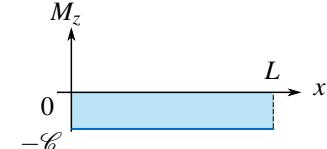
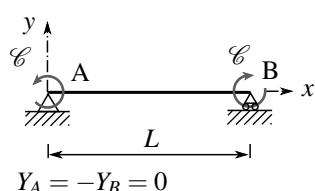
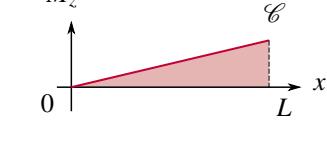
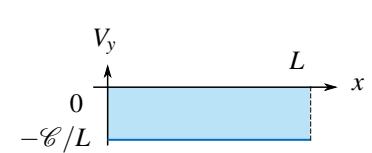
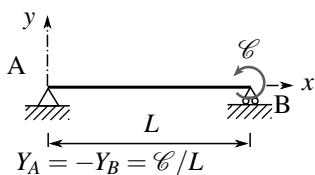
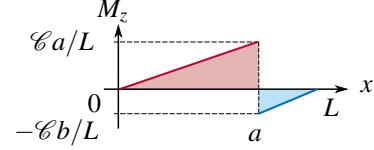
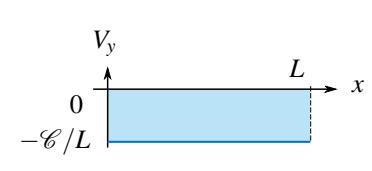
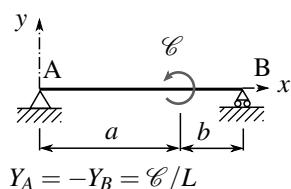
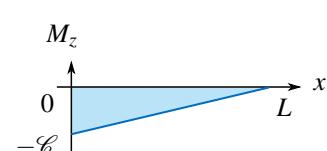
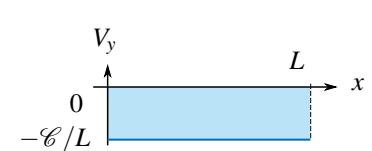
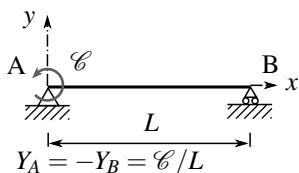
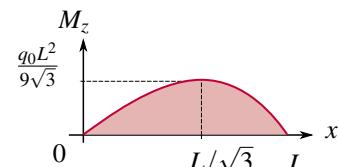
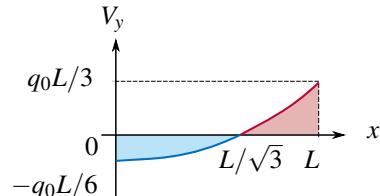
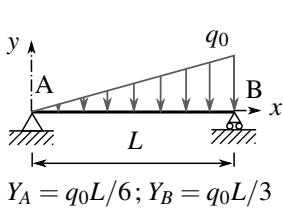
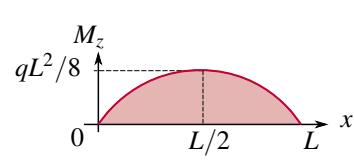
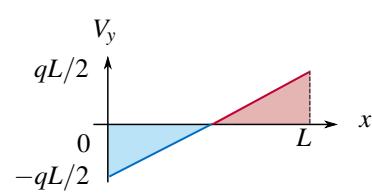
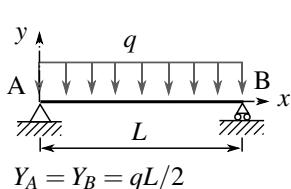
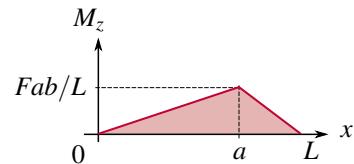
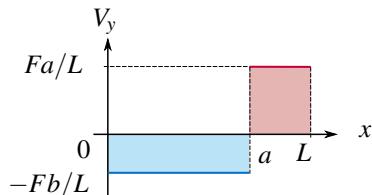
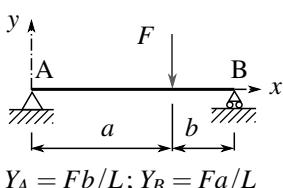
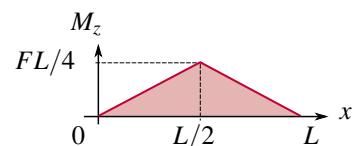
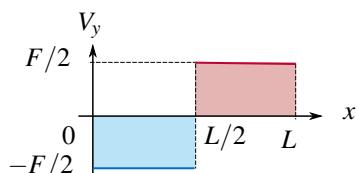
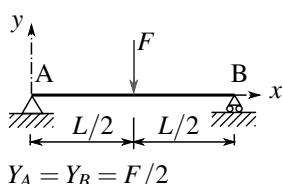
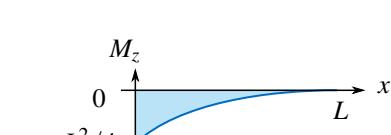
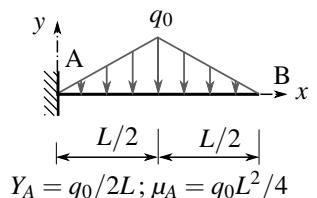
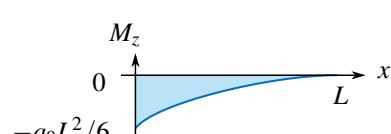
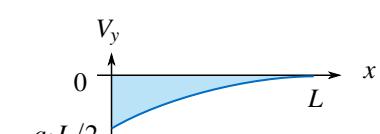
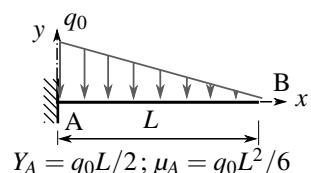
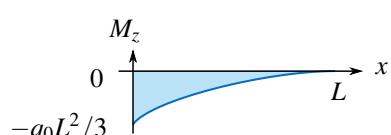
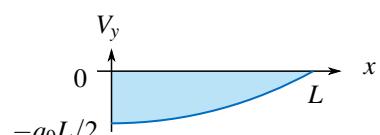
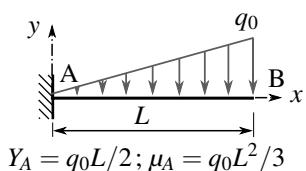
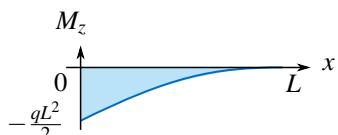
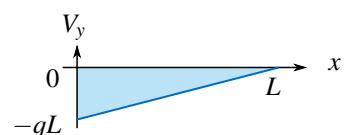
