

三角形の面積 S

$$S = \frac{1}{2}bc \sin A = \frac{1}{2}ca \sin B = \frac{1}{2}ab \sin C$$

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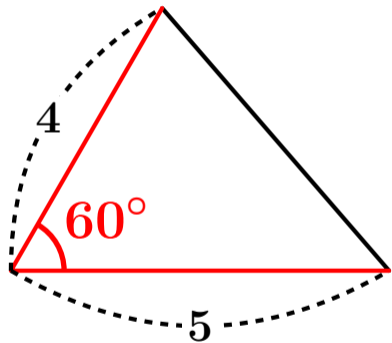
こんな公式は覚える必要なし！

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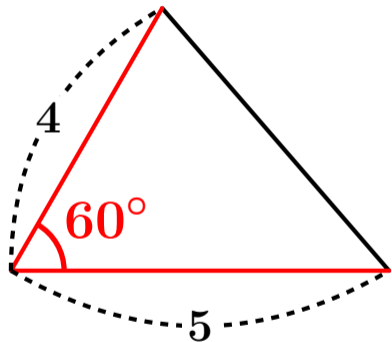
$$S = \frac{1}{2} \times \text{辺} \times \text{辺} \times \sin^{\text{あいだ}} \text{間の角度}$$

覚えるのはこれひとつ
こっちがわかりやすい (たぶん…)

三角形の面積 S はいくら？

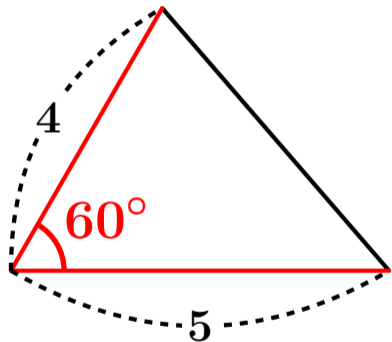


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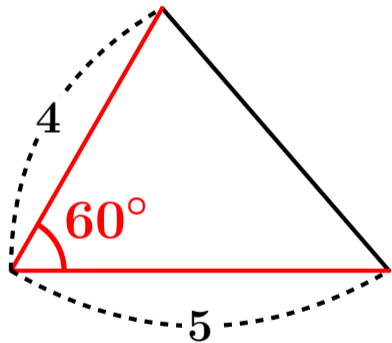
$$\frac{1}{2} \times 5 \times 4 \times \sin 60^\circ$$

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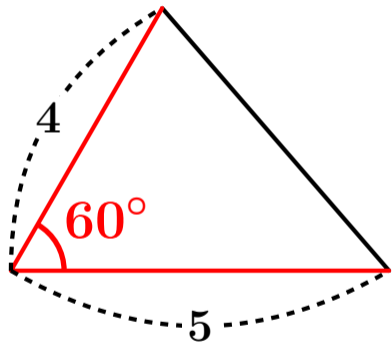
$$\begin{aligned} & \frac{1}{2} \times 5 \times 4 \times \sin 60^\circ \\ = & \frac{1}{2} \times 5 \times 4 \times \frac{\sqrt{3}}{2} \end{aligned}$$

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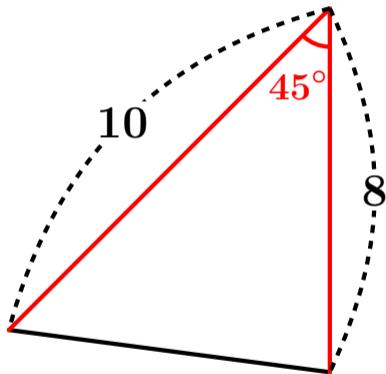
$$\begin{aligned} & \frac{1}{2} \times 5 \times 4 \times \sin 60^\circ \\ &= \frac{1}{2} \times 5 \times 4 \times \frac{\sqrt{3}}{2} \\ &= \frac{1}{\cancel{2}} \times 5 \times \cancel{4} \times \frac{\sqrt{3}}{\cancel{2}} \end{aligned}$$

