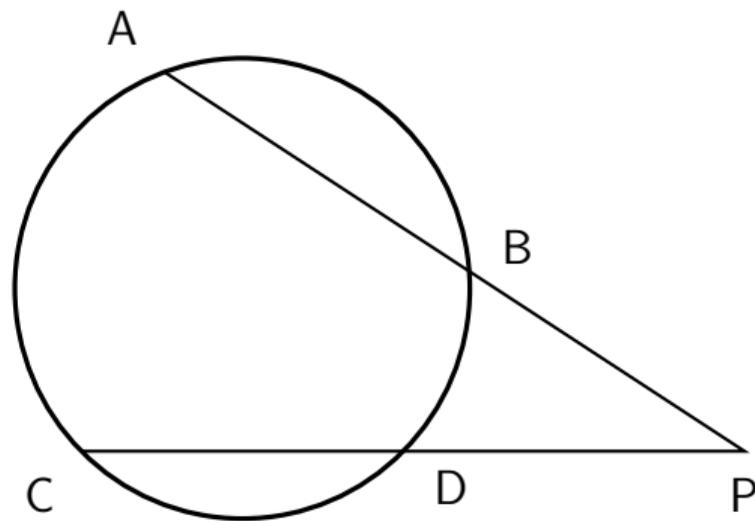
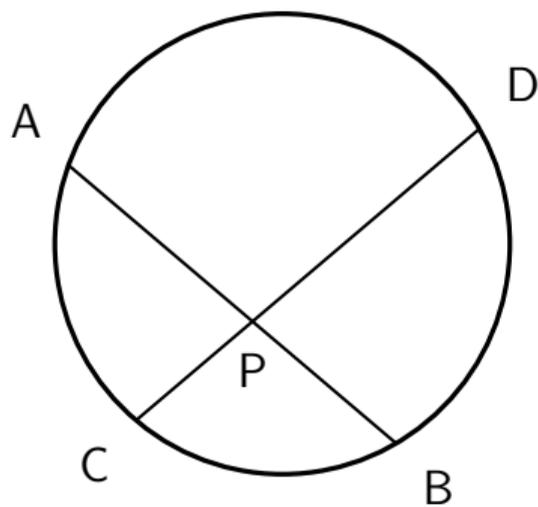
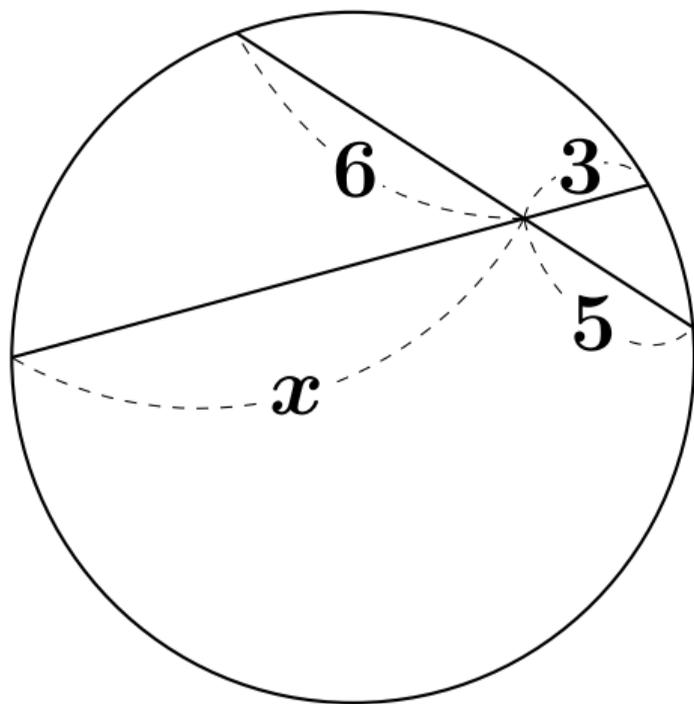


