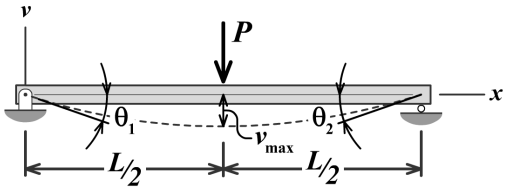
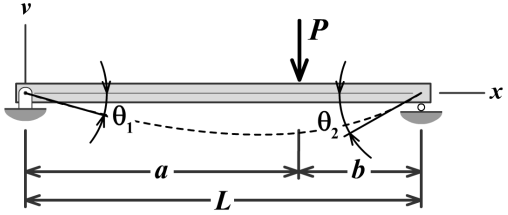
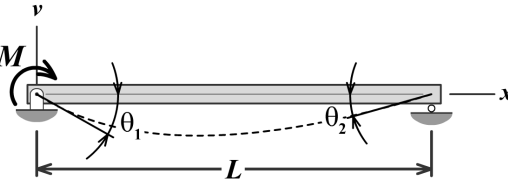
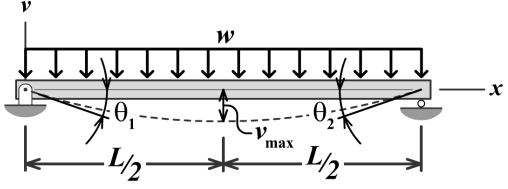
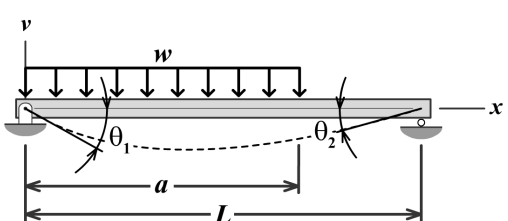
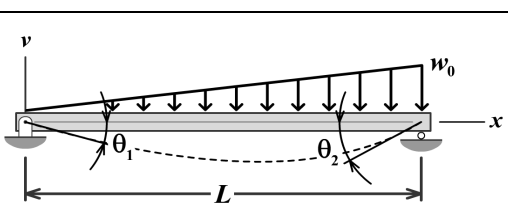
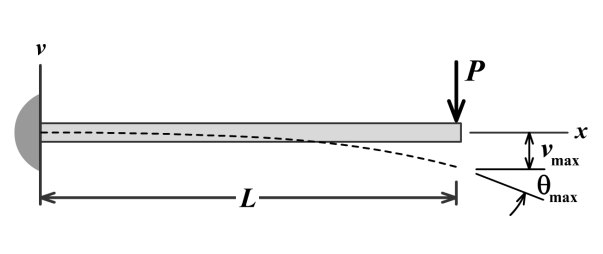
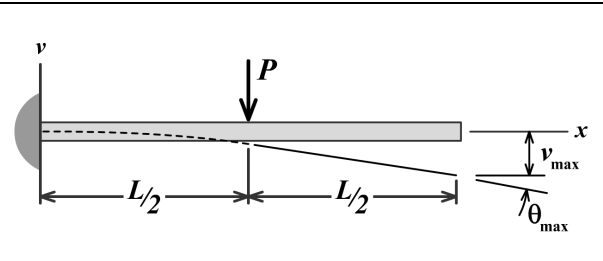
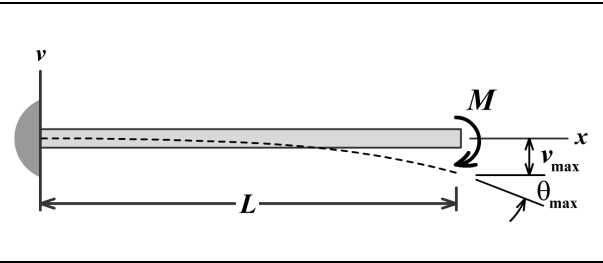
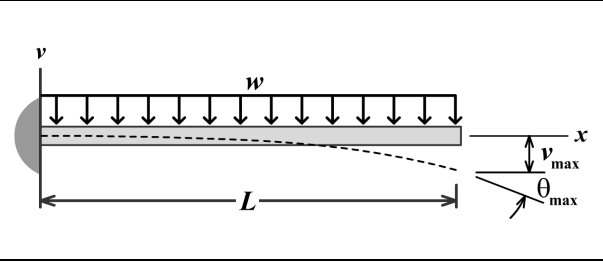
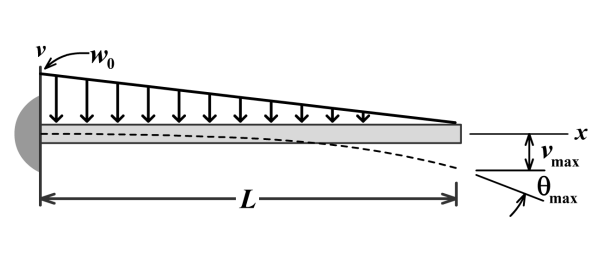