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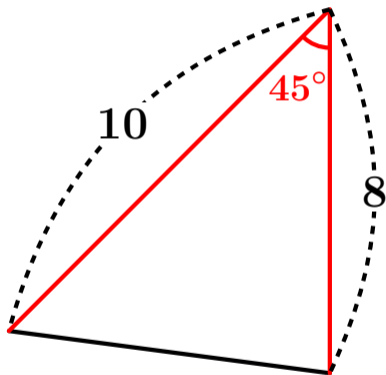


$$\begin{aligned} & \frac{1}{2} \times 5 \times 4 \times \sin 60^\circ \\ &= \frac{1}{2} \times 5 \times 4 \times \frac{\sqrt{3}}{2} \\ &= \frac{1}{\cancel{2}} \times 5 \times \cancel{4} \times \frac{\sqrt{3}}{\cancel{2}} \\ &= 5\sqrt{3} \end{aligned}$$

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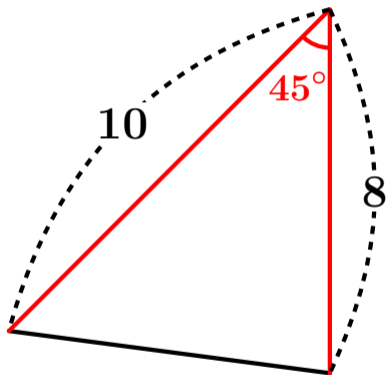


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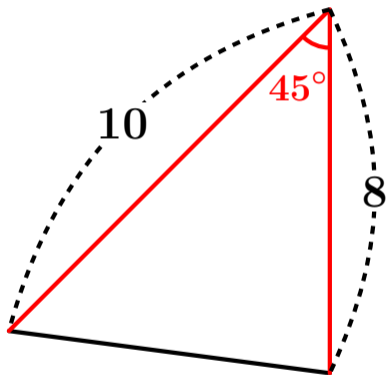
$$\frac{1}{2} \times 10 \times 8 \times \sin 45^\circ$$

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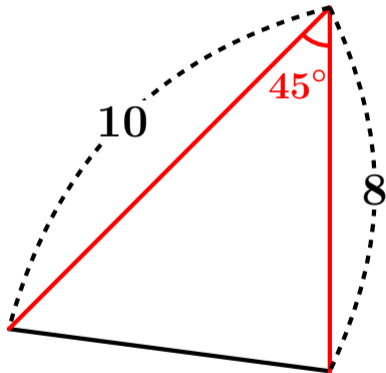
$$\begin{aligned} & \frac{1}{2} \times 10 \times 8 \times \sin 45^\circ \\ = & \frac{1}{2} \times 10 \times 8 \times \frac{1}{\sqrt{2}} \end{aligned}$$

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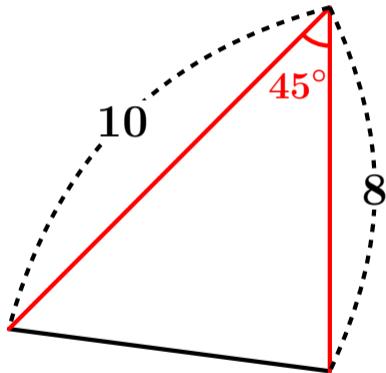
$$\begin{aligned} & \frac{1}{2} \times 10 \times 8 \times \sin 45^\circ \\ &= \frac{1}{2} \times 10 \times 8 \times \frac{1}{\sqrt{2}} \\ &= \frac{40}{\sqrt{2}} \end{aligned}$$

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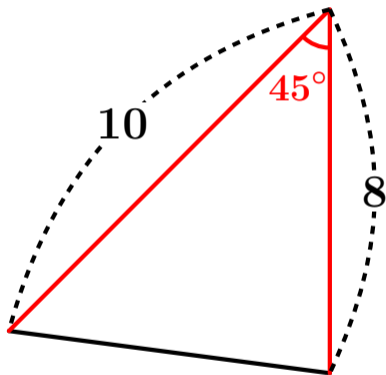
$$\begin{aligned} & \frac{1}{2} \times 10 \times 8 \times \sin 45^\circ \\ &= \frac{1}{2} \times 10 \times 8 \times \frac{1}{\sqrt{2}} \\ &= \frac{40}{\sqrt{2}} = \frac{40 \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} \end{aligned}$$

