

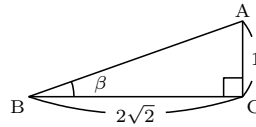
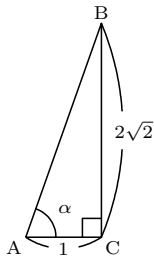
第5章 1. 「鋭角の三角比」 第2回

解答

1. (1) $\frac{2\sqrt{2}}{3}$ (2) $\frac{1}{3}$ (3) $2\sqrt{2}$ (4) $\frac{1}{3}$ (5) $\frac{2\sqrt{2}}{3}$ (6) $\frac{\sqrt{2}}{4}$
2. (1) $\frac{1}{\sqrt{2}}$ または $\frac{\sqrt{2}}{2}$ (2) $\frac{\sqrt{3}}{2}$ (3) $\sqrt{3}$ (4) $\frac{1}{2}$
- (5) $\frac{1}{2}$ (6) 1 (7) $\frac{\sqrt{3}}{2}$ (8) $\frac{1}{\sqrt{2}}$ または $\frac{\sqrt{2}}{2}$
3. (1) 5.3 (2) 8.5
4. (1) $\cos 18^\circ$ (2) $\sin 23^\circ$ (3) $\frac{1}{\tan 35^\circ}$

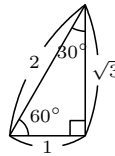
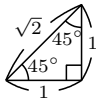
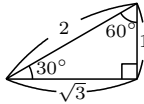
解説

1. $AB > 0$ より, $AB = \sqrt{9} = 3$



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

2.



3. (1) $\cos 58^\circ = \frac{AC}{AB}$ より,
 $AC = AB \cos 58^\circ = 10 \times 0.53 = 5.3$
- (2) $\sin 58^\circ = \frac{BC}{AB}$ より,
 $BC = AB \sin 58^\circ = 10 \times 0.85 = 8.5$
4. (1) $18^\circ + 72^\circ = 90^\circ$ より,
 $\sin 72^\circ = \cos 18^\circ$
- (2) $23^\circ + 67^\circ = 90^\circ$ より,
 $\cos 67^\circ = \sin 23^\circ$
- (3) $35^\circ + 55^\circ = 90^\circ$ より,
 $\tan 55^\circ = \frac{1}{\tan 35^\circ}$