# 方べきの定理

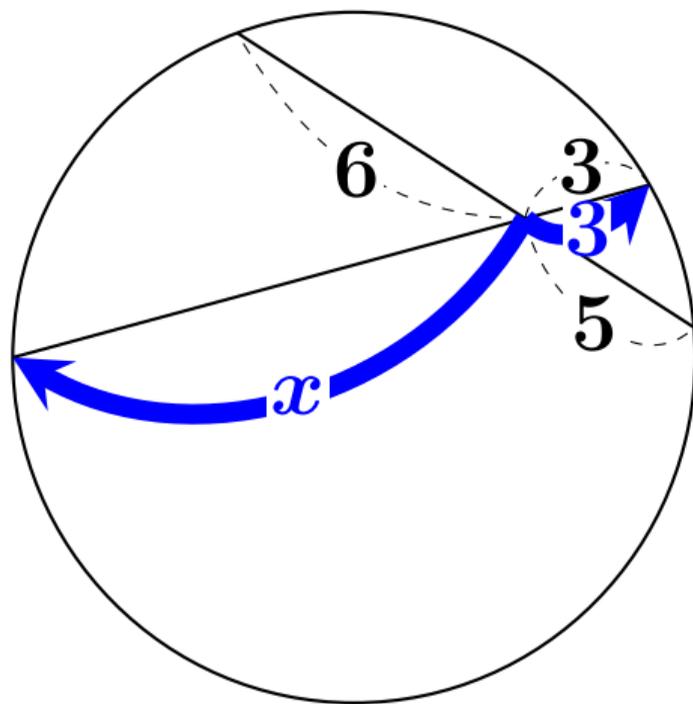
以下の図のとき  $PA \times PB = PC \times PD$



# 方べきの定理

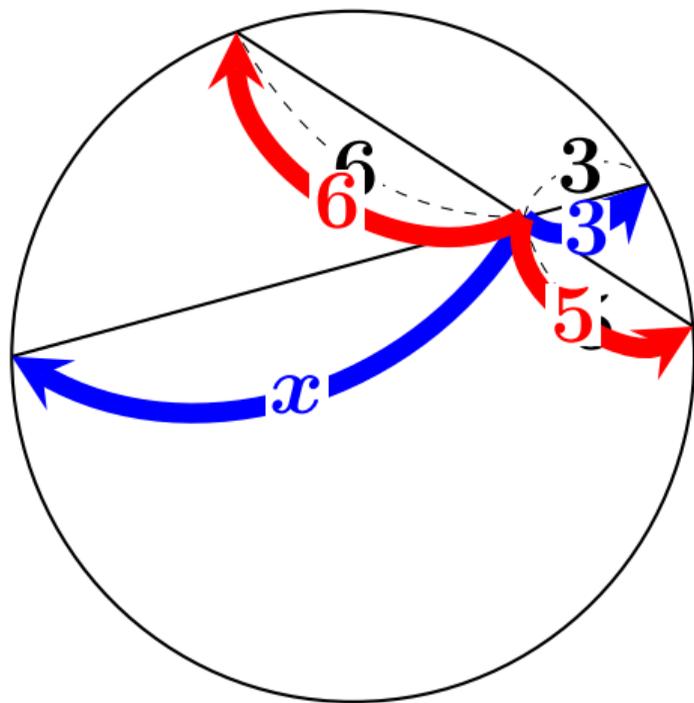


# 方べきの定理



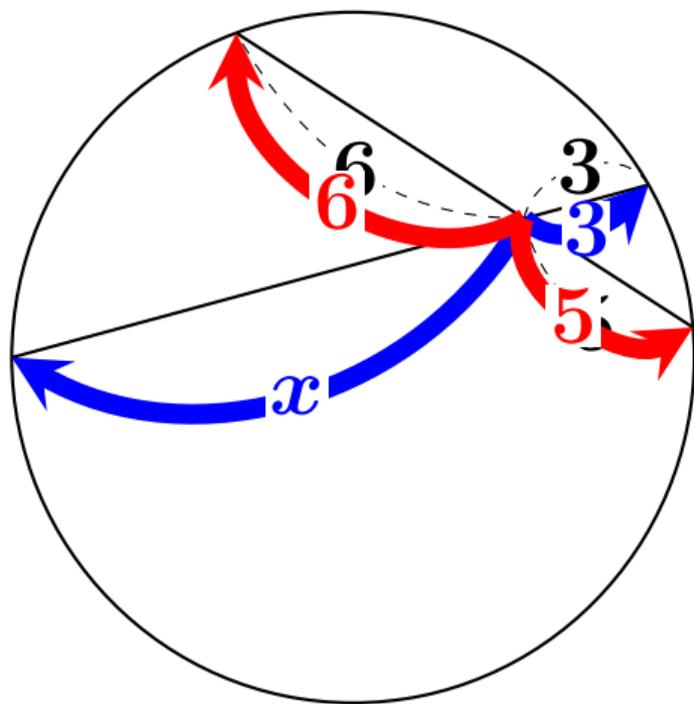
$$3 \times x$$

# 方べきの定理



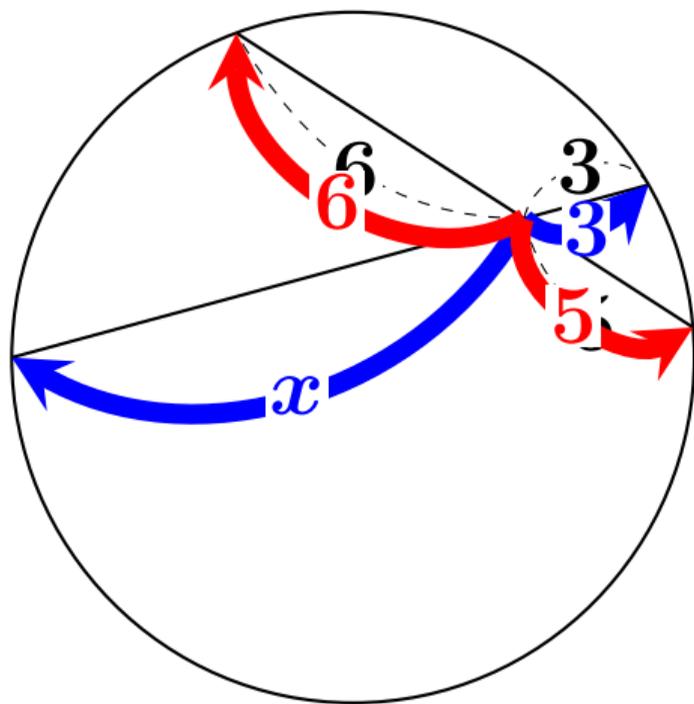
$$3 \times x = 6 \times 5$$

# 方べきの定理



$$\begin{aligned} 3 \times x &= 6 \times 5 \\ \frac{3 \times x}{3} &= \frac{6 \times 5}{3} \end{aligned}$$

