

## Problem 11.40

Two lightweight rods 24 cm in length are mounted perpendicular to an axle and at  $180^\circ$  to each other. At the end of each rod is a 480-g mass. The rods are spaced 42 cm apart along the axle. The axle rotates at 4.7 rad/s. (Figure 1)

## Part A

What is the component of the total angular momentum along the axle?

Express your answer using two significant figures.

$L_{\text{along axle}} =$

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## Part B

What angle does the vector angular momentum make with the axle? The angular momentum must be calculated about the *same point* for both rods.

Express your answer using two significant figures.

$\theta =$

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Figure 1 ▼ of 1

