

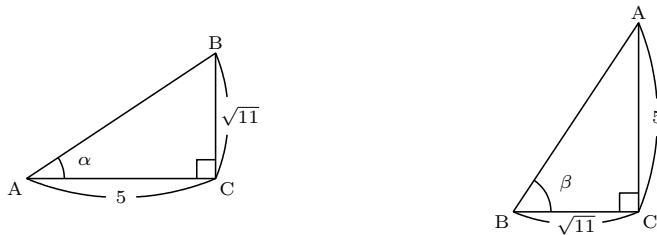
# 第5章 1. 「鋭角の三角比」 第1回

## 解答

1. (1)  $\frac{\sqrt{11}}{6}$       (2)  $\frac{5}{6}$       (3)  $\frac{\sqrt{11}}{5}$       (4)  $\frac{5}{6}$       (5)  $\frac{\sqrt{11}}{6}$       (6)  $\frac{5}{\sqrt{11}}$
2. (1)  $\frac{1}{2}$       (2)  $\frac{1}{2}$       (3)  $\frac{1}{\sqrt{3}}$  または  $\frac{\sqrt{3}}{3}$       (4)  $\frac{\sqrt{3}}{2}$
- (5)  $\frac{1}{\sqrt{2}}$  または  $\frac{\sqrt{2}}{2}$       (6)  $\sqrt{3}$       (7)  $\frac{1}{\sqrt{2}}$  または  $\frac{\sqrt{2}}{2}$       (8)  $\frac{\sqrt{3}}{2}$
3. (1) 6.8      (2) 7.3
4. (1)  $\cos 29^\circ$       (2)  $\sin 37^\circ$       (3)  $\frac{1}{\tan 12^\circ}$

## 解説

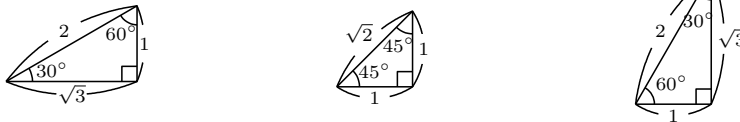
1.  $AB^2 = 5^2 + (\sqrt{11})^2 = 36$ ,  $AB > 0$  より,  $AB = \sqrt{36} = 6$



(1)  $\sin \alpha = \frac{BC}{AB} = \frac{\sqrt{11}}{6}$       (2)  $\cos \alpha = \frac{AC}{AB} = \frac{5}{6}$       (3)  $\tan \alpha = \frac{BC}{AC} = \frac{\sqrt{11}}{5}$

(4)  $\sin \beta = \frac{AC}{AB} = \frac{5}{6}$       (5)  $\cos \beta = \frac{BC}{AB} = \frac{\sqrt{11}}{6}$       (6)  $\tan \beta = \frac{AC}{BC} = \frac{5}{\sqrt{11}}$

2.



3. (1)  $\cos 47^\circ = \frac{AC}{AB}$  より,  
 $AC = AB \cos 47^\circ = 10 \times 0.68 = 6.8$
- (2)  $\sin 47^\circ = \frac{BC}{AB}$  より,  
 $BC = AB \sin 47^\circ = 10 \times 0.73 = 7.3$
4. (1)  $29^\circ + 61^\circ = 90^\circ$  より,  
 $\sin 61^\circ = \cos 29^\circ$
- (2)  $37^\circ + 53^\circ = 90^\circ$  より,  
 $\cos 53^\circ = \sin 37^\circ$
- (3)  $12^\circ + 78^\circ = 90^\circ$  より,  
 $\tan 78^\circ = \frac{1}{\tan 12^\circ}$