

Objective: Describe angles using radian and degree measures

Thursday 4/2

Radian and Degree Measure

- Complementary and supplementary angles in degrees and radians

Objective: Describe angles using radian and degree measures

Complementary and Supplementary angles

Complementary angles –

two **positive** angles with a sum of $\frac{\pi}{2}$ or 90°

Supplementary angles –

two **positive** angles with a sum of π or 180°

Objective: Describe angles using radian and degree measures

Find the complement and Supplement of each angle (if possible). Give your answers in degrees.

1. $\beta = 37^\circ$

2. $\omega = 84^\circ$

Objective: Describe angles using radian and degree measures

Find the complement and Supplement of each angle (if possible). Give your answers in degrees.

1. $\beta = 37^\circ$ Complement = $90 - 37 = 53^\circ$
Supplement = $180 - 37 = 143^\circ$

2. $\omega = 84^\circ$ Complement = $90 - 84 = 6^\circ$
Supplement = $180 - 84 = 96^\circ$

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Find the complement and Supplement of each angle (if possible). Give your answers in radians.

1. $\beta = \frac{\pi}{12}$

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Find the complement and Supplement of each angle (if possible). Give your answers in radians.

$$\beta = \frac{\pi}{12}$$

$$\text{complement} = \frac{\pi}{2} - \beta \rightarrow \frac{\pi}{2} - \frac{\pi}{12} \rightarrow \frac{6\pi}{12} - \frac{\pi}{12} = \frac{5\pi}{12}$$

$$\text{supplement} = \pi - \beta \rightarrow \pi - \frac{\pi}{12} \rightarrow \frac{12\pi}{12} - \frac{\pi}{12} = \frac{11\pi}{12}$$

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Find the complement and Supplement of each angle (if possible). Give your answers in radians.

$$2. \omega = \frac{7\pi}{10}$$

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Find the complement and Supplement of each angle (if possible). Give your answers in radians.

$$\omega = \frac{7\pi}{10}$$

There is no complement in this case because it gives a negative answer. The given angle is already more than 90° .

$$\text{complement} = \frac{\pi}{2} - \omega \rightarrow \frac{\pi}{2} - \frac{7\pi}{10} \rightarrow \frac{5\pi}{10} - \frac{7\pi}{10} = -\frac{2\pi}{10} \rightarrow \text{none}$$

$$\text{supplement} = \pi - \omega \rightarrow \pi - \frac{7\pi}{10} \rightarrow \frac{10\pi}{10} - \frac{7\pi}{10} = \frac{3\pi}{10}$$

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Assignment:

Log in to Office 365

Complete the assignment:

Complementary and Supplementary Angles (Week 1, Day 4)