

氏名 _____

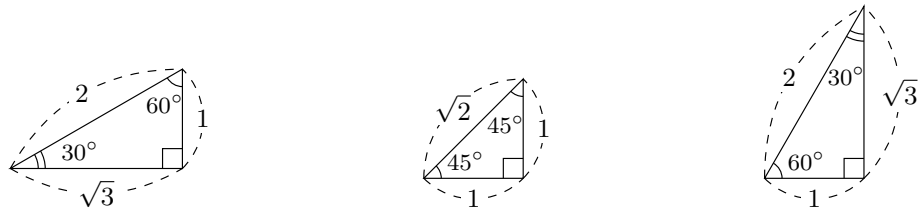
■ 三角比の拡張

• $\sin A = \frac{\text{縦}}{\text{斜め}}$

• $\cos A = \frac{\text{横}}{\text{斜め}}$

• $\tan A = \frac{\text{縦}}{\text{横}}$

1 (復習) 次の直角三角形を用いて、 30° , 45° , 60° の \sin , \cos , \tan の値を求めなさい。



$\sin 30^\circ =$

$\cos 30^\circ =$

$\tan 30^\circ =$

$\sin 45^\circ =$

$\cos 45^\circ =$

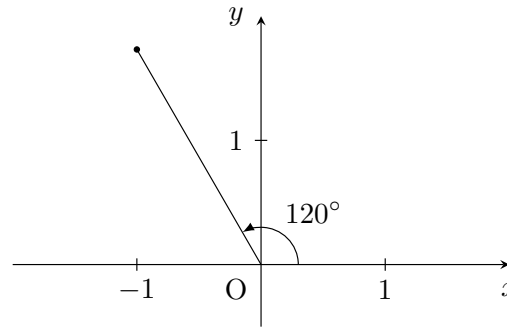
$\tan 45^\circ =$

$\sin 60^\circ =$

$\cos 60^\circ =$

$\tan 60^\circ =$

■ 120° の三角比

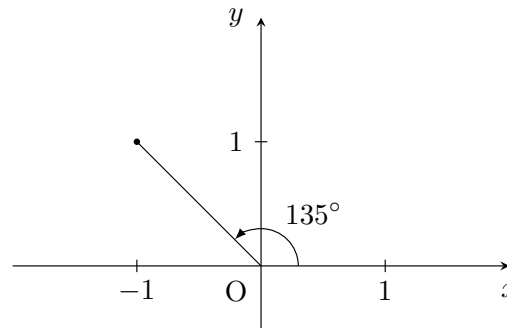


$\sin 120^\circ =$

$\cos 120^\circ =$

$\tan 120^\circ =$

■ 135° の三角比

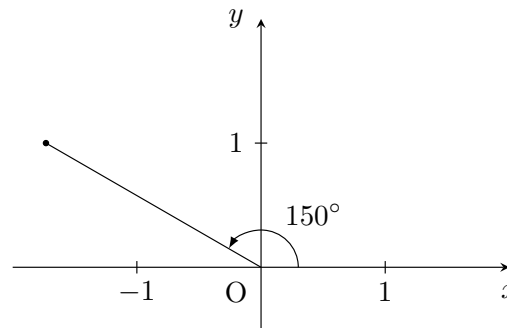


$\sin 135^\circ =$

$\cos 135^\circ =$

$\tan 135^\circ =$

■ 150° の三角比



$\sin 150^\circ =$

$\cos 150^\circ =$

$\tan 150^\circ =$

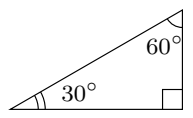
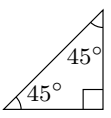
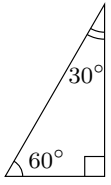
$\sin 150^\circ = \frac{1}{2}, \cos 150^\circ = -\frac{\sqrt{3}}{2}, \tan 150^\circ = -\frac{1}{\sqrt{3}}$

