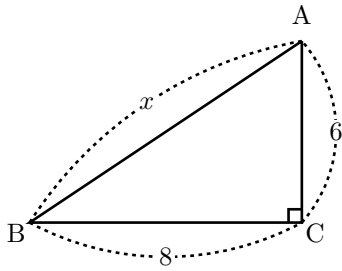


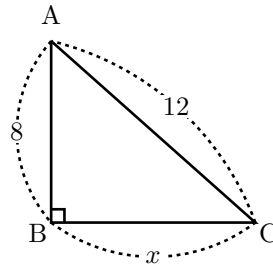
# 反射テスト 線分の長さ 三平方の定理 公式 01

1.  $x$  の長さを求めよ. (  $S$  級 45 秒,  $A$  級 1 分 30 秒,  $B$  級 3 分,  $C$  級 5 分 )

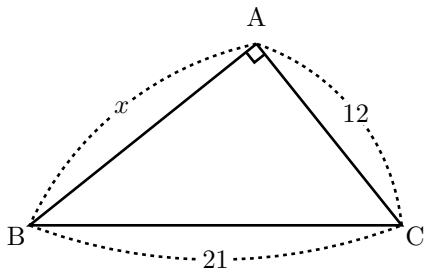
(1)



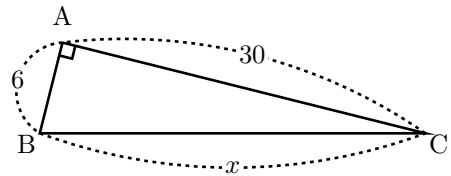
(2)



(3)

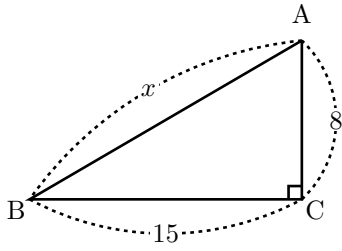


(4)

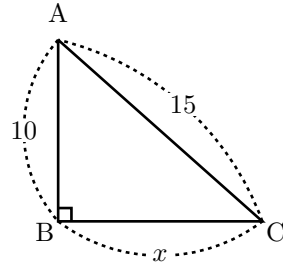


2.  $x$  の長さを求めよ. (  $S$  級 45 秒,  $A$  級 1 分 30 秒,  $B$  級 3 分,  $C$  級 5 分 )

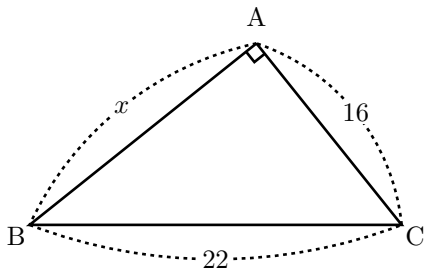
(1)



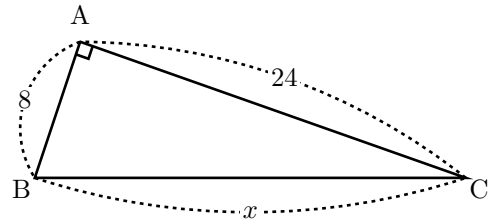
(2)



(3)

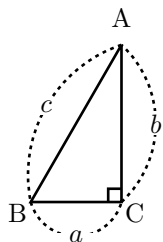


(4)



# 反射テスト 線分の長さ 三平方の定理 公式 01 解答解説

1.  $x$  の長さを求めよ。(S級 45秒, A級 1分30秒, B級 3分, C級 5分)



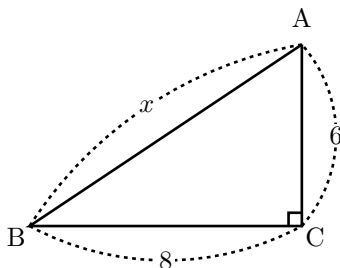
★ 三平方の定理

直角三角形の斜辺の長さ  $c$ , 他の辺の長さを  $a, b$  としたとき,

$$a^2 + b^2 = c^2$$

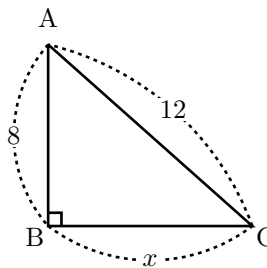
よって,  $\begin{cases} c = \sqrt{a^2 + b^2} \\ a = \sqrt{c^2 - b^2} \end{cases}$  が成り立つ.

