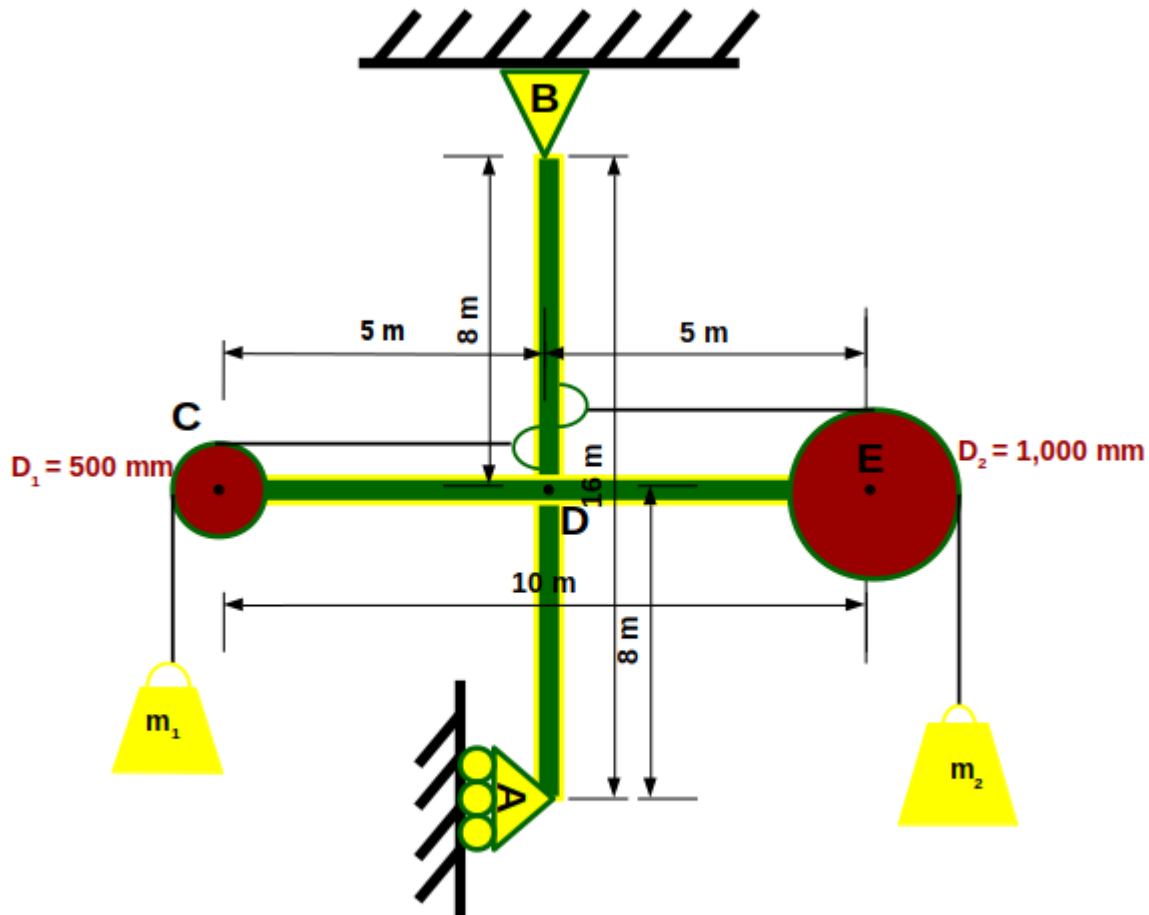


Date: 15<sup>th</sup> May 2019

The structure shown below has a roller support at A and is pinned at B and D, consisting of rigid frames and pulleys. Find the reactions at A, B and D for the frames and machines if  $m_1 = 100 \text{ kg}$  and  $m_2 = 150 \text{ kg}$ .



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**Answers (refer to solutions for detail)**

$$A_x = 61.3 \text{ N} \rightarrow, B_x = 61.3 \text{ N} \leftarrow, B_y = 2.45 \text{ kN} \uparrow, D_x = 491 \text{ N} \rightarrow, D_y = 2.45 \text{ kN} \uparrow$$