Angular Velocity Conversions

Here are 2 non-SI common units for angular velocity

rps = rotations per second = $\frac{\text{rotations}}{\text{second}}$ rpm = rotations per minute = $\frac{\text{rotations}}{\text{minute}}$

You can convert these into radians per second using the following conversion factor:
1 rotation = 2π radians.
In each of the following problems, please fully write out the conversion factors.

Convert 50 rps to radians per second.

Convert 120 rps to radians per second.

Convert 2 rpms to radians per second:

Convert 30 rpms to radians per second.

Conceptual Questions on Angular Velocity:

Remember, that angular velocity, unlike linear velocity, does not relate to something that is *down*.

Written Question 1:
Which has a higher angular velocity, the earth (in its daily rotation) or a typical spinning top? Explain you answer