

## Angle sum and difference identities

**Using angle sum or difference to find an exact value of trigonometric functions**

1)  $\tan 105^\circ$

2)  $\tan 75^\circ$

3)  $\tan 165^\circ$

4)  $\cos 285^\circ$

5)  $\sin -15^\circ$

6)  $\sin 165^\circ$

7)  $\sin 105^\circ$

8)  $\cos -105^\circ$

9)  $\cos 255^\circ$

10)  $\cos 165^\circ$

11)  $\cos 15^\circ$

12)  $\sin 15^\circ$

13)  $\sin 195^\circ$

14)  $\cos 195^\circ$

15)  $\cos -15^\circ$

16)  $\tan -75^\circ$

17)  $\tan 75^\circ$

18)  $\sin 75^\circ$

19)  $\sin 75^\circ$

20)  $\tan 195^\circ$

21)  $\tan 255^\circ$

22)  $\sin 255^\circ$

23)  $\tan -15^\circ$

24)  $\cos 105^\circ$

25)  $\cos 105^\circ$

26)  $\sin -75^\circ$

27)  $\sin -105^\circ$

28)  $\cos -75^\circ$

29)  $\tan 15^\circ$

30)  $\cos 75^\circ$

31)  $\tan 285^\circ$

32)  $\cos 75^\circ$

33)  $\sin 285^\circ$

34)  $\tan -105^\circ$

35)  $\tan 105^\circ$

36)  $\sin 105^\circ$

## Angle sum and difference identities

### Using angle sum or difference to find an exact value of trigonometric functions

1)  $\tan 105^\circ$

$$-2 - \sqrt{3}$$

2)  $\tan 75^\circ$

$$2 + \sqrt{3}$$

3)  $\tan 165^\circ$

$$\sqrt{3} - 2$$

4)  $\cos 285^\circ$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

5)  $\sin -15^\circ$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

6)  $\sin 165^\circ$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

7)  $\sin 105^\circ$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

8)  $\cos -105^\circ$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

9)  $\cos 255^\circ$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

10)  $\cos 165^\circ$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

11)  $\cos 15^\circ$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

12)  $\sin 15^\circ$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

13)  $\sin 195^\circ$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

14)  $\cos 195^\circ$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

$$15) \cos -15^\circ$$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

$$16) \tan -75^\circ$$

$$-2 - \sqrt{3}$$

$$17) \tan 75^\circ$$

$$2 + \sqrt{3}$$

$$18) \sin 75^\circ$$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

$$19) \sin 75^\circ$$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

$$20) \tan 195^\circ$$

$$2 - \sqrt{3}$$

$$21) \tan 255^\circ$$

$$2 + \sqrt{3}$$

$$22) \sin 255^\circ$$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$



$$23) \tan -15^\circ$$

$$\sqrt{3} - 2$$

$$24) \cos 105^\circ$$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

$$25) \cos 105^\circ$$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

$$26) \sin -75^\circ$$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

$$27) \sin -105^\circ$$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

$$28) \cos -75^\circ$$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

$$29) \tan 15^\circ$$

$$2 - \sqrt{3}$$

$$30) \cos 75^\circ$$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

$$31) \tan 285^\circ$$

$$-2 - \sqrt{3}$$

$$32) \cos 75^\circ$$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

$$33) \sin 285^\circ$$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

$$34) \tan -105^\circ$$

$$2 + \sqrt{3}$$

$$35) \tan 105^\circ$$

$$-2 - \sqrt{3}$$

$$36) \sin 105^\circ$$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$