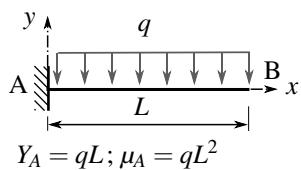
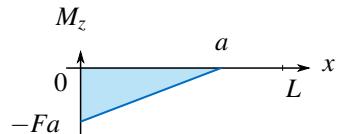
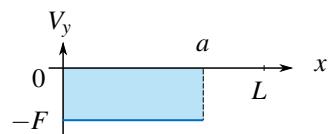
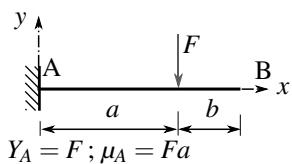
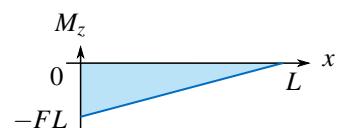
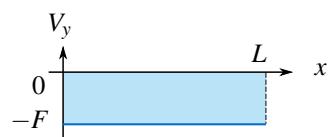
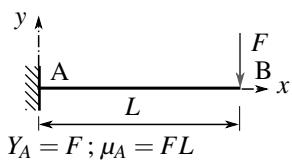
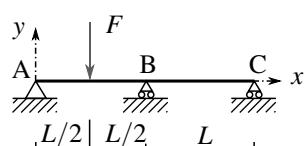
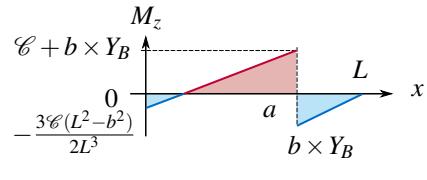
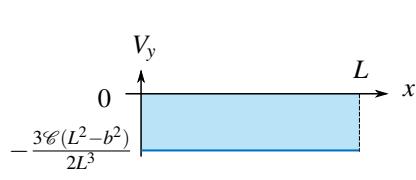
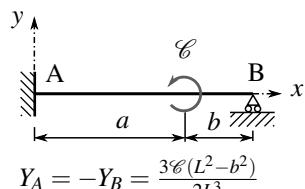
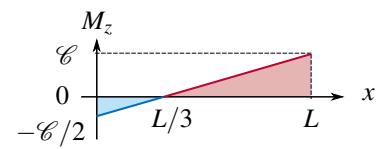
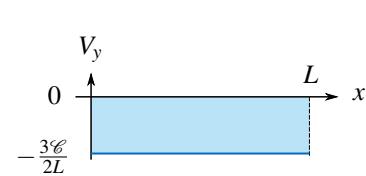
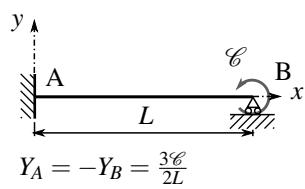
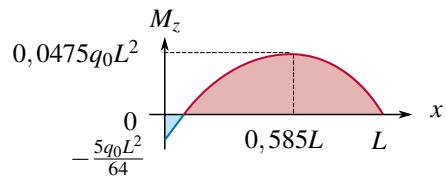
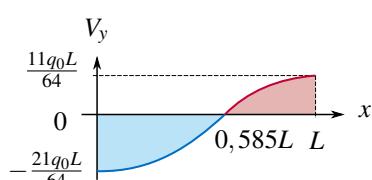
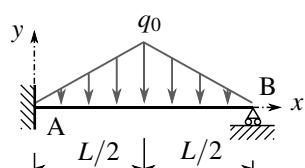
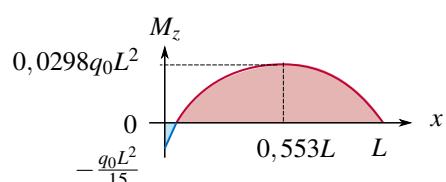
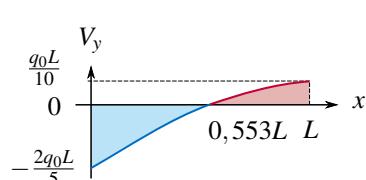
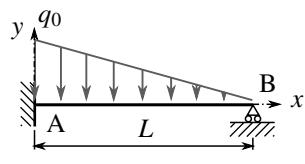
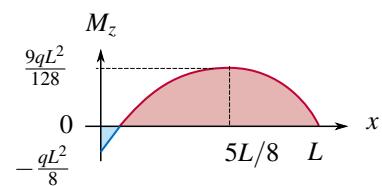
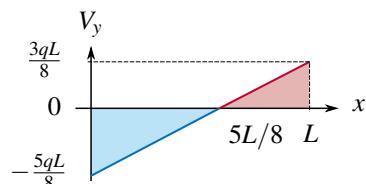
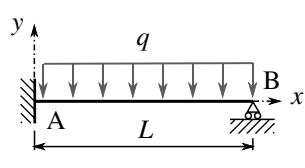
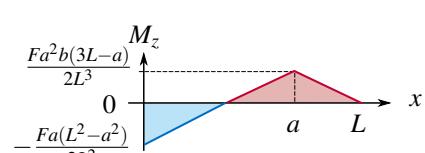
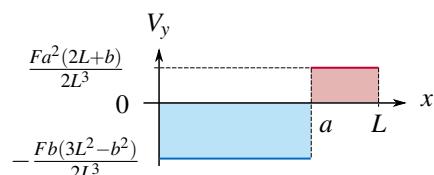
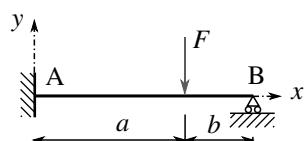
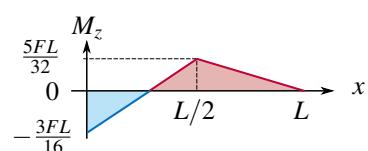
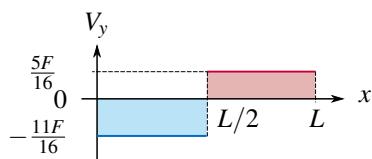
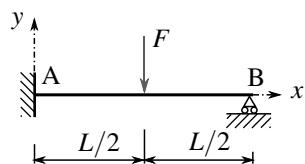
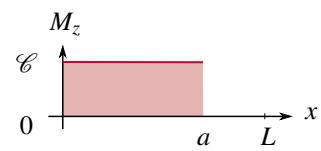
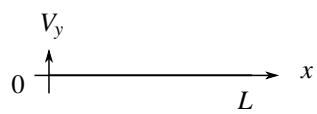
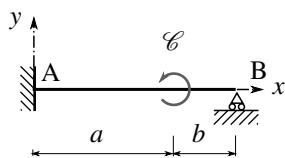


