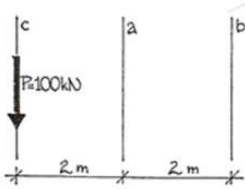


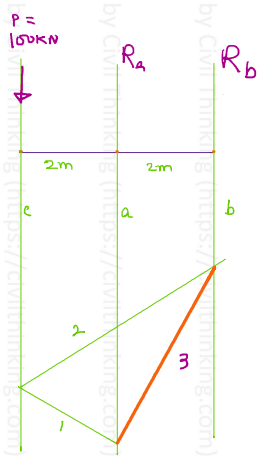
Statics: Force System: **Parallel Force System Equilibrium**

Solved Problem using **graphic method**

Please find on lines of action **a** and **b** two forces parallel to each other and balancing the force **P = 100 kN** on line **c**. Use graphic and numerical methods.

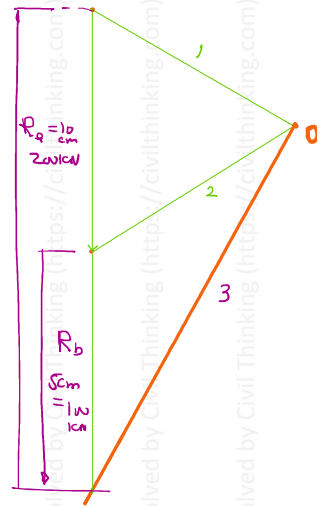


Space Diagram
Scale: 1m = 1cm



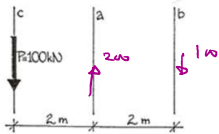
Vector Polygon

Scale: 1cm = 20kN \Rightarrow 1kN = $\frac{1}{20}$ cm \Rightarrow 100kN = $\frac{100}{20}$ = 5cm



$\Rightarrow R_a = 200\text{kN} (\uparrow)$
 $R_b = 100\text{kN} (\downarrow)$

Numerical method:



$\sum M_B = 0: -\frac{(100 \times 4)}{2} + 2R_A = 0$

$R_A = 200\text{kN} \checkmark \text{ o.k.}$

$\sum F_y = 0: -100 + 200 + R_B = 0$

$100 + R_B = 0$

$R_B = -100 \checkmark \text{ o.k.}$

This problem was solved by Civil Thinking (<https://civilthinking.com>)
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