



DTY Tutoring, inc.
Email: dytutoring@gmail.com
Website: www.dytutoring.com

Date: 26th September 2019

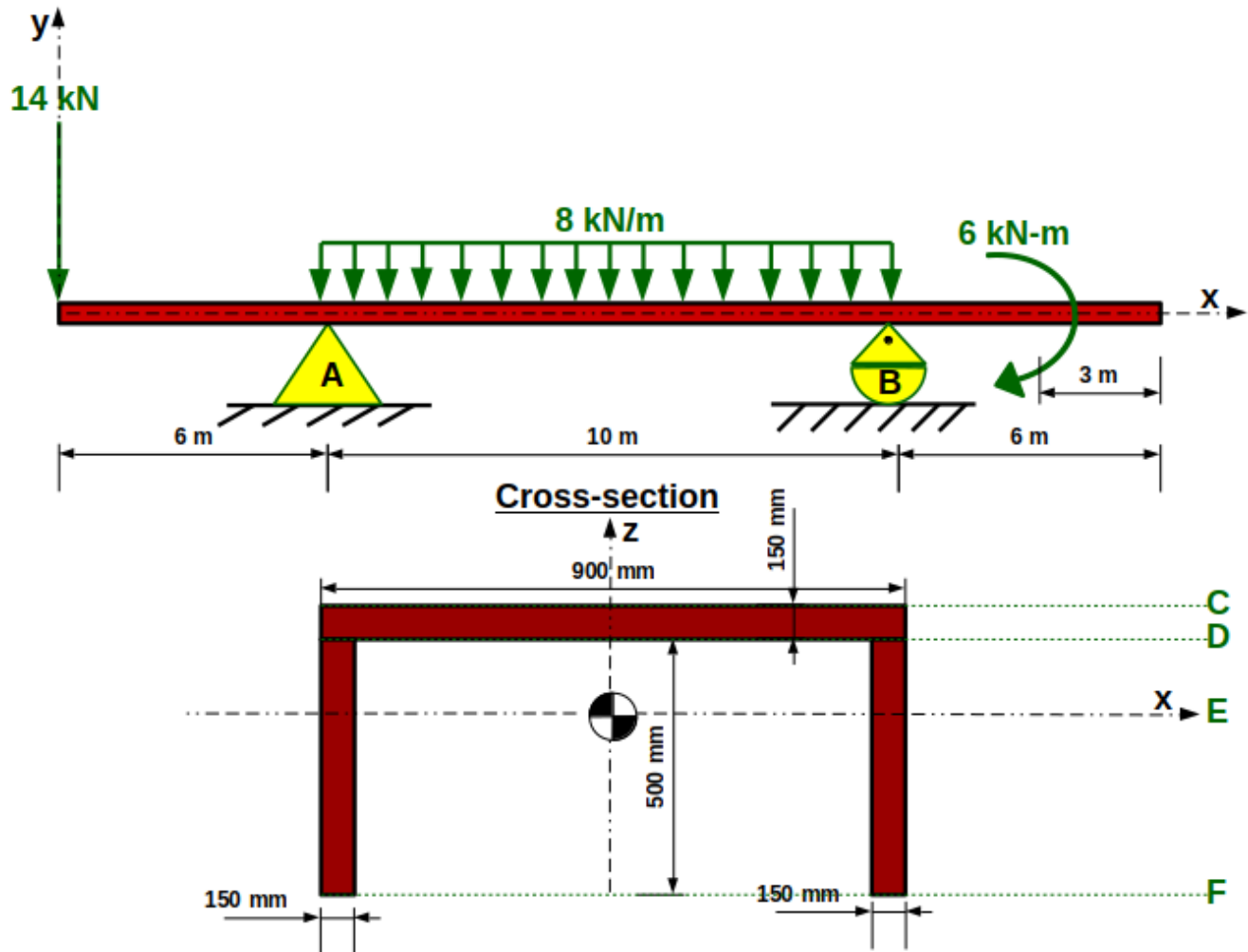
This overhang beam is supported by a pin at A , a rocker at B, and has a uniform distributed load acting in between the supports. Cross-section dimensions of the beam is given. Compute:

(a) the flexural/bending stress at C, D, E and F;

(b) compute the flexural/bending stress and draw the stress distribution at the left support (A) ,

(c) from part (b), what are the maximum flexural tensile and compressive stresses at support A

(d) what are the maximum flexural tensile and compressive stresses that occurs throughout the entire span of the beam?



Answers (refer to solutions for detail)

- (a) $\sigma_C = 1,899 \text{ kPa}$, $\sigma_D = 741 \text{ kPa}$, $\sigma_E = 0$, $\sigma_F = -3,118 \text{ kPa}$
- (b) refer to solution
- (c) $\sigma_{\text{MAX}(T)} = 1,899 \text{ kPa}$, $\sigma_{\text{MAX}(C)} = -3,118 \text{ kPa}$
- (d) $\sigma_{\text{MAX}(T)} = 2,183 \text{ kPa}$, $\sigma_{\text{MAX}(C)} = -3,118 \text{ kPa}$