

氏名 _____

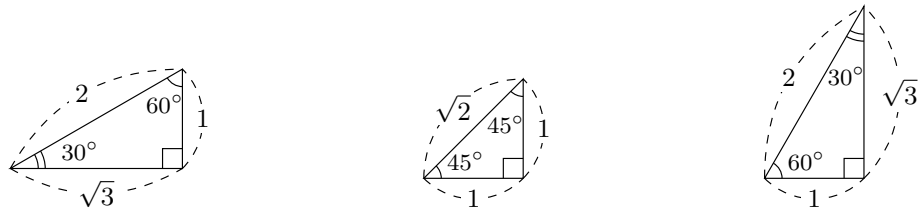
■ 三角比の拡張

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

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

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

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。

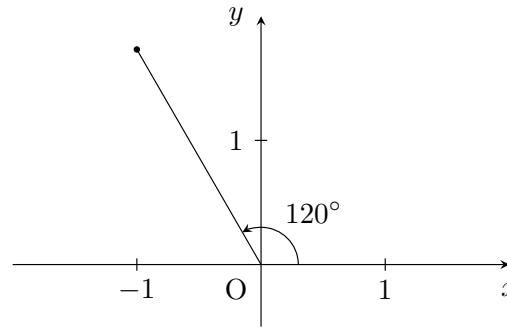


$\sin 30^\circ =$
 $\cos 30^\circ =$
 $\tan 30^\circ =$

$\sin 45^\circ =$
 $\cos 45^\circ =$
 $\tan 45^\circ =$

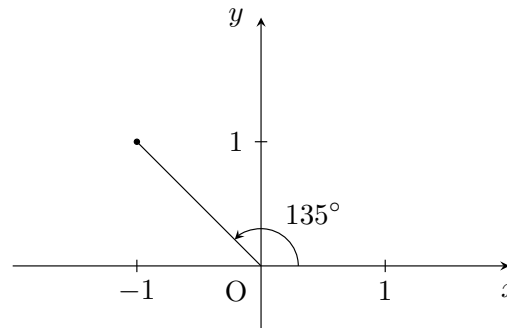
$\sin 60^\circ =$
 $\cos 60^\circ =$
 $\tan 60^\circ =$

■ 120° の三角比



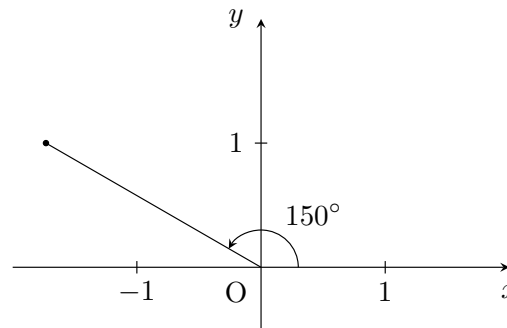
$\sin 120^\circ =$
 $\cos 120^\circ =$
 $\tan 120^\circ =$

■ 135° の三角比



$\sin 135^\circ =$
 $\cos 135^\circ =$
 $\tan 135^\circ =$

■ 150° の三角比



$\sin 150^\circ =$
 $\cos 150^\circ =$
 $\tan 150^\circ =$

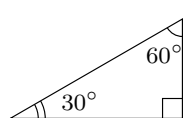
$\sin 150^\circ = \frac{1}{2}, \cos 150^\circ = -\frac{\sqrt{3}}{2}, \tan 150^\circ = -\frac{1}{\sqrt{3}}$

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

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■ 三角比の拡張 (90°~180° の三角比)

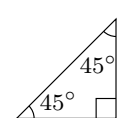
(復習) 次の直角三角形を用いて、30°, 45°, 60°, 120°, 135°, 150° の sin, cos, tan の値を求めなさい。



sin 30° =

cos 30° =

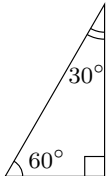
tan 30° =



sin 45° =

cos 45° =

tan 45° =

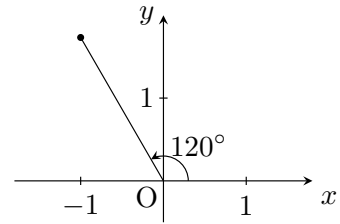


sin 60° =

cos 60° =

tan 60° =

■ 120° の三角比

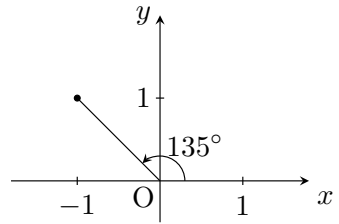


sin 120° =

cos 120° =

tan 120° =

■ 135° の三角比

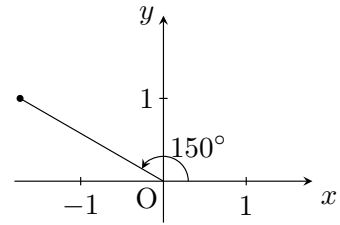


sin 135° =

cos 135° =

tan 135° =

■ 150° の三角比



sin 150° =

cos 150° =

tan 150° =

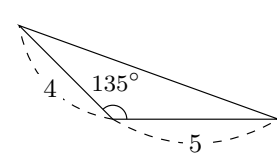
■ 三角形の面積

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。

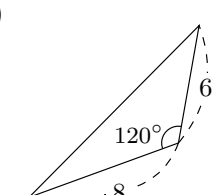
(三角形の面積) = $\frac{1}{2} \times (\text{辺の長さ}) \times (\text{辺の長さ}) \times \sin(\text{間の角度})$

1 次の三角形の面積を求めなさい。

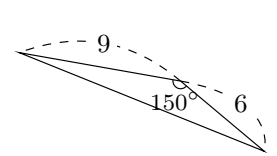
(1)



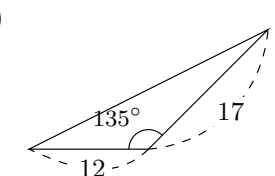
(2)



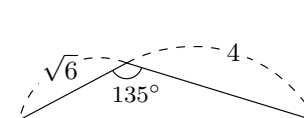
(3)



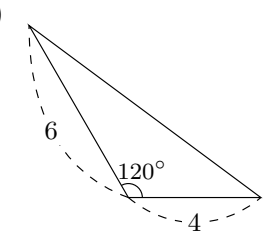
(4)



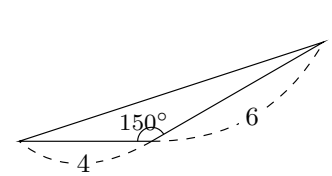
(5)



(6)



(7)



(8)

