

Recognizing Trigonometric Unit Circle

Lesson 164 | Trigonometry | Unit circle and exact values • Radians, reference and coterminal angles

<https://www.youtube.com/watch?v=Uyr1XAenSmE>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Find exact $\sin(570^\circ)$ and $\cos(570^\circ)$ using the unit circle. Give the coterminal angle in $[0^\circ, 360^\circ)$.

02

For angle -870° , find the radian measure, the coterminal angle in $[0^\circ, 360^\circ)$, and its reference angle (use 0° or 90° for axis angles).

03

Find exact $\sin(-3090^\circ)$ and $\cos(-3090^\circ)$ using the unit circle. Give the coterminal angle in $[0^\circ, 360^\circ)$.

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04

For angle 180° , find the radian measure, the coterminal angle in $[0^\circ, 360^\circ)$, and its reference angle (use 0° or 90° for axis angles).

05

Find exact $\sin(-3180^\circ)$ and $\cos(-3180^\circ)$ using the unit circle. Give the coterminal angle in $[0^\circ, 360^\circ)$.

06

For angle 1380° , find the radian measure, the coterminal angle in $[0^\circ, 360^\circ)$, and its reference angle (use 0° or 90° for axis angles).

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01

Find exact $\sin(570^\circ)$ and $\cos(570^\circ)$ using the unit circle. Give the coterminal angle in $[0^\circ, 360^\circ)$.

Coterminal angle 210° . Coordinates $(\cos \theta, \sin \theta) = (-\sqrt{3}/2, -1/2)$; the first is cosine and the second is sine.

02

For angle -870° , find the radian measure, the coterminal angle in $[0^\circ, 360^\circ)$, and its reference angle (use 0° or 90° for axis angles).

Radians = $-29/6\pi$. Coterminal angle 210° . Reference angle 30° .

03

Find exact $\sin(-3090^\circ)$ and $\cos(-3090^\circ)$ using the unit circle. Give the coterminal angle in $[0^\circ, 360^\circ)$.

Coterminal angle 150° . Coordinates $(\cos \theta, \sin \theta) = (-\sqrt{3}/2, 1/2)$; the first is cosine and the second is sine.

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04

For angle 180° , find the radian measure, the coterminal angle in $[0^\circ, 360^\circ)$, and its reference angle (use 0° or 90° for axis angles).

Radians = 1π . Coterminal angle 180° . Reference angle 0° .

05

Find exact $\sin(-3180^\circ)$ and $\cos(-3180^\circ)$ using the unit circle. Give the coterminal angle in $[0^\circ, 360^\circ)$.

Coterminal angle 60° . Coordinates $(\cos \theta, \sin \theta) = (1/2, \sqrt{3}/2)$; the first is cosine and the second is sine.

06

For angle 1380° , find the radian measure, the coterminal angle in $[0^\circ, 360^\circ)$, and its reference angle (use 0° or 90° for axis angles).

Radians = $23/3\pi$. Coterminal angle 300° . Reference angle 60° .