TABLE 1 VECTOR EQUATIONS FOR MOTION WITH CONSTANT ACCELERATION

Equation Number	*Equation*	*Contains*				
		$\mathbf{r}$	$\mathbf{v}_0$	$\mathbf{v}$	$\mathbf{a}$	t
11	$\mathbf{v} = \mathbf{v}_0 + \mathbf{a}t$	×	✓	✓	✓	✓
12	$\mathbf{r} = \mathbf{r}_0 + \mathbf{v}_0 t + \frac{1}{2}\mathbf{a}t^2$	✓	✓	×	✓	✓
13[a]	$\mathbf{v} \cdot \mathbf{v} = \mathbf{v}_0 \cdot \mathbf{v}_0 + 2\mathbf{a} \cdot (\mathbf{r} - \mathbf{r}_0)$	✓	✓	✓	✓	×
14	$\mathbf{r} = \mathbf{r}_0 + \frac{1}{2}(\mathbf{v}_0 + \mathbf{v})t$	✓	✓	✓	×	✓
15	$\mathbf{r} = \mathbf{r}_0 + \mathbf{v}t - \frac{1}{2}\mathbf{a}t^2$	✓	×	✓	✓	✓

[a] This equation involves the scalar or dot product of two vectors,