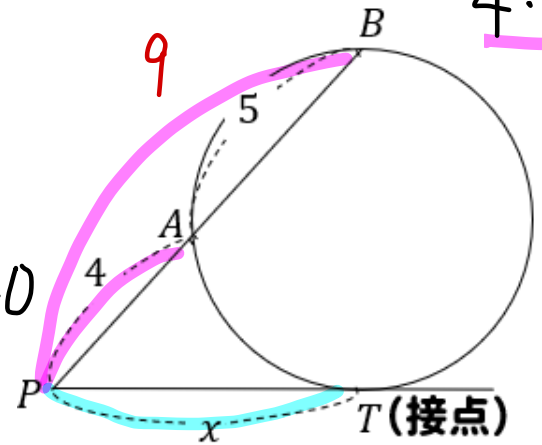
$60 = x^2 + 7x$

$x^2 + 7x - 60 = 0$

$(x+12)(x-5) = 0$

$x = 5, -12$

$x > 0$ より $x = 5$



$4 \cdot 9 = x^2$

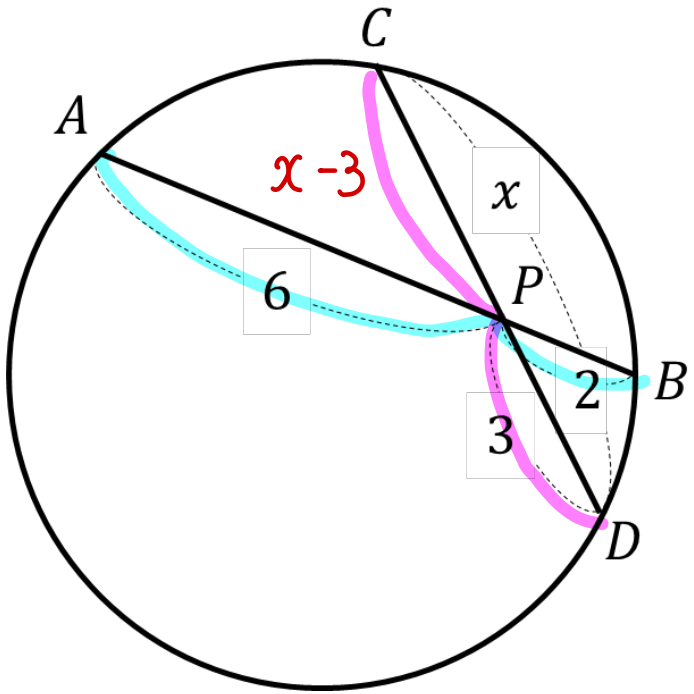
$x^2 = 36$

$x = \pm 6$

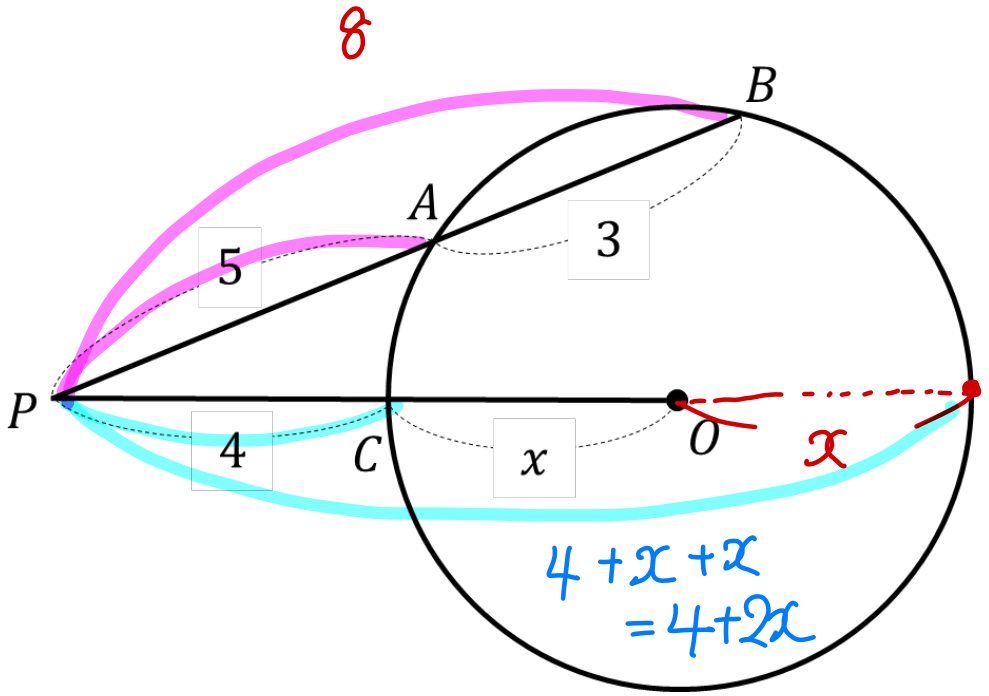
$x > 0$ より

$x = 6$

下の図において，x を求めなさい。



$$6 \cdot 2 = (x-3) \cdot 3$$
$$12 = 3x - 9$$
$$3x = 21$$
$$x = 7$$



$$5 \cdot 8 = 4(4+2x)$$
$$40 = 16 + 8x$$
$$8x = 24$$
$$x = 3$$