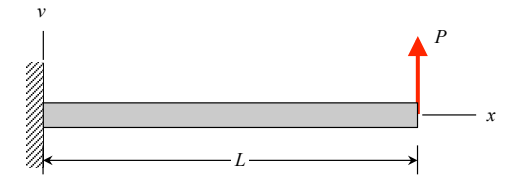
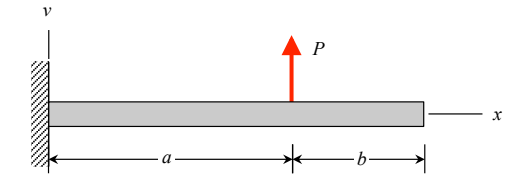
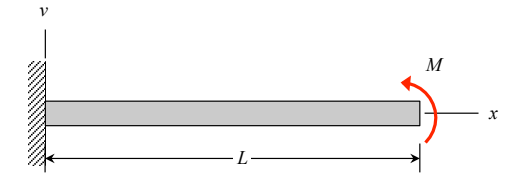
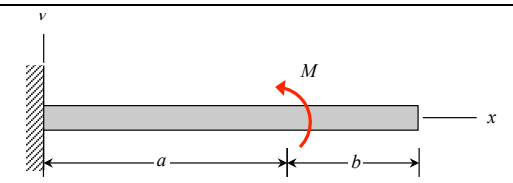
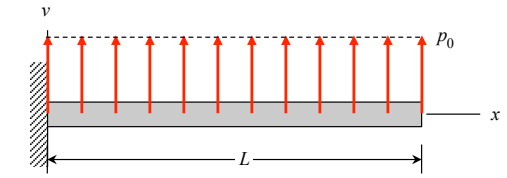
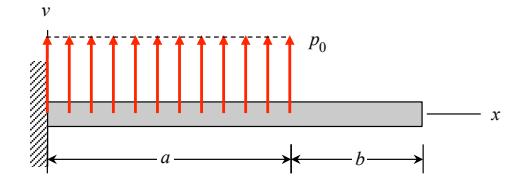
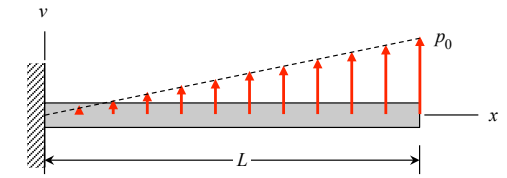
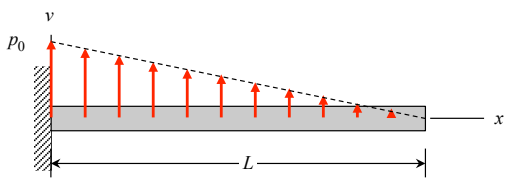
CANTILEVERED BEAMS

Loading on beam	*Deflection equation*
	$v(x)=\frac{1}{6}\left[x^2(3L-x)\right]\frac{P}{EI}$
	$v(x)=\frac{1}{6}\left[x^2(3a-x)\right]\frac{P}{EI}\quad ;\quad 0<x<a$ $=\frac{1}{6}\left[a^2(3x-a)\right]\frac{P}{EI}\quad ;\quad a<x<L$
	$v(x)=\frac{1}{2}\left[x^2\right]\frac{M}{EI}$
	$v(x)=\frac{1}{2}\left[x^2\right]\frac{M}{EI}\quad ;\quad 0<x<a$ $=\frac{1}{2}\left[a(2x-a)\right]\frac{M}{EI}\quad ;\quad a<x<L$
	$v(x)=\frac{1}{24}\left[x^2\left(6L^2-4Lx+x^2\right)\right]\frac{p_0}{EI}$
	$v(x)=\frac{x^2}{24}\left[6a^2-4ax+x^2\right]\frac{p_0}{EI}\quad ;\quad 0<x<a$ $=\frac{a^3}{24}\left[4x-a\right]\frac{p_0}{EI}\quad ;\quad a<x<L$
	$v(x)=\frac{1}{120}\left[x^3\left(20L^3-10L^2x+x^3\right)\right]\frac{p_0}{LEI}$
	$v(x)=\frac{1}{120}\left[x^2\left(10L^3-10L^2x+5Lx^2-x^3\right)\right]\frac{p_0}{LEI}$