# 方べきの定理

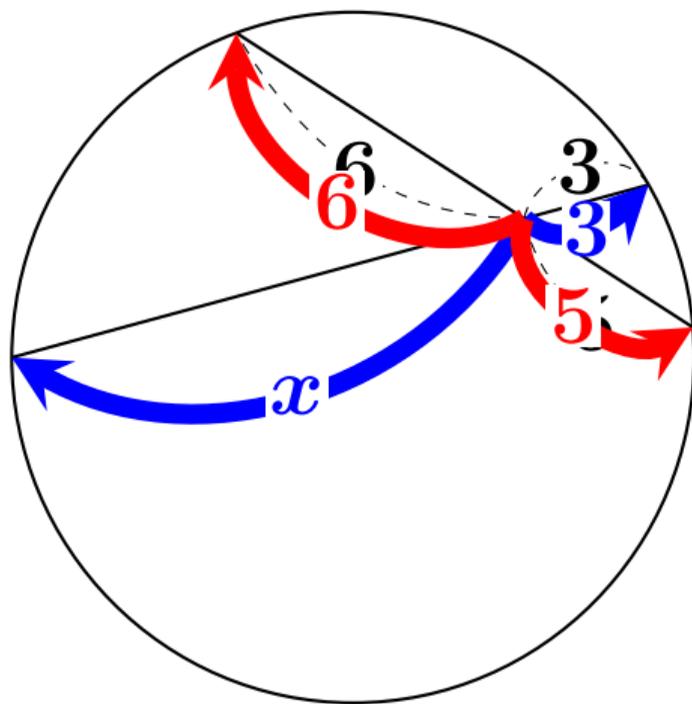


$$3 \times x = 6 \times 5$$

$$\frac{3 \times x}{3} = \frac{6 \times 5}{3}$$

$$x = 2 \times 5$$

# 方べきの定理



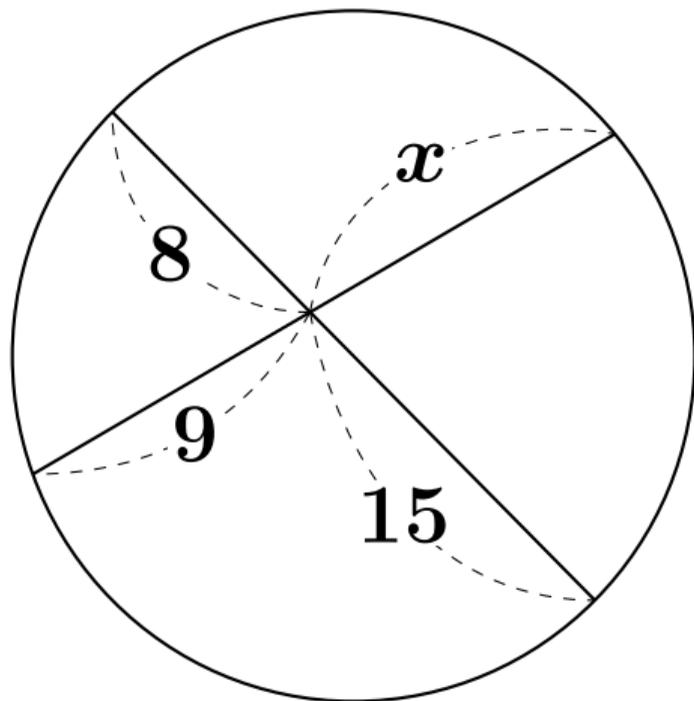
$$3 \times x = 6 \times 5$$

$$\frac{3 \times x}{3} = \frac{6 \times 5}{3}$$

$$x = 2 \times 5$$

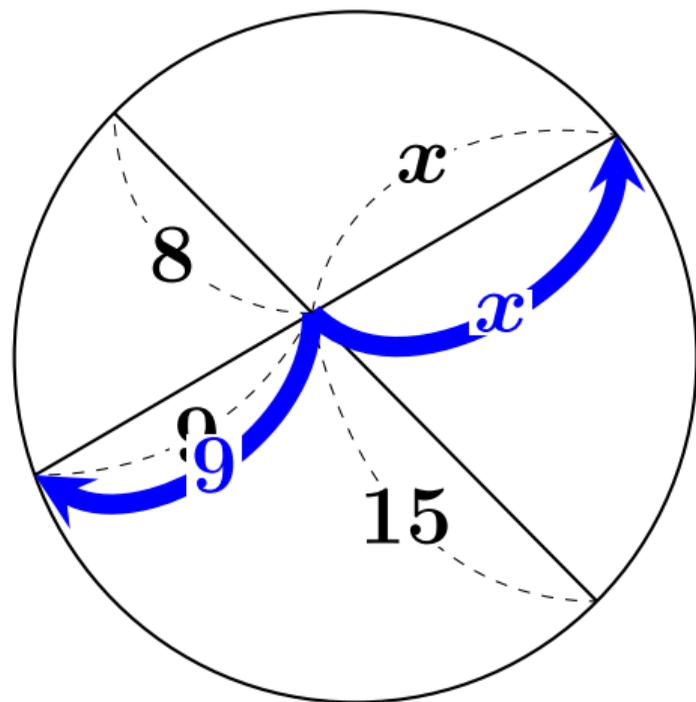
$$x = 10$$

# 方べきの定理



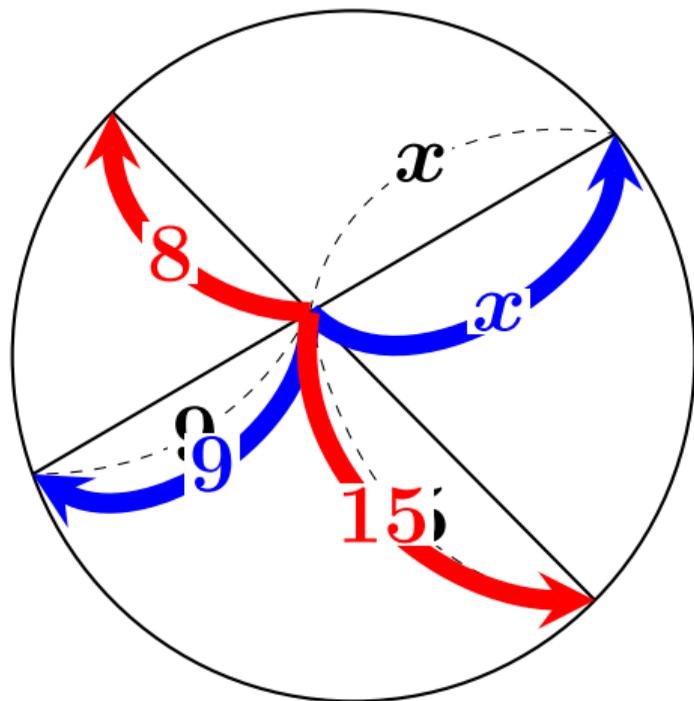
# 方べきの定理

$$9 \times x$$

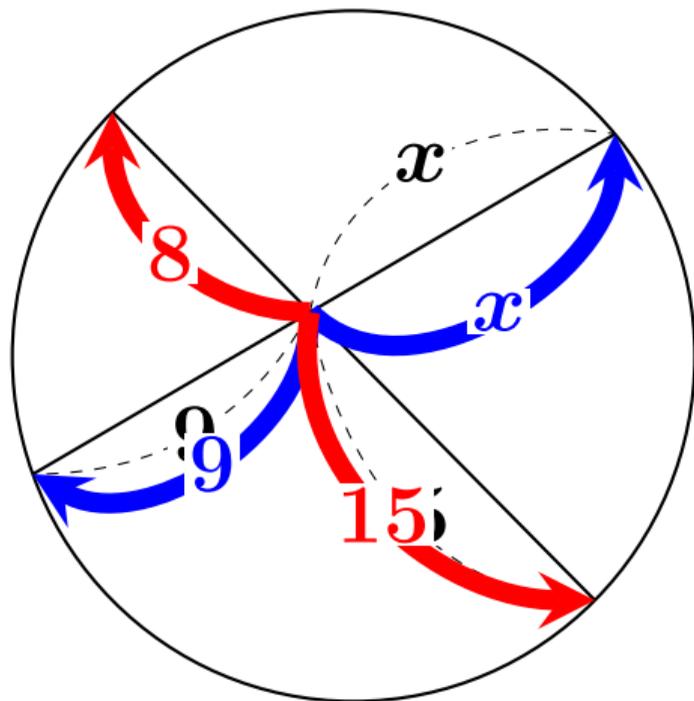


# 方べきの定理

$$9 \times x = 8 \times 15$$

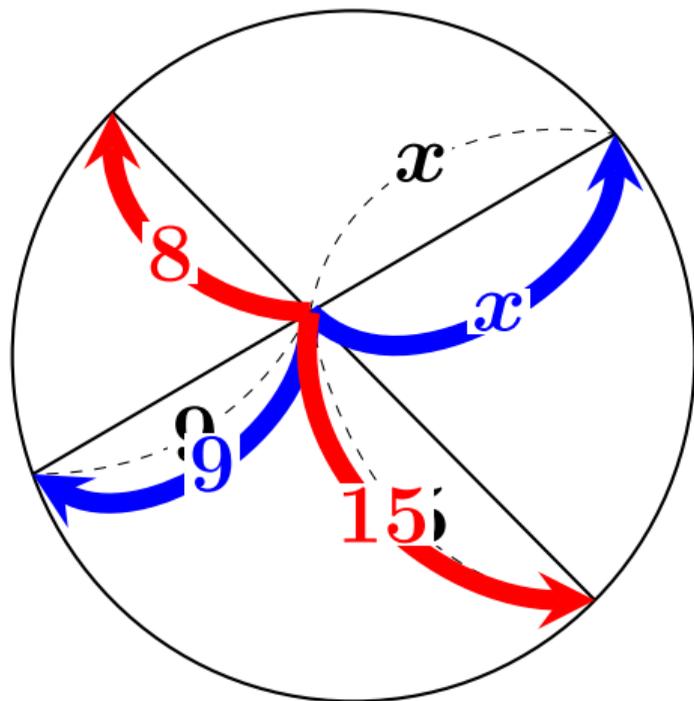


# 方べきの定理



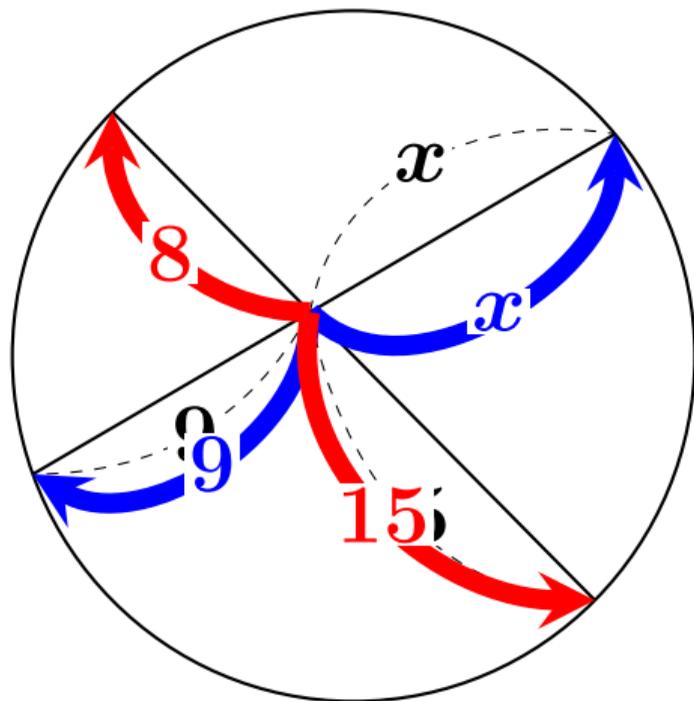
$$\begin{aligned} 9 \times x &= 8 \times 15 \\ \frac{9 \times x}{9} &= \frac{8 \times 15}{9} \end{aligned}$$

# 方べきの定理



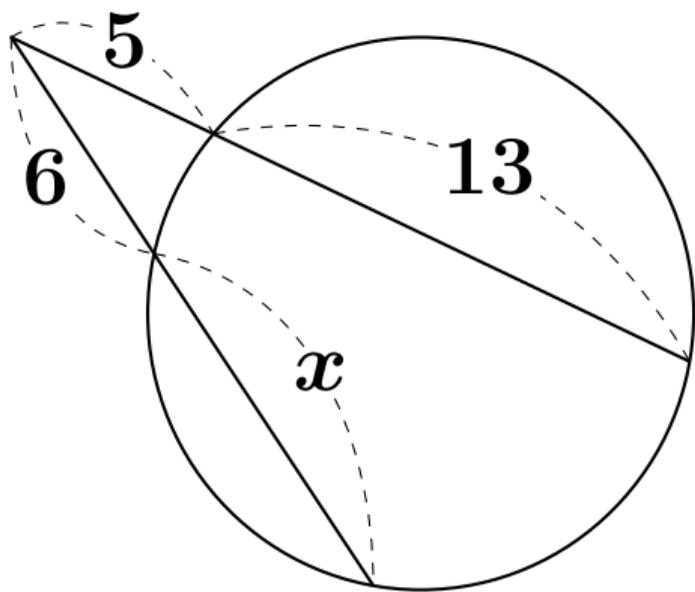
$$\begin{aligned} 9 \times x &= 8 \times 15 \\ \frac{9 \times x}{9} &= \frac{8 \times 15}{9} \\ x &= \frac{8 \times 5}{3} \end{aligned}$$

