

**Coterminal Angles**

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**Find two coterminal angles for each given angle.**

1)  $-5^\circ$

2)  $5^\circ$

3)  $45^\circ$

4)  $-45^\circ$

5)  $\frac{5\pi}{2}$

6)  $-\pi$

7)  $\frac{17\pi}{9}$

8)  $\frac{13\pi}{18}$

**State if the two given angles are coterminal or not.**

9)  $110^\circ, -250^\circ$

10)  $125^\circ, -415^\circ$

11)  $140^\circ, -220^\circ$

12)  $160^\circ, -380^\circ$

13)  $\frac{19\pi}{18}, -\frac{53\pi}{18}$

14)  $\frac{35\pi}{36}, \frac{107\pi}{36}$

15)  $\frac{41\pi}{36}, \frac{61\pi}{36}$

16)  $\frac{5\pi}{4}, -\frac{3\pi}{4}$

## Answers to Coterminal Angles

1)  $355^\circ$  and  $-365^\circ$

2)  $365^\circ$  and  $-355^\circ$

3)  $405^\circ$  and  $-315^\circ$

4)  $315^\circ$  and  $-405^\circ$

5)  $\frac{\pi}{2}$  and  $-\frac{3\pi}{2}$

6)  $\pi$  and  $-3\pi$

7)  $\frac{35\pi}{9}$  and  $-\frac{\pi}{9}$

8)  $\frac{49\pi}{18}$  and  $-\frac{23\pi}{18}$

9) Yes

10) No

11) Yes

12) No

13) Yes

14) Yes

15) No

16) Yes