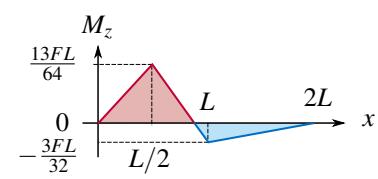
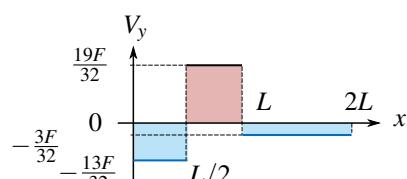
**Poutres isostatiques**

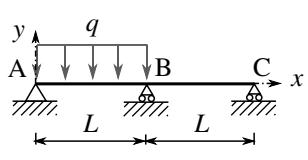


### Poutres hyperstatiques

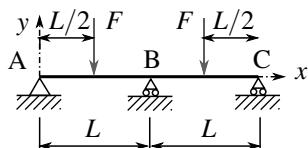


$$Y_A = \frac{13F}{32}; Y_B = \frac{11F}{16}; Y_C = -\frac{3F}{32}$$

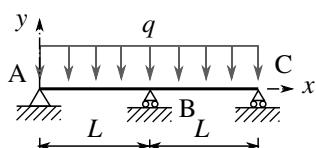




$$Y_A = \frac{7qL}{16}; Y_B = \frac{15qL}{24}; Y_C = -\frac{3qL}{48}$$



$$Y_A = Y_C = \frac{5F}{16}; Y_B = \frac{11F}{8}$$



$$Y_A = Y_C = \frac{3qL}{8}; Y_B = \frac{5qL}{4}$$

