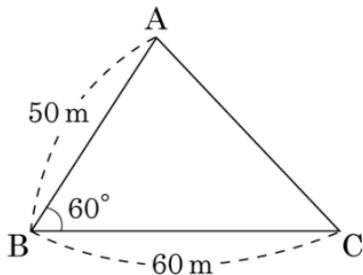


1. 두 지점 A, C 사이의 거리를 알아보기 위해 오른쪽 그림과 같이 측정하였다. 두 지점 A, C 사이의 거리를 구하여라.

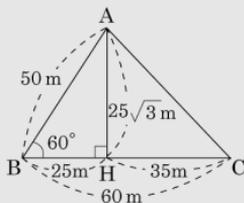


▶ 답 : cm

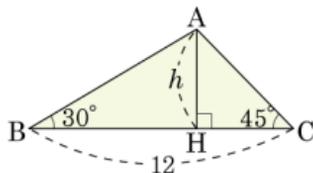
▷ 정답 : $10\sqrt{31}$ cm

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.



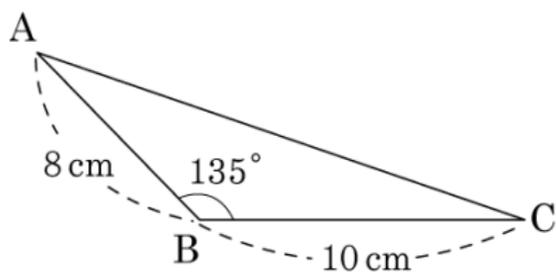
▶ 답:

▷ 정답: $6\sqrt{3} - 6$

해설

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

3. 다음 삼각형의 넓이를 구하여라.



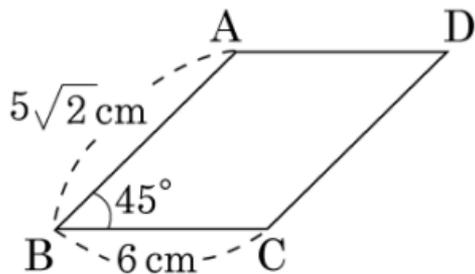
▶ 답: cm^2

▷ 정답: $20\sqrt{2}$ cm^2

해설

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

4. 다음 평행사변형의 넓이를 구하여라.



▶ 답: cm^2

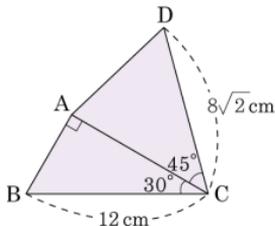
▶ 정답: 30 cm^2

해설

$$(\text{넓이}) = 5\sqrt{2} \times 6 \times \sin 45^\circ$$

$$= 5\sqrt{2} \times 6 \times \frac{\sqrt{2}}{2} = 30(\text{cm}^2)$$

5. 다음 그림과 같은 $\square ABCD$ 의 넓이를 구하여라. (단, 단위는 생략한다.)



▶ 답:

▶ 정답: $42\sqrt{3}$

해설

$$\cos 30^\circ = \frac{\overline{AC}}{12} = \frac{\sqrt{3}}{2}, \overline{AC} = 6\sqrt{3}\text{cm}$$

$$\triangle ABC = \frac{1}{2} \times 12 \times 6\sqrt{3} \sin 30^\circ = 18\sqrt{3}(\text{cm}^2)$$

$$\triangle ACD = \frac{1}{2} \times 8\sqrt{2} \times 6\sqrt{3} \sin 45^\circ = 24\sqrt{3}(\text{cm}^2)$$

따라서, $\square ABCD = 18\sqrt{3} + 24\sqrt{3} = 42\sqrt{3}(\text{cm}^2)$ 이다.