$\sin 30^\circ = \frac{1}{2}, \sin 45^\circ = \frac{\sqrt{2}}{2}, \sin 60^\circ = \frac{\sqrt{3}}{2}, \cos 30^\circ = \frac{\sqrt{3}}{2}, \cos 45^\circ = \frac{\sqrt{2}}{2}, \cos 60^\circ = \frac{1}{2}, \tan 30^\circ = \frac{1}{\sqrt{3}}, \tan 45^\circ = 1, \tan 60^\circ = \sqrt{3}, \sin 120^\circ = \frac{\sqrt{3}}{2}, \cos 120^\circ = -\frac{1}{2}, \tan 120^\circ = -\sqrt{3}, \sin 135^\circ = \frac{\sqrt{2}}{2}, \cos 135^\circ = -\frac{\sqrt{2}}{2}, \tan 135^\circ = -1,$

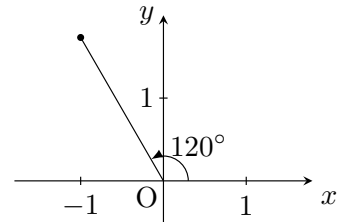
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■ 三角比の拡張 (90°~180° の三角比)

(復習) 次の直角三角形を用いて、30°, 45°, 60°, 120°, 135°, 150° の sin, cos, tan の値を求めなさい。

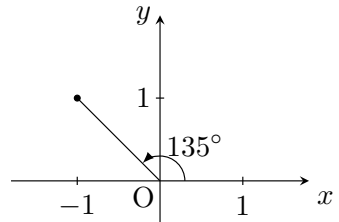
		
sin 30° = <input type="text"/>	sin 45° = <input type="text"/>	sin 60° = <input type="text"/>
cos 30° = <input type="text"/>	cos 45° = <input type="text"/>	cos 60° = <input type="text"/>
tan 30° = <input type="text"/>	tan 45° = <input type="text"/>	tan 60° = <input type="text"/>

■ 120° の三角比



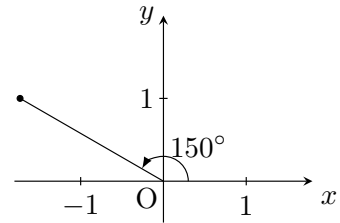
sin 120° =
 cos 120° =
 tan 120° =

■ 135° の三角比



sin 135° =
 cos 135° =
 tan 135° =

■ 150° の三角比



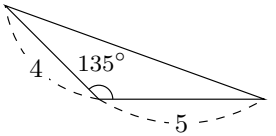
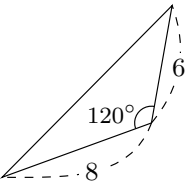
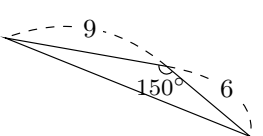
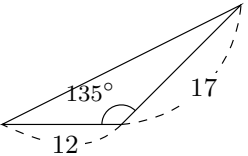
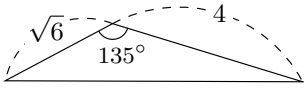
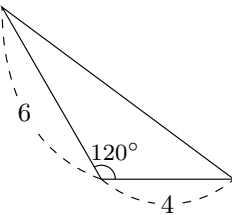
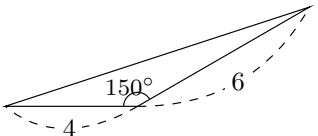
sin 150° =
 cos 150° =
 tan 150° =

■ 三角形の面積

今日は 120°, 135°, 150° を使って、以前学んだ三角形の面積を計算しよう。

(三角形の面積) = $\frac{1}{2} \times (\text{辺の長さ}) \times (\text{辺の長さ}) \times \sin(\text{間の角度})$

1 次の三角形の面積を求めなさい。

(1) 	(2) 
(3) 	(4) 
(5) 	(6) 
(7) 	(8) 