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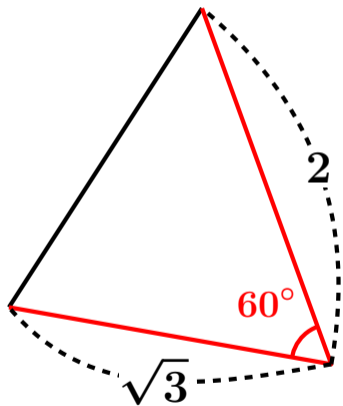
$$\begin{aligned} & \frac{1}{2} \times 10 \times 8 \times \sin 45^\circ \\ &= \frac{1}{2} \times 10 \times 8 \times \frac{1}{\sqrt{2}} \\ &= \frac{40}{\sqrt{2}} = \frac{40 \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} = \frac{40\sqrt{2}}{2} \end{aligned}$$

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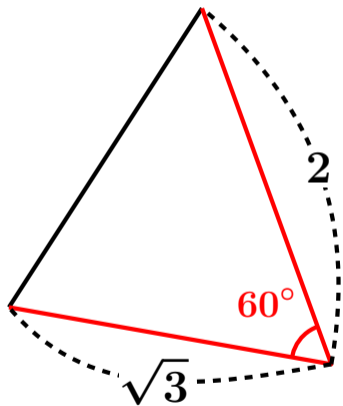


$$\begin{aligned} & \frac{1}{2} \times 10 \times 8 \times \sin 45^\circ \\ &= \frac{1}{2} \times 10 \times 8 \times \frac{1}{\sqrt{2}} \\ &= \frac{40}{\sqrt{2}} = \frac{40 \times \sqrt{2}}{\sqrt{2} \times \sqrt{2}} = \frac{40\sqrt{2}}{2} \\ &= 20\sqrt{2} \end{aligned}$$

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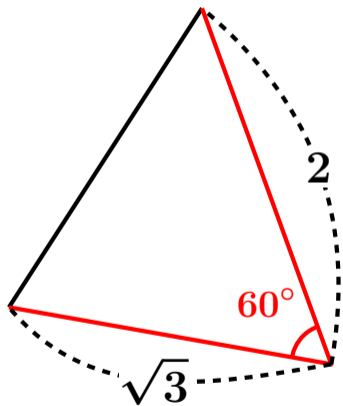


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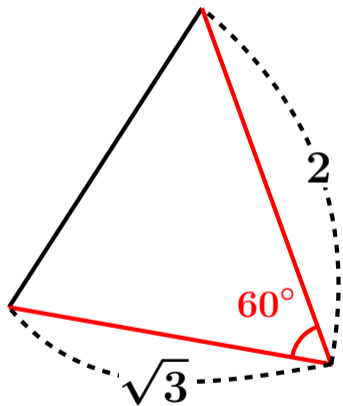
$$\frac{1}{2} \times \sqrt{3} \times 2 \times \sin 60^\circ$$

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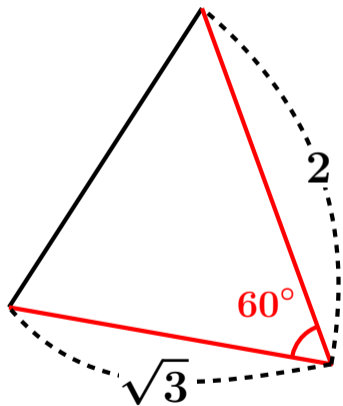
$$\begin{aligned} & \frac{1}{2} \times \sqrt{3} \times 2 \times \sin 60^\circ \\ &= \frac{1}{2} \times \sqrt{3} \times 2 \times \frac{\sqrt{3}}{2} \end{aligned}$$

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$$\begin{aligned} & \frac{1}{2} \times \sqrt{3} \times 2 \times \sin 60^\circ \\ &= \frac{1}{2} \times \sqrt{3} \times 2 \times \frac{\sqrt{3}}{2} \\ &= \frac{1}{2} \times \sqrt{3} \times \cancel{2} \times \frac{\sqrt{3}}{\cancel{2}} \end{aligned}$$

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$$\begin{aligned} & \frac{1}{2} \times \sqrt{3} \times 2 \times \sin 60^\circ \\ &= \frac{1}{2} \times \sqrt{3} \times 2 \times \frac{\sqrt{3}}{2} \\ &= \frac{1}{2} \times \sqrt{3} \times \cancel{2} \times \frac{\sqrt{3}}{\cancel{2}} \\ &= \frac{3}{2} \quad (\sqrt{3} \times \sqrt{3} = 3 \text{ です}) \end{aligned}$$