**Noteguide for Basic Quantities and Conversions (Videos 8ABC) Name**

**8A:**

Radians:



360o = 2π radians = full circle

**(Do 1-5 on the Worksheet)**

Angular Quantities:

|  |  |
| --- | --- |
| Linear:sva | Angular:θ ω α  |

**8B:**

Conversions: (Let's use revolution as a synonym for rotation in this unit)

|  |  |
| --- | --- |
| RadiansRevolutionsRad/sRad/sRev/min (RPM) | = rev x (2π)= rad ÷ (2π)= RPM x (2π) ÷ (60)= (rev/s) x (2π)= (rad/s) x (60) ÷ ( 2π) |

**(Do 6-13 on the Worksheet)**

**8C:**

Tangential relationships:

|  |  |
| --- | --- |
| Linear:(m) s(m/s) v(m/s/s) a | Tangential: (at the edge of the wheel)= θr - Displacement\* = ωr - Velocity= αr - Acceleration\* \* not in data packet |

**(Do 14-23 on the Worksheet) -** For 20-23, convert the angular quantity to radians, rad/s or rad/s/s, and then apply the tangential relationship.