# 方べきの定理

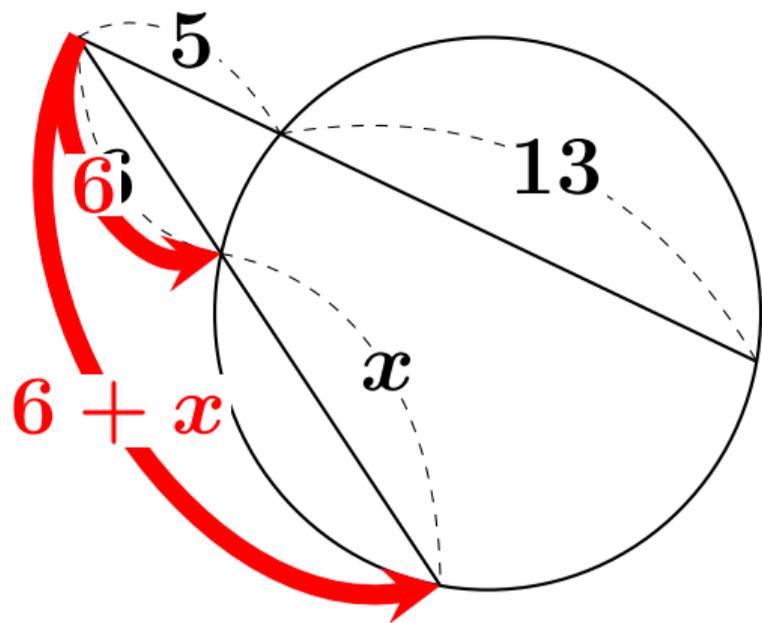


$$\begin{aligned}9 \times x &= 8 \times 15 \\ \frac{9 \times x}{9} &= \frac{8 \times 15}{9} \\ x &= \frac{8 \times 5}{3} \\ x &= \frac{40}{3}\end{aligned}$$

