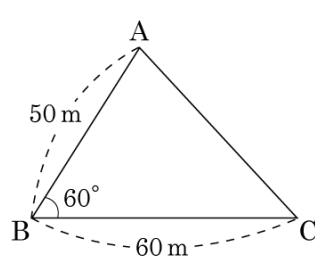


1. 두 지점 A, C 사이의 거리를 알아보기 위해 오른쪽 그림과 같이 측정하였다. 두 지점 A, C 사이의 거리를 구하여라.

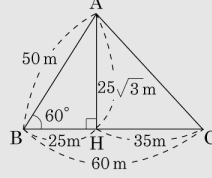


▶ 답: cm

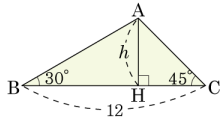
▷ 정답 : $10\sqrt{31}\text{cm}$

해설

$$\begin{aligned}\overline{AC} &= \sqrt{(25\sqrt{3})^2 + 35^2} \\ &= \sqrt{1875 + 1225} \\ &= \sqrt{3100} \\ &= 10\sqrt{31}(\text{m})\end{aligned}$$



2. 다음 $\triangle ABC$ 에서 높이 h 를 구하여라.



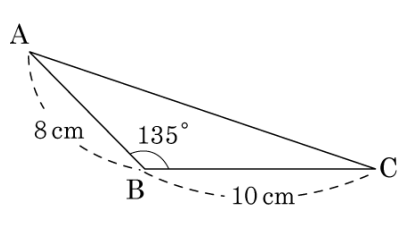
▶ 답 :

▷ 정답 : $6\sqrt{3}-6$

해설

$$\begin{aligned} h &= \frac{12}{\tan 60^\circ + \tan 45^\circ} \\ &= \frac{\sqrt{3}+1}{6} \\ &= 6(\sqrt{3}-1) \end{aligned}$$

3. 다음 삼각형의 넓이를 구하여라.



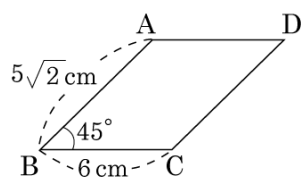
▶ 답 : cm²

▷ 정답 : $20\sqrt{2}$ cm²

해설

$$\begin{aligned}(\text{넓이}) &= \frac{1}{2} \times 8 \times 10 \times \sin(180^\circ - 135^\circ) \\ &= \frac{1}{2} \times 8 \times 10 \times \sin 45^\circ \\ &= \frac{1}{2} \times 8 \times 10 \times \frac{\sqrt{2}}{2} = 20\sqrt{2} \text{ (cm}^2\text{)}\end{aligned}$$

4. 다음 평행사변형의 넓이를 구하여라.



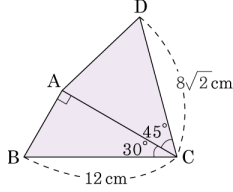
▶ 답 : cm^2

▷ 정답 : 30 cm²

해설

$$\begin{aligned} (\text{넓이}) &= 5\sqrt{2} \times 6 \times \sin 45^\circ \\ &= 5\sqrt{2} \times 6 \times \frac{\sqrt{2}}{2} = 30(\text{cm}^2) \end{aligned}$$

5. 다음 그림과 같은 □ABCD 의 넓이를 구하여라.(단, 단위는 생략한다.)



▶ 답 :

▷ 정답 : $42\sqrt{3}$

해설

$$\begin{aligned}\cos 30^\circ &= \frac{\overline{AC}}{12} = \frac{\sqrt{3}}{2}, \overline{AC} = 6\sqrt{3}\text{cm} \\ \triangle ABC &= \frac{1}{2} \times 12 \times 6\sqrt{3} \sin 30^\circ = 18\sqrt{3}(\text{cm}^2) \\ \triangle ACD &= \frac{1}{2} \times 8\sqrt{2} \times 6\sqrt{3} \sin 45^\circ = 24\sqrt{3}(\text{cm}^2) \\ \text{따라서, } \square ABCD &= 18\sqrt{3} + 24\sqrt{3} = 42\sqrt{3}(\text{cm}^2) \text{ 이다.}\end{aligned}$$