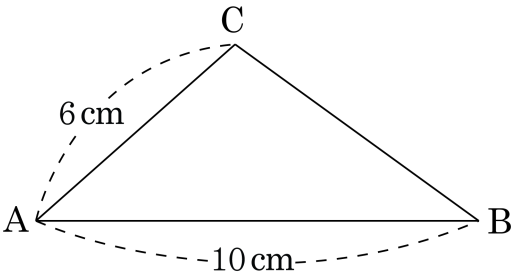
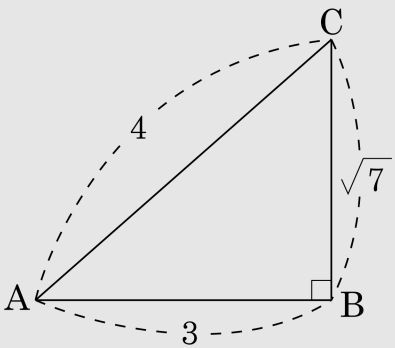
1. 다음 그림과 같은 $\triangle ABC$에서 $\cos \angle A = \frac{3}{4}$ 일 때, $\triangle ABC$ 의 넓이는? (단, $0° < \angle A\ 90°$)



① $\frac{13}{2}\text{cm}^2$ ② $\frac{13\sqrt{2}}{2}\text{cm}^2$ ③ $\frac{15}{2}\text{cm}^2$
④ $\frac{15\sqrt{7}}{2}\text{cm}^2$ ⑤ $\frac{15\sqrt{10}}{2}\text{cm}^2$

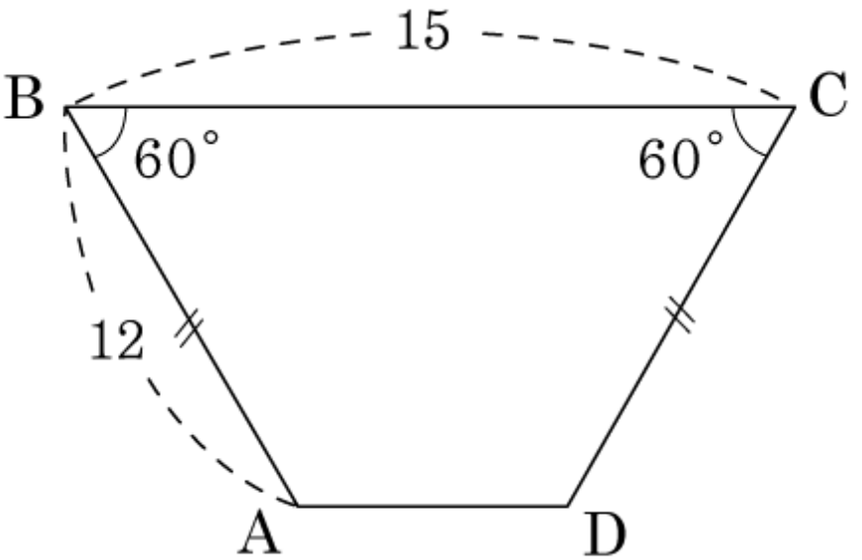
해설



$\sin A = \frac{\sqrt{7}}{4}$

$\triangle ABC = \frac{1}{2} \times 6 \times 10 \times \frac{\sqrt{7}}{4} = \frac{15\sqrt{7}}{2}(\text{cm}^2)$

2. 다음 사다리꼴의 넓이로 바른 것은?



① $50\sqrt{3}$ ② $52\sqrt{3}$

③ $54\sqrt{3}$ ④ $56\sqrt{3}$

⑤ $58\sqrt{3}$

해설

(넓이)

$= 12 \times 3 \times \sin 60° + \frac{1}{2} \times 12 \times 12 \times \sin 60°$

$= 12 \times 3 \times \frac{\sqrt{3}}{2} + \frac{1}{2} \times 12 \times 12 \times \frac{\sqrt{3}}{2}$

$= 18\sqrt{3} + 36\sqrt{3}$

$= 54\sqrt{3}$