G11_Angular displacement & Angular velocity

A. Convert the following units.

1. 120^0 → _____ radians
2. 135^0 → _____ radians
3. 150^0 → _____ radians
4. 1.2 radians → _____ degree
5. 3.0 radians → _____ degree
6. $\frac{2\pi}{3}$ radians → _____ degree

B. Short answer.

1. A tire rotates at a constant 1.5 radians every 0.1 second. What is the tire angular velocity ? _____ rad/s.

   If the tire has diameter 80 cm, what is the linear speed velocity ? _____ cm/s

2. A mass of 1.5 kg moves in a circle of radius 25 cm at 2.0 Hz . Calculate the angular velocity _____ rad/s and linear velocity _____ m/s