

AstroMath DLL

```
<?xml version="1.0"?>
<doc>
  <assembly>
    <name>AstroMath</name>
  </assembly>
  <members>
    <member name="T:AstroMath.AstronomicalFunctions">
      <summary>
        Name: Francis Sullivan
        Student ID: 30034007
        Date: 2023.08.29
        Description: This DLL provides calculation services with the four following astronomical
        functions:
        Star Velocity, Star Distance, Temperature Conversion and Blackhole Event Horizon.
      </summary>
    </member>
    <member name="M:AstroMath.AstronomicalFunctions.StarVelocity(System.Double,System.Double)">
      <summary>
        Calculate Star Velocity.
        Formula used:  $v = c \left( \frac{\Delta\lambda}{\lambda_0} \right)$ 
        Warning! This method contains no error trapping, and will not catch division by zero
        errors.
        Error trapping must be implemented on the client side.
      </summary>
      <param name="observedWavelengthInNanoMetres">Input a double value representing the
      observed wavelength of the body in nano metres.</param>
      <param name="restWavelengthInNanoMetres">Input a double value representing the rest
      wavelength of the body in nano metres.</param>
      <returns>Returns a double value representing the velocity of the body in metres per
      second.</returns>
    </member>
    <member name="M:AstroMath.AstronomicalFunctions.TemperatureConversion(System.Double)">
      <summary>
        Convert Celsius to Kelvin.
        Formula used:  $K = C + 273.15$ 
        Warning! This method contains no error trapping, and will not catch non-existent
        temperatures such as those below absolute zero.
        Error trapping must be implemented on the client side.
      </summary>
      <param name="temperatureInCelsius">Input a double value representing the temperature in
      celsius that you wish to convert to kelvin.</param>
      <returns>Returns a double value representing your temperature in kelvin.</returns>
    </member>
    <member name="M:AstroMath.AstronomicalFunctions.StarDistance(System.Double)">
      <summary>
        Calculate Star Distance.
        Formula used:  $D = 1 / P$ 
        Warning! This method contains no error trapping, and will not catch division by zero
        errors.
        Error trapping must be implemented on the client side.
      </summary>
      <param name="paralaxAngleInArcseconds">Input a double value representing the parallax
      angle of the body in arcseconds.</param>
      <returns>Returns a double value representing the distance to the body in
      parsecs.</returns>
    </member>
    <member name="M:AstroMath.AstronomicalFunctions.BlackholeEventHorizon(System.Double)">
      <summary>
        Calculate Blackhole Schwarzschild Radius.
        Formula used:  $R = (2GM) / c^2$ 
      </summary>
      <param name="blackHoleMassInKilograms">Input a double value representing the mass of the
      body you wish to calculate for in kilograms.</param>
      <returns>Returns a double value representing the Schwarzschild Radius of the body in
      metres.</returns>
    </member>
  </members>
</doc>
```