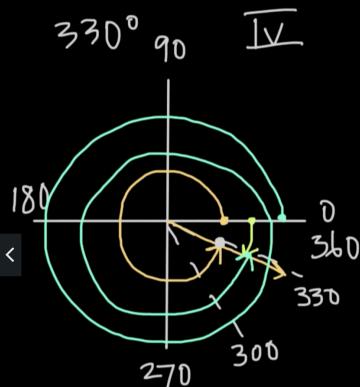


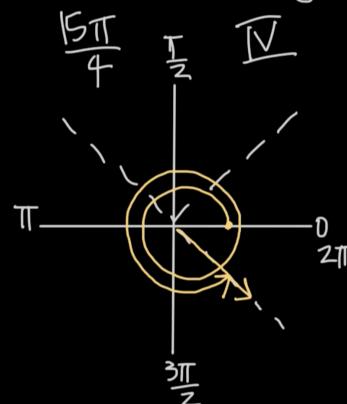
14. Coterminal angles

Sketch and classify the angle, then give coterminal angles.



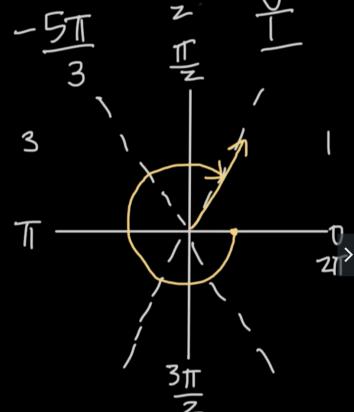
$$330 + 360 = 690^\circ, 1050^\circ, 1410^\circ$$

$$330 - 360 = -30^\circ, -390^\circ, -750^\circ$$



$$\frac{15\pi}{4} + \frac{8\pi}{4} = \frac{23\pi}{4}, \frac{31\pi}{4}$$

$$\frac{15\pi}{4} - \frac{8\pi}{4} = \frac{7\pi}{4}, -\frac{\pi}{4}, -\frac{9\pi}{4}$$

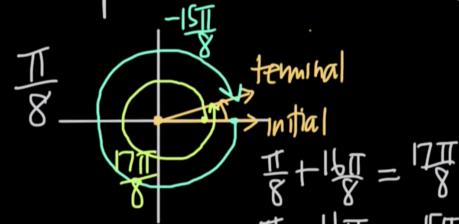


$$-\frac{5\pi}{3} + \frac{6\pi}{3} = \frac{\pi}{3}, \frac{7\pi}{3}$$

$$-\frac{5\pi}{3} - \frac{6\pi}{3} = -\frac{11\pi}{3}, -\frac{7\pi}{3}$$

Udemy

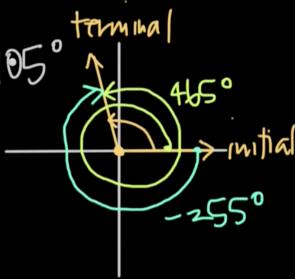
Find positive and negative coterminal angles



$$\frac{\pi}{8} + \frac{16\pi}{8} = \frac{17\pi}{8}$$

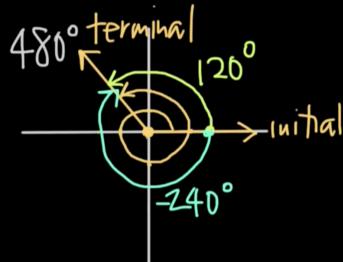
$$\frac{\pi}{8} - \frac{14\pi}{8} = -\frac{13\pi}{8}$$

angle
less than $\pm 2\pi/360^\circ$
move than $+2\pi/360^\circ$
more than $-2\pi/360^\circ$



$$105^\circ + 360^\circ = 465^\circ$$

$$105^\circ - 360^\circ = -255^\circ$$



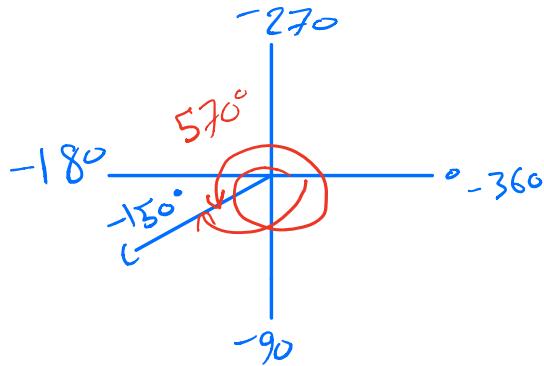
$$480^\circ - 360^\circ = 120^\circ$$

$$120^\circ - 360^\circ = -240^\circ$$

Udemy

Quiz

Q1° which angle is coterminal with -150° ?



Question 2:

Question: Which angle α is coterminal with $(71/16)\pi$ if the terminal side of α is reached from the terminal side of $(71/16)\pi$ by making two full rotations about the origin in the negative direction?

Answer choices:

A $\alpha = \frac{7}{16}\pi$

B $\alpha = -\frac{7}{16}\pi$

C $\alpha = \frac{39}{16}\pi$

D $\alpha = -\frac{25}{16}\pi$

$$\begin{aligned} & \text{Answer choices:} \\ & \text{A } \alpha = \frac{7}{16}\pi = \left(\frac{71\pi}{16} - \frac{32\pi}{16} \right) = \left(\frac{39\pi}{16} - \frac{32\pi}{16} \right) \\ & \quad \text{first full rotation} \\ & \quad \text{Second full rotation} \end{aligned}$$

Question 3:

Question: Which angle is not coterminal with $-(8/3)\pi$?

Answer choices:

A $\frac{4}{3}\pi$

B $-\frac{4}{3}\pi$ - This angle is not coterminal

C $-\frac{26}{3}\pi$

D $\frac{22}{3}\pi$