# 方べきの定理

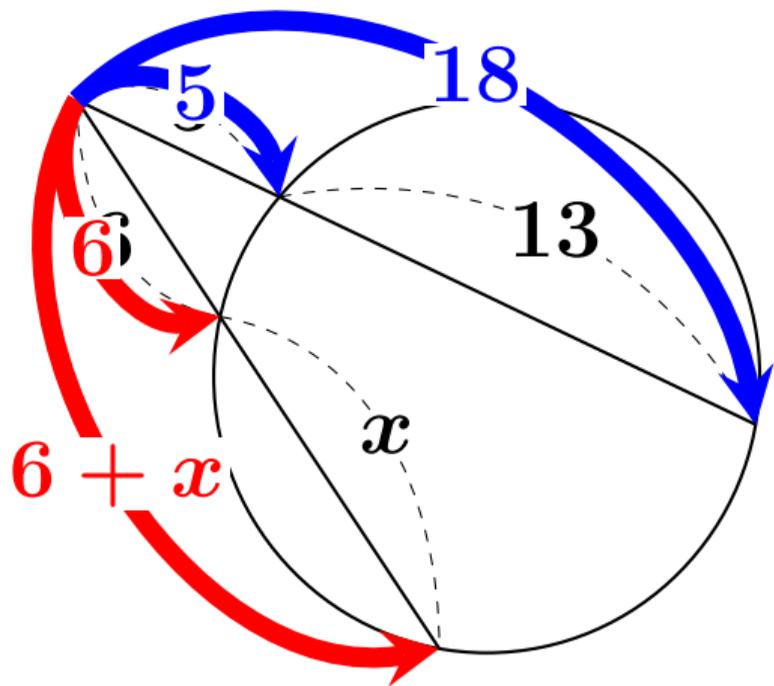


# 方べきの定理



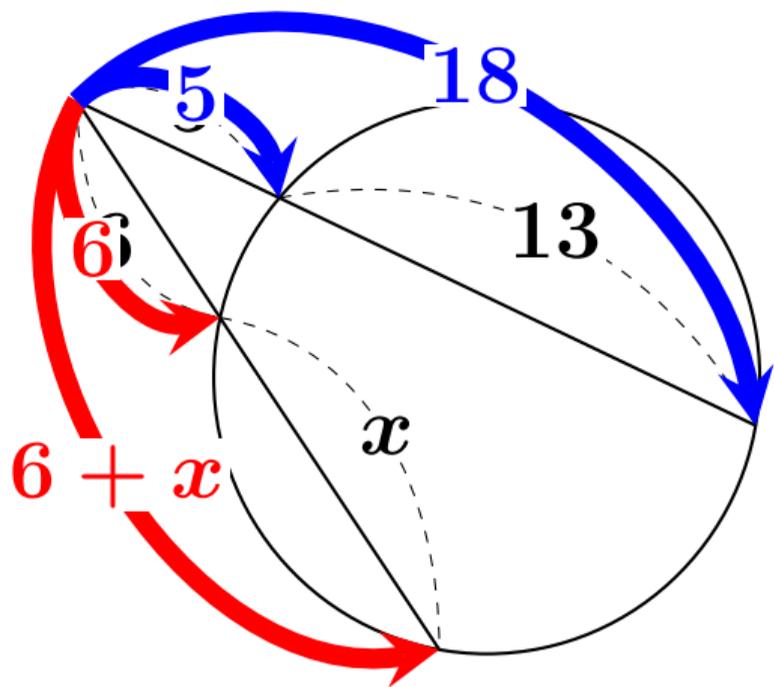
$$6(6 + x)$$

# 方べきの定理



$$6(6+x) = 5 \times 18$$

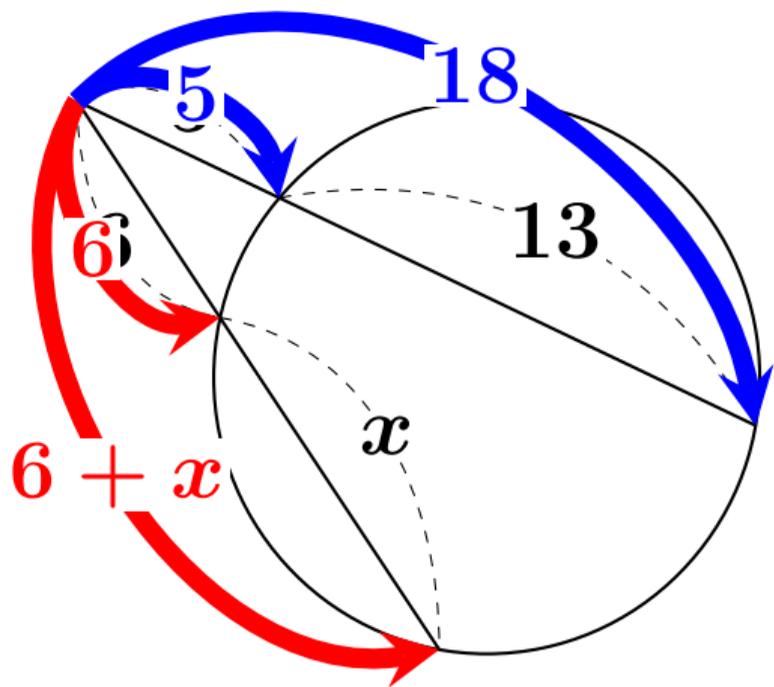
# 方べきの定理



$$6(6+x) = 5 \times 18$$

$$36 + 6x = 90$$

# 方べきの定理

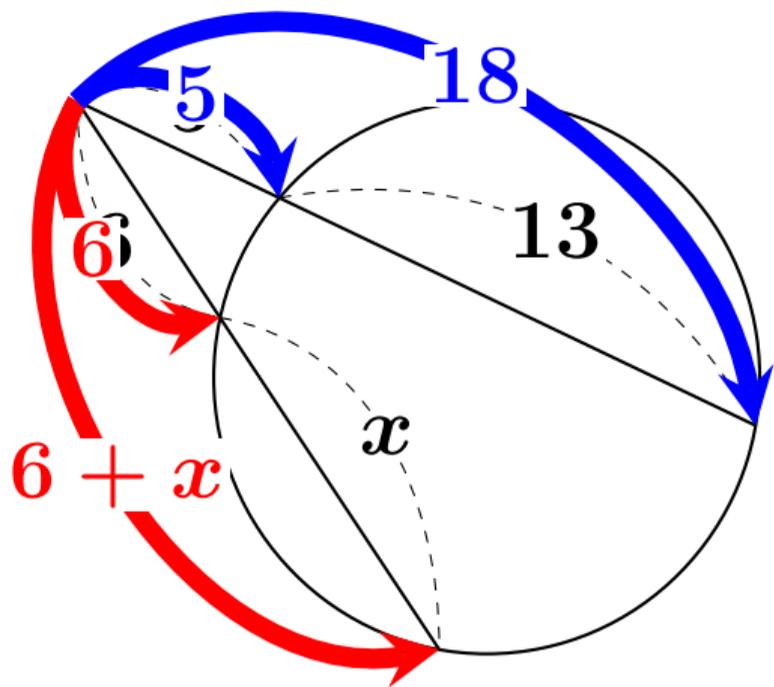


$$6(6+x) = 5 \times 18$$

$$36 + 6x = 90$$

$$6x = 54$$

# 方べきの定理



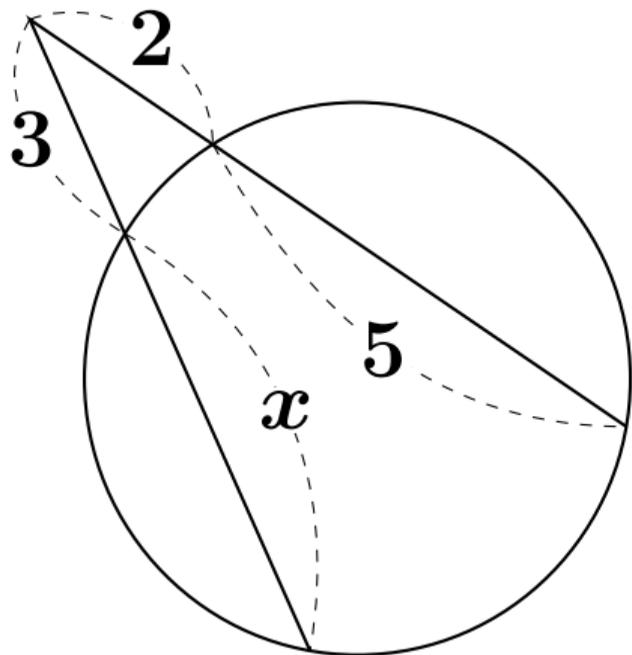
$$6(6+x) = 5 \times 18$$

$$36 + 6x = 90$$

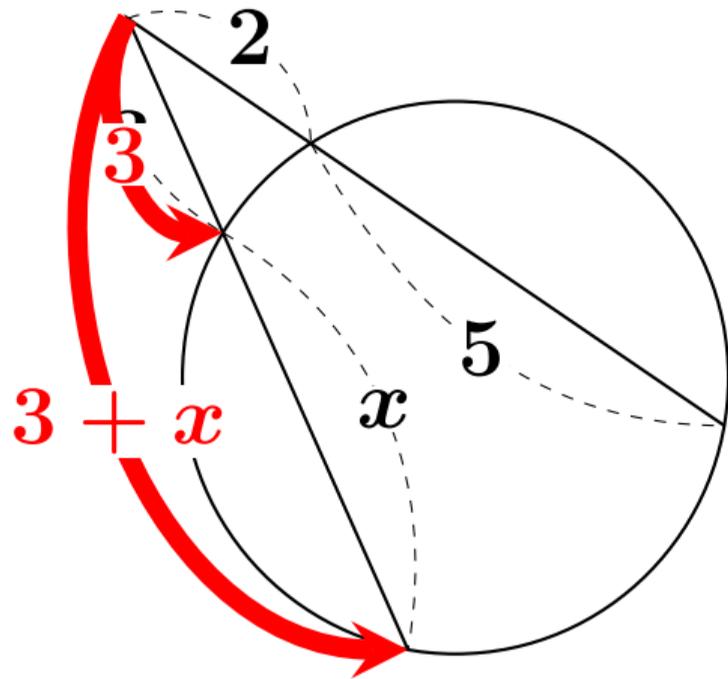
$$6x = 54$$

$$x = 9$$

# 方べきの定理

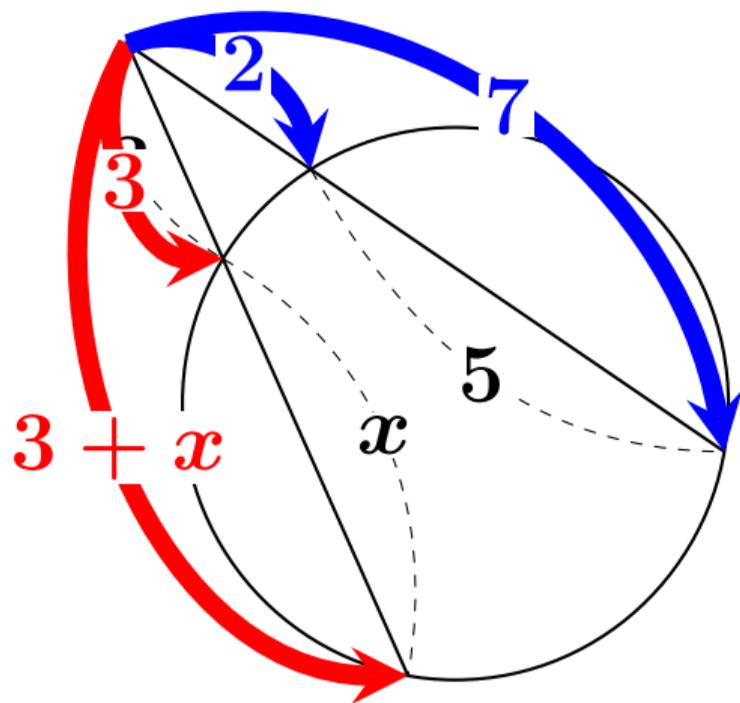


