

Fixed End Moments

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| $(FEM)_{AB} = \frac{PL}{8}$ $(FEM)_{BA} = \frac{PL}{8}$ | $(FEM)'_{AB} = \frac{3PL}{16}$ $(FEM)_{BA} = (\frac{P}{L^2})(b^2a + a^2b)$ |
| $(FEM)_{AB} = \frac{2PL}{9}$ $(FEM)_{BA} = \frac{2PL}{9}$ | $(FEM)'_{AB} = \frac{PL}{3}$ $(FEM)'_{AB} = \frac{45PL}{96}$ |
| $(FEM)_{AB} = \frac{wL^2}{12}$ $(FEM)_{BA} = \frac{wL^2}{12}$ | $(FEM)'_{AB} = \frac{wL^2}{8}$ |
| $(FEM)_{AB} = \frac{11wL^2}{192}$ $(FEM)_{BA} = \frac{5wL^2}{192}$ | $(FEM)'_{AB} = \frac{9wL^2}{128}$ |
| $(FEM)_{AB} = \frac{wL^2}{20}$ $(FEM)_{BA} = \frac{wL^2}{30}$ | $(FEM)'_{AB} = \frac{wL^2}{15}$ |
| $(FEM)_{AB} = \frac{5wL^2}{96}$ $(FEM)_{BA} = \frac{5wL^2}{96}$ | $(FEM)'_{AB} = \frac{5wL^2}{64}$ |
| $(FEM)_{AB} = \frac{6EI\Delta}{L^2}$ $(FEM)_{BA} = \frac{6EI\Delta}{L^2}$ | $(FEM)'_{AB} = \frac{3EI\Delta}{L^2}$ |
| $\frac{PL}{8}$ $\frac{P}{2}$ | $\frac{qL^2}{12}$ $\frac{qL}{2}$ |
| $\frac{Pab^2}{L^2}$ $\frac{Pb^2(3a+b)}{L^3}$ | $\frac{qL^2}{12}$ $\frac{qL}{2}$ |
| $\frac{Mb(2a-b)}{L^2}$ $\frac{6Mab}{L^3}$ | $\frac{5qL^2}{96}$ $\frac{qL}{4}$ |
| $\frac{Ma(2b-a)}{L^2}$ $\frac{6Mab}{L^3}$ | $\frac{qL^2}{30}$ $\frac{3qL}{20}$ |
| $\frac{6EI\Delta}{L^2}$ $\frac{12EI\Delta}{L^3}$ | $[ab^2 + \frac{(a-2b)d^2}{12}]$ $R_1 = \frac{qd}{L^3} [(2a+L)b^2 + \frac{(a-b)d^2}{4}]$ $R_2 = \frac{qd}{L^3} [(2b+L)a^2 - \frac{(a-b)d^2}{4}]$ |