
PHYS 1110 Worksheet: Radians

1. Fill in the blanks to describe the equivalencies between different rotational measures.

1 revolution = _____ radians

1 revolution = _____ degrees

_____ Radians = _____ degrees

2. Complete the conversions.

2 revolutions = _____ radians

1/8 revolution = _____ radians

45° = _____ radians

1 rad/s = _____ rev/min

100 rev/min = _____ rad/s

3. A basketball with a radius of 12.0 cm rolls 30.0 meters in 12.0 seconds.

How many radians does it turn?

How many cycles does it turn?

What is its average linear speed, in meters per second?

What is its average angular speed, in radians per second?