# 方べきの定理



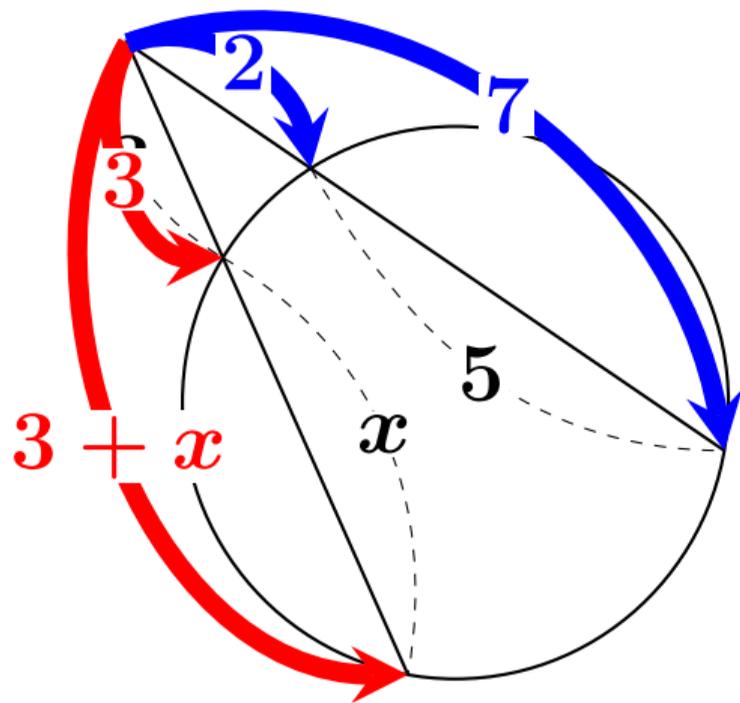
$$3(3 + x)$$

# 方べきの定理



$$3(3+x) = 2 \times 7$$

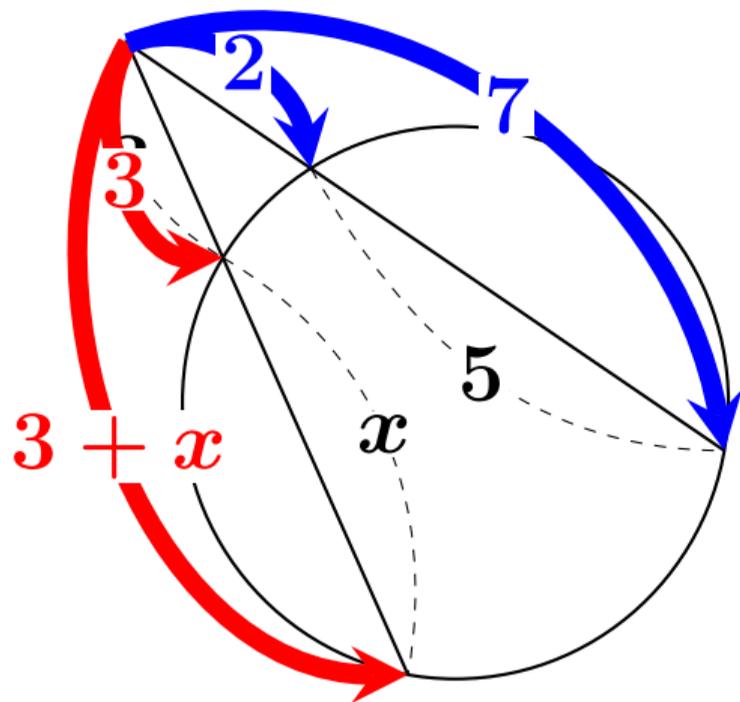
# 方べきの定理



$$3(3 + x) = 2 \times 7$$

$$9 + 3x = 14$$

# 方べきの定理

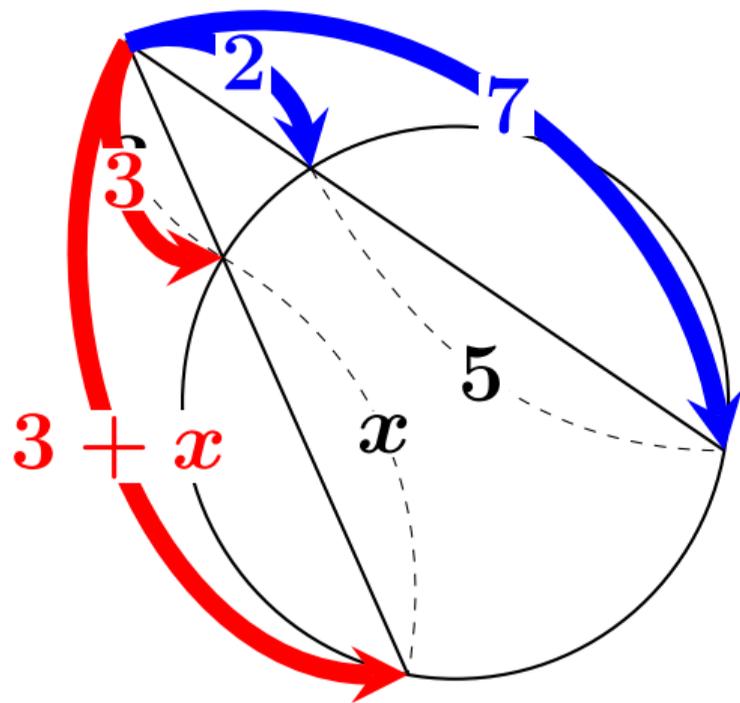


$$3(3+x) = 2 \times 7$$

$$9 + 3x = 14$$

$$3x = 5$$

# 方べきの定理



$$3(3+x) = 2 \times 7$$

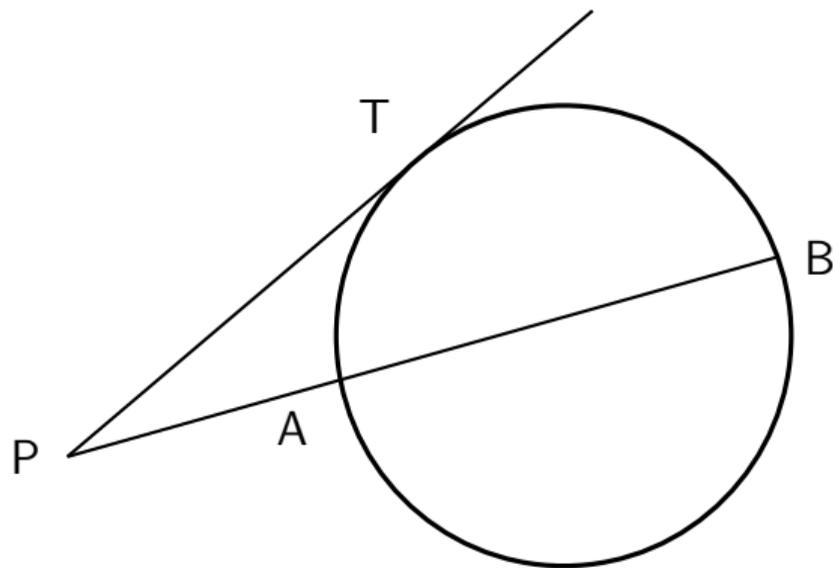
$$9 + 3x = 14$$

$$3x = 5$$

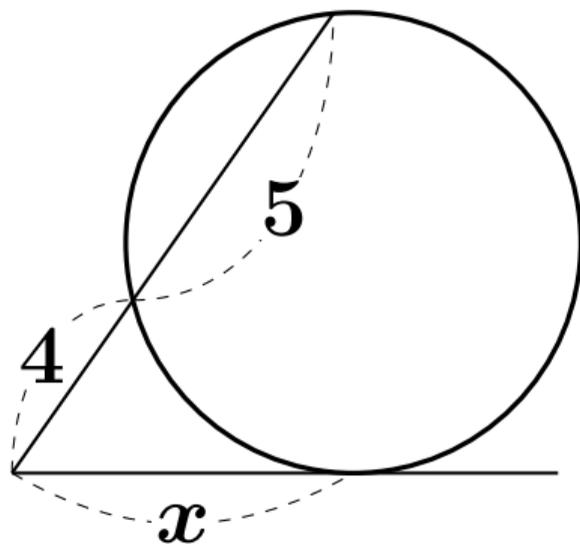
$$x = \frac{5}{3}$$

# 方べきの定理 (変形版) PTは接線

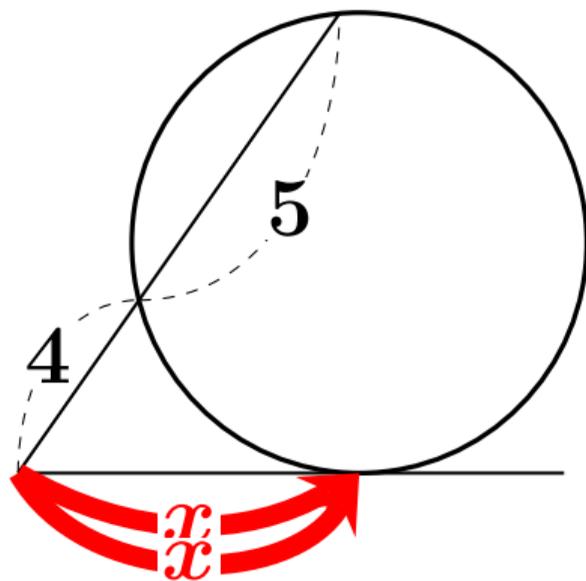
以下の図のとき  $PA \times PB = PT^2$



# 方べきの定理 (変形版)

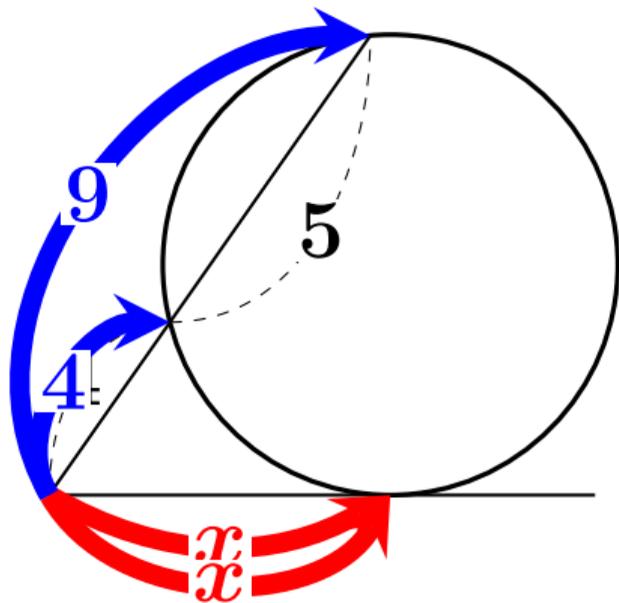