(1)



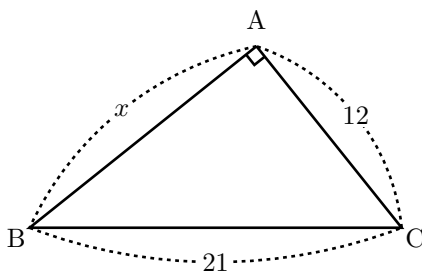
$$x = \sqrt{8^2 + 6^2} = 10 \quad \dots \text{答え}$$

(2)



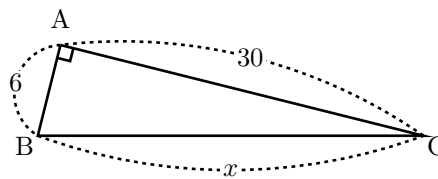
$$x = \sqrt{12^2 - 8^2} = 4\sqrt{5} \quad \dots \text{答え}$$

(3)



$$\begin{aligned} x &= \sqrt{21^2 - 12^2} \\ &= \sqrt{3^2 \cdot 7^2 - 3^2 \cdot 4^2} \\ &= 3\sqrt{7^2 - 4^2} \\ &= 3\sqrt{33} \quad \dots \text{答え} \end{aligned}$$

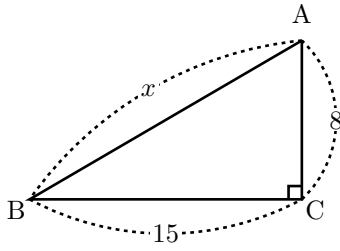
(4)



$$\begin{aligned} x &= \sqrt{30^2 + 6^2} \\ &= \sqrt{6^2 \cdot 5^2 + 6^2 \cdot 1^2} \\ &= 6\sqrt{5^2 + 1^2} \\ &= 6\sqrt{26} \\ &= 6\sqrt{26} \quad \dots \text{答え} \end{aligned}$$

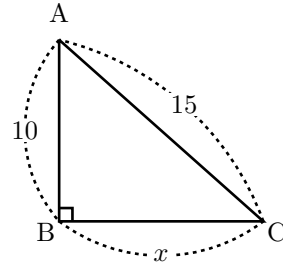
2.  $x$  の長さを求めよ。(S 級 45 秒, A 級 1 分 30 秒, B 級 3 分, C 級 5 分)

(1)



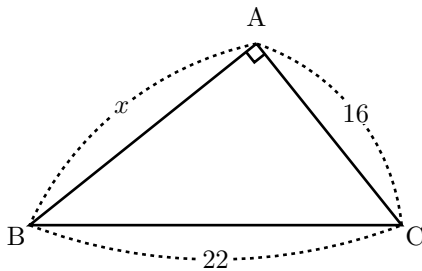
$$x = \sqrt{8^2 + 15^2} = 17 \quad \cdots \text{答え}$$

(2)



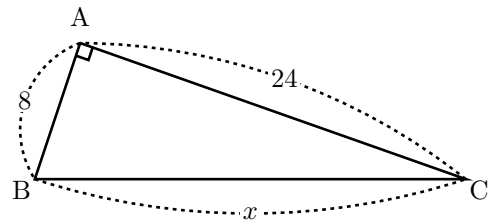
$$x = \sqrt{15^2 - 10^2} = 5\sqrt{5} \quad \cdots \text{答え}$$

(3)



$$\begin{aligned} x &= \sqrt{22^2 - 16^2} \\ &= \sqrt{2^2 \cdot 11^2 - 2^2 \cdot 8^2} \\ &= 2\sqrt{11^2 - 8^2} \\ &= 2\sqrt{121 - 64} \\ &= 2\sqrt{57} \quad \cdots \text{答え} \end{aligned}$$

(4)



$$\begin{aligned} x &= \sqrt{24^2 + 8^2} \\ &= \sqrt{8^2 \cdot 3^2 + 8^2 \cdot 1^2} \\ &= 8\sqrt{3^2 + 1^2} \\ &= 8\sqrt{10} \quad \cdots \text{答え} \end{aligned}$$