



from Geometry -

$$\angle ROB = \beta = 65^\circ$$

$$\angle ROA = \alpha = 25^\circ$$

at point A from Lami's theorem -

$$\frac{W}{\sin ROA} = \frac{R_B}{\sin ROA} = \frac{R_A}{\sin ROB}$$

$$\frac{500}{\sin (25+65)} = \frac{R_B}{\sin (90+65)} = \frac{R_A}{\sin (180-65)}$$

$$\frac{500}{\sin 90^\circ} = \frac{R_B}{\cos 65} = \frac{R_A}{\sin 65}$$

$$\frac{500}{1} = \frac{R_B}{0.4226} = \frac{R_A}{0.9063}$$

$$R_B = 500 \times 0.4226$$
$$[R_B = 211 \text{ N}]$$

$$R_A = 500 \times 0.9063$$

$$[R_A = 453 \text{ N}]$$

Ans