# 方べきの定理 (変形版)



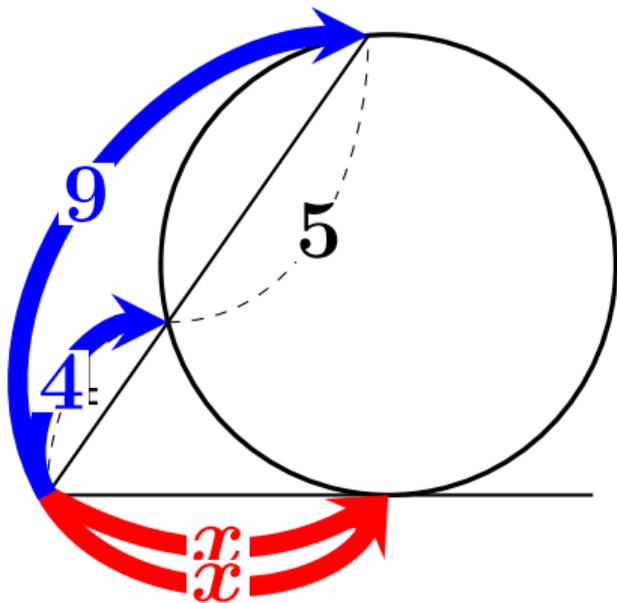
$$x \times x$$

# 方べきの定理 (変形版)



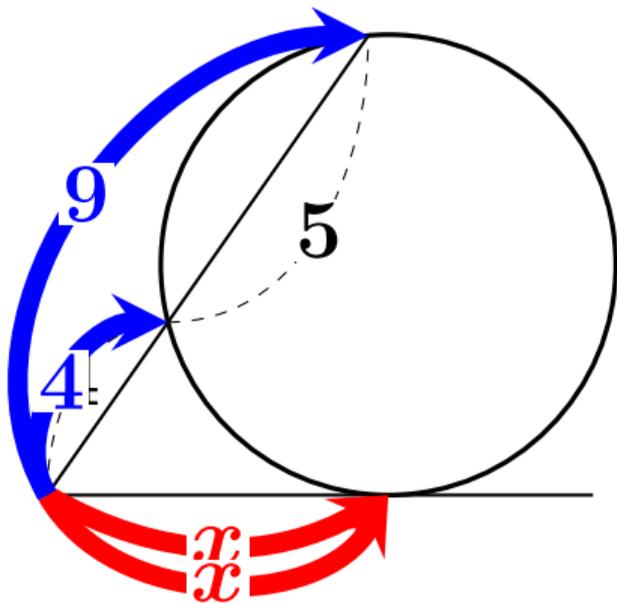
$$x \times x = 4 \times 9$$

# 方べきの定理 (変形版)



$$x \times x = 4 \times 9$$
$$x^2 = 36$$

# 方べきの定理 (変形版)

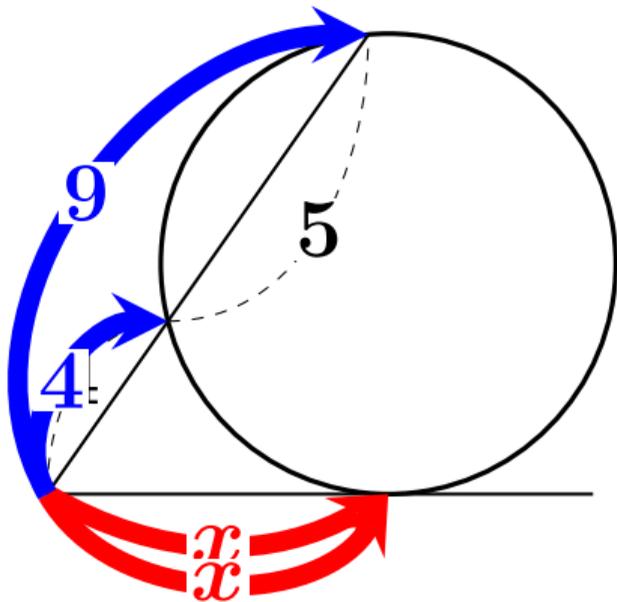


$$x \times x = 4 \times 9$$

$$x^2 = 36$$

$$x > 0 \text{ より}$$

# 方べきの定理 (変形版)



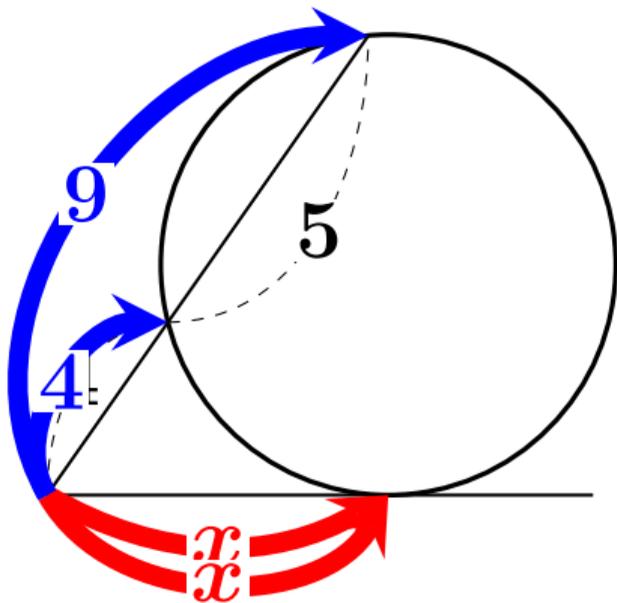
$$x \times x = 4 \times 9$$

$$x^2 = 36$$

$$x > 0 \text{ より}$$

$$\sqrt{x^2} = \sqrt{36}$$

# 方べきの定理 (変形版)



$$x \times x = 4 \times 9$$

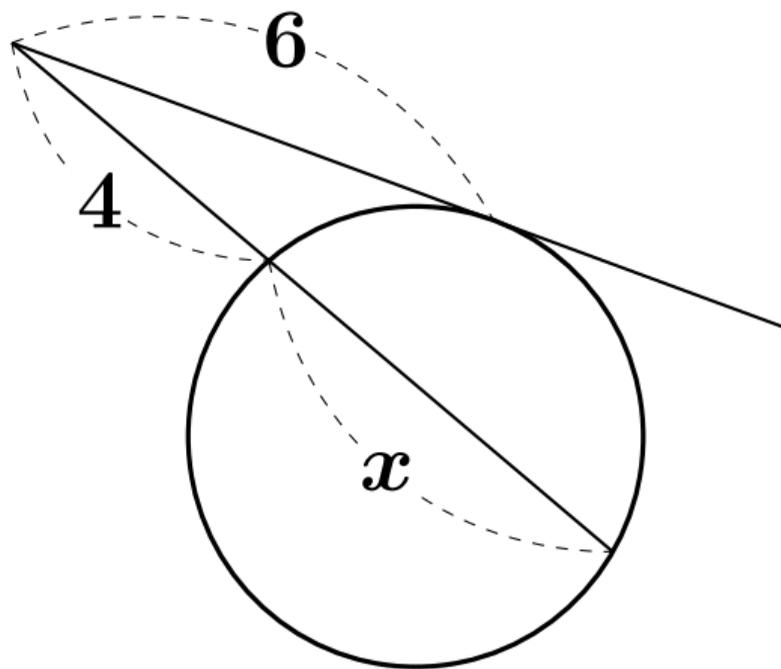
