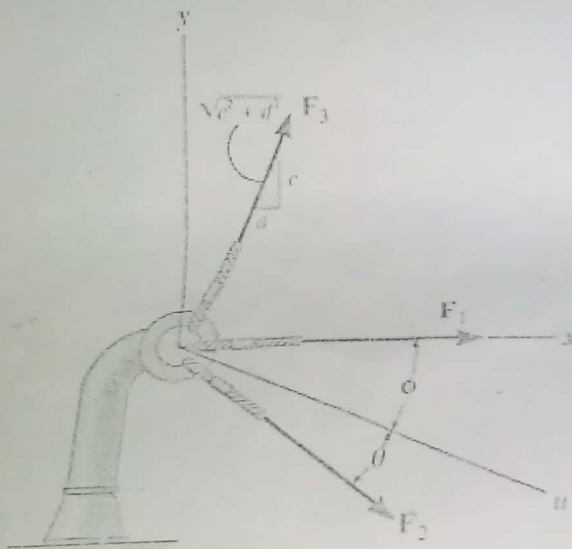
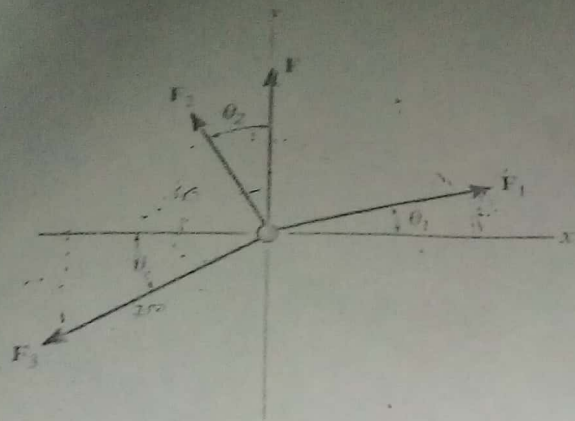


$$\begin{aligned} F_1 &= 200 \text{ lb } c = 3 \\ F_2 &= 400 \text{ lb } d = 4 \\ F_3 &= 300 \text{ lb } e = 3 \\ F_4 &= 300 \text{ lb } f = 4 \end{aligned}$$



$$\begin{aligned} F_R &= 50 \text{ lb} \\ F_1 &= 80 \text{ lb} \\ F_3 &= 52 \text{ lb} \\ \phi &= 25^\circ \\ c &= 12 \\ d &= 5 \end{aligned}$$



Determine the magnitude of F and the orientation θ of the force F_3 so that the particle is in equilibrium.

Given:

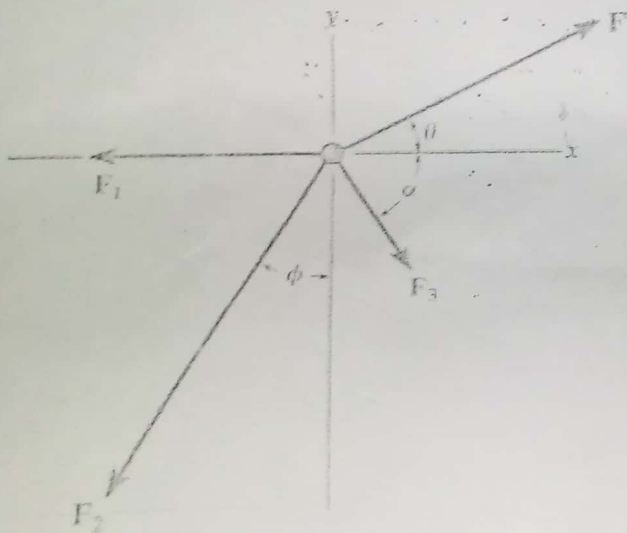
$$F_1 = 700 \text{ N}$$

$$F_2 = 450 \text{ N}$$

$$F_3 = 750 \text{ N}$$

$$\theta_1 = 15^\circ$$

$$\theta_2 = 30^\circ$$



Determine the magnitude and angle θ of F so that the particle is in equilibrium.

Units Used:

$$\text{kN} = 10^3 \text{ N}$$

Given:

$$F_1 = 4.5 \text{ kN}$$

$$F_2 = 7.5 \text{ kN}$$

$$F_3 = 2.25 \text{ kN}$$

$$\alpha = 60^\circ$$

$$\phi = 30^\circ$$

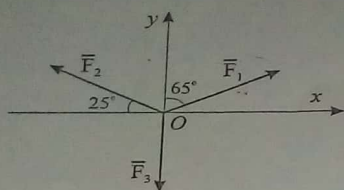


Рис. 1.17.4

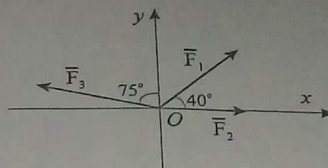


Рис. 1.18.4

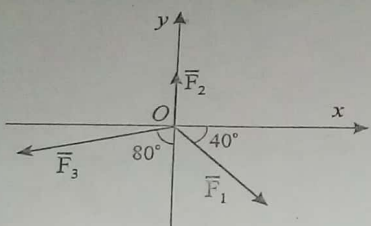


Рис. 1.19.4

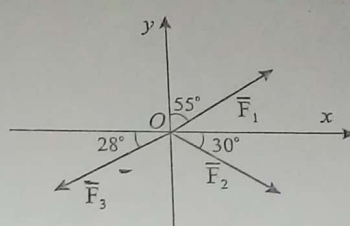


Рис. 1.20.4

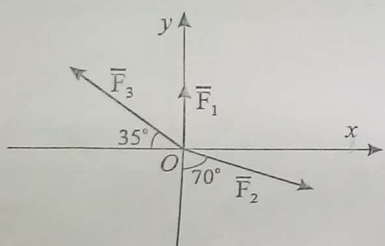


Рис. 1.21.4

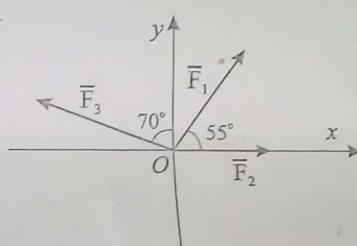


Рис. 1.22.4

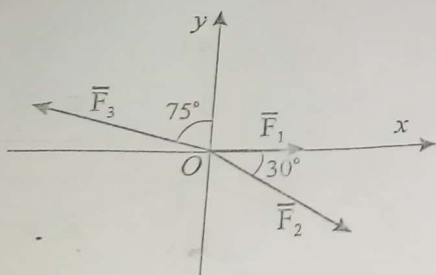


Рис. 1.23.4

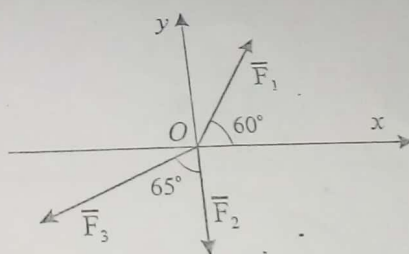
