

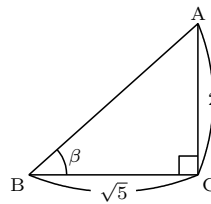
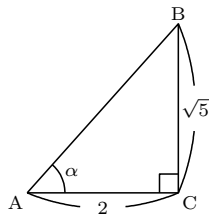
第5章 1. 「鋭角の三角比」 第4回

解答

1. (1) $\frac{\sqrt{5}}{3}$ (2) $\frac{2}{3}$ (3) $\frac{\sqrt{5}}{2}$ (4) $\frac{2}{3}$ (5) $\frac{\sqrt{5}}{3}$ (6) $\frac{2}{\sqrt{5}}$
2. (1) $\frac{1}{\sqrt{2}}$ または $\frac{\sqrt{2}}{2}$ (2) $\frac{\sqrt{3}}{2}$ (3) 1 (4) $\frac{1}{2}$
- (5) $\frac{1}{2}$ (6) $\frac{1}{\sqrt{3}}$ または $\frac{\sqrt{3}}{3}$ (7) $\frac{\sqrt{3}}{2}$ (8) $\frac{1}{\sqrt{2}}$ または $\frac{\sqrt{2}}{2}$
3. (1) 9.2 (2) 3.9
4. (1) $\cos 24^\circ$ (2) $\sin 31^\circ$ (3) $\frac{1}{\tan 19^\circ}$

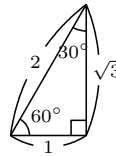
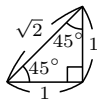
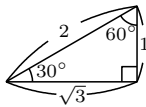
解説

1. $AB^2 = (\sqrt{5})^2 + 2^2 = 9$, $AB > 0$ より, $AB = \sqrt{9} = 3$



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

2.



3. (1) $\cos 23^\circ = \frac{AC}{AB}$ より,
 $AC = AB \cos 23^\circ = 10 \times 0.92 = 9.2$
- (2) $\sin 23^\circ = \frac{BC}{AB}$ より,
 $BC = AB \sin 23^\circ = 10 \times 0.39 = 3.9$
4. (1) $24^\circ + 66^\circ = 90^\circ$ より,
 $\sin 66^\circ = \cos 24^\circ$
- (2) $31^\circ + 59^\circ = 90^\circ$ より,
 $\cos 59^\circ = \sin 31^\circ$
- (3) $19^\circ + 71^\circ = 90^\circ$ より,
 $\tan 71^\circ = \frac{1}{\tan 19^\circ}$