$$x^2 = 36$$

$$x > 0 \text{ より}$$

$$\sqrt{x^2} = \sqrt{36}$$

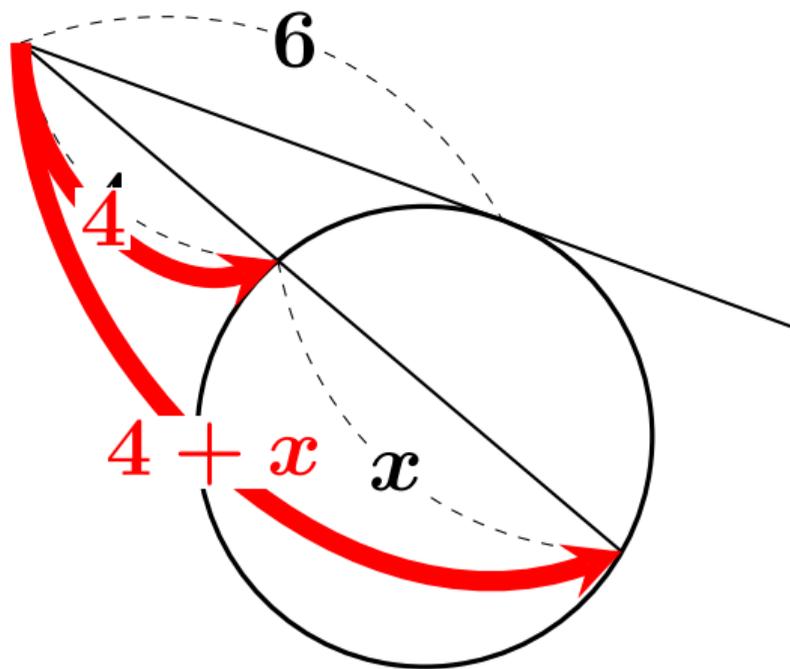
$$x = 6$$

# 方べきの定理 (変形版)



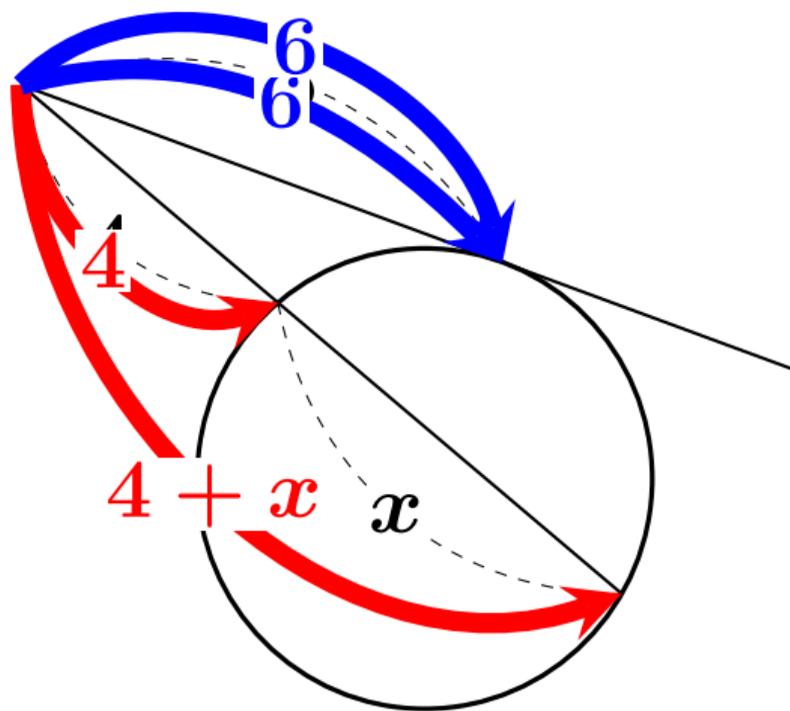
# 方べきの定理 (変形版)

$$4(4+x)$$

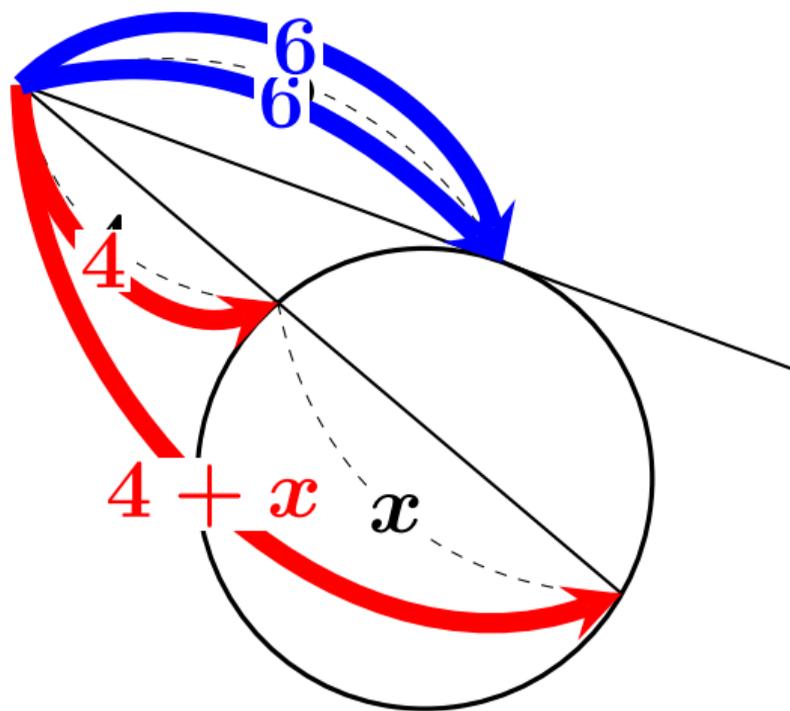


# 方べきの定理 (変形版)

$$4(4+x) = 6 \times 6$$



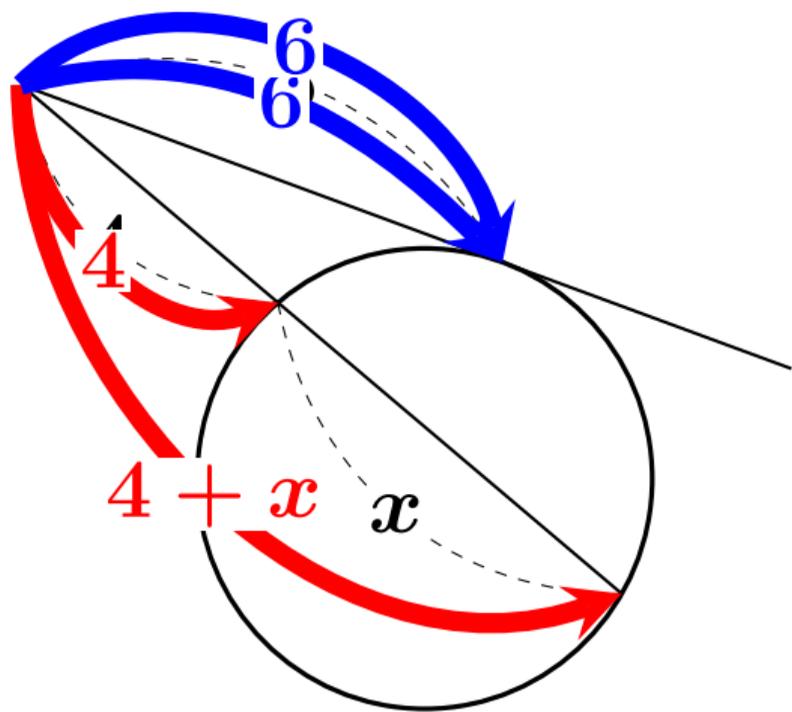
# 方べきの定理 (変形版)



$$4(4+x) = 6 \times 6$$

$$16 + 4x = 36$$

# 方べきの定理 (変形版)

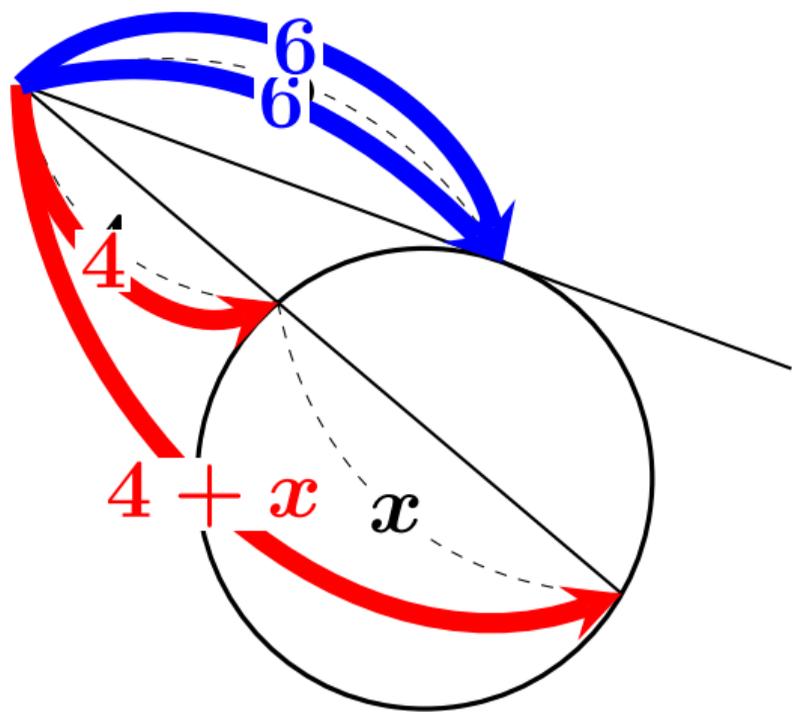


$$4(4+x) = 6 \times 6$$

$$16 + 4x = 36$$

$$4x = 20$$

# 方べきの定理 (変形版)



$$4(4+x) = 6 \times 6$$

$$16 + 4x = 36$$

$$4x = 20$$

$$x = 5$$