SIMPLY SUPPORTED BEAMS

Beam	Slope	Deflection	Elastic Curve
	1 $\theta_1 = -\theta_2 = -\frac{PL^2}{16EI}$	2 $v_{\max} = -\frac{PL^3}{48EI}$	3 $v = -\frac{Px}{48EI}(3L^2 - 4x^2)$ <p style="text-align: right;">for $0 \leq x \leq L/2$</p>
	4 $\theta_1 = -\frac{Pb(L^2 - b^2)}{6LEI}$ $\theta_2 = +\frac{Pa(L^2 - a^2)}{6LEI}$	5 $v = -\frac{Pa^2b^2}{3LEI}$ <p style="text-align: center;">at $x = a$</p>	6 $v = -\frac{Pbx}{6LEI}(L^2 - b^2 - x^2)$ <p style="text-align: right;">for $0 \leq x \leq a$</p>
	7 $\theta_1 = -\frac{ML}{3EI}$ $\theta_2 = +\frac{ML}{6EI}$	8 $v_{\max} = -\frac{ML^2}{9\sqrt{3}EI}$ <p style="text-align: center;">at $x = L\left(1 - \frac{\sqrt{3}}{3}\right)$</p>	9 $v = -\frac{Mx}{6LEI}(2L^2 - 3Lx + x^2)$
	10 $\theta_1 = -\theta_2 = -\frac{wL^3}{24EI}$	11 $v_{\max} = -\frac{5wL^4}{384EI}$	12 $v = -\frac{wx}{24EI}(L^3 - 2Lx^2 + x^3)$
	13 $\theta_1 = -\frac{wa^2}{24LEI}(2L - a)^2$ $\theta_2 = +\frac{wa^2}{24LEI}(2L^2 - a^2)$	14 $v = -\frac{wa^3}{24LEI}(4L^2 - 7aL + 3a^2)$ <p style="text-align: center;">at $x = a$</p>	$v = -\frac{wx}{24LEI}(Lx^3 - 4aLx^2 + 2a^2x^2 + 4a^2L^2 - 4a^3L + a^4)$ <p style="text-align: right;">for $0 \leq x \leq a$</p> $v = -\frac{wa^2}{24LEI}(2x^3 - 6Lx^2 + a^2x + 4L^2x - a^2L)$ <p style="text-align: right;">for $a \leq x \leq L$</p>
	16 $\theta_1 = -\frac{7w_0L^3}{360EI}$ $\theta_2 = +\frac{w_0L^3}{45EI}$	17 $v_{\max} = -0.00652 \frac{w_0L^4}{EI}$ <p style="text-align: center;">at $x = 0.5193L$</p>	18 $v = -\frac{w_0x}{360LEI}(7L^4 - 10L^2x^2 + 3x^4)$

CANTILEVER BEAMS

Beam	Slope	Deflection	Elastic Curve
	<p>19</p> $\theta_{\max} = -\frac{PL^2}{2EI}$	<p>20</p> $v_{\max} = -\frac{PL^3}{3EI}$	<p>21</p> $v = -\frac{Px^2}{6EI}(3L - x)$
	<p>22</p> $\theta_{\max} = -\frac{PL^2}{8EI}$	<p>23</p> $v_{\max} = -\frac{5PL^3}{48EI}$	<p>24</p> $v = -\frac{Px^2}{12EI}(3L - 2x) \quad \text{for } 0 \leq x \leq L/2$ $v = -\frac{PL^2}{48EI}(6x - L) \quad \text{for } L/2 \leq x \leq L$
	<p>25</p> $\theta_{\max} = -\frac{ML}{EI}$	<p>26</p> $v_{\max} = -\frac{ML^2}{2EI}$	<p>27</p> $v = -\frac{Mx^2}{2EI}$
	<p>28</p> $\theta_{\max} = -\frac{wL^3}{6EI}$	<p>29</p> $v_{\max} = -\frac{wL^4}{8EI}$	<p>30</p> $v = -\frac{wx^2}{24EI}(6L^2 - 4Lx + x^2)$
	<p>31</p> $\theta_{\max} = -\frac{w_0L^3}{24EI}$	<p>32</p> $v_{\max} = -\frac{w_0L^4}{30EI}$	<p>33</p> $v = -\frac{w_0x^2}{120LEI}(10L^3 - 10L^2x + 5Lx^2 - x^3)$