Angular and Linear Velocity

The velocity (ω) of a point in motion on a circle through an angle which has a measure of α radians in t seconds of elapsed time is determined by using the following equation.

$$\omega = \frac{\alpha}{t}$$ The arc length (*s*) of a circle is calculated by using the following formula.

$$S = \alpha t$$

The linear velocity (v) of a point in circular motion (with circle radius r) is given by the following formula:

$$V = \frac{S}{t}$$ Where s is the arc length traveled by the point