

### Formulas for MCV4U Exam:

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|---|---|
| 1.) $W =  \vec{f}   \vec{d}  \cos \theta$<br>2.) $V =  \vec{w} \cdot \vec{u} \times \vec{v} $<br>3.) $\text{proj}_{\vec{u}} \vec{v} = \left( \frac{\vec{v} \cdot \vec{u}}{\vec{u} \cdot \vec{u}} \right) \vec{u}$<br>4.) $y = m(x - a) + f(a)$<br>5.) $A =  \vec{u} \times \vec{v} $<br>6.) $\hat{b} = \frac{\vec{b}}{ \vec{b} }$<br>7.) $a^2 = b^2 + c^2 - 2bc \cos A$ | 8.) $\sin(x \pm y) = \sin x \cos y \pm \cos x \sin y$<br>9.) $\cos(x \pm y) = \cos x \cos y \mp \sin x \sin y$<br>10.) $\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}$<br>11.) $\sin 2\theta = 2 \cdot \sin \theta \cos \theta$<br>12.) $\cos 2\theta = \cos^2 \theta - \sin^2 \theta$<br>13.) $\tan 2\theta = \frac{2 \tan \theta}{1 - \tan^2 \theta}$ |
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