

Watch. Practice. Understand. | Lesson 149

The Secret of Finding a Reference Angle (Day 5 Trig Lesson)

Watch the matching video: <https://www.youtube.com/watch?v=epYLEzrKU1M>

Practice focus: Radians, reference and coterminal angles

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 Convert 150° to radians.

02 Convert $7\pi/4$ radians to degrees.

03 Find the reference angle for 225° , and one positive coterminal angle greater than 360° .

04 Find the unit-circle coordinates at $5\pi/6$.

Worked answers | Lesson 149

The Secret of Finding a Reference Angle (Day 5 Trig Lesson)

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Practice focus: Radians, reference and coterminal angles

Original extra practice matched to the listed lesson topic.

01 Convert 150° to radians.

$$150\pi/180 = 5\pi/6.$$

02 Convert $7\pi/4$ radians to degrees.

$$(7\pi/4)(180/\pi) = 315^\circ.$$

03 Find the reference angle for 225° , and one positive coterminal angle greater than 360° .

Reference angle = $225 - 180 = 45^\circ$. A coterminal angle is $225 + 360 = 585^\circ$.

04 Find the unit-circle coordinates at $5\pi/6$.

Reference angle $\pi/6$ in quadrant II: $(\cos \theta, \sin \theta) = (-\sqrt{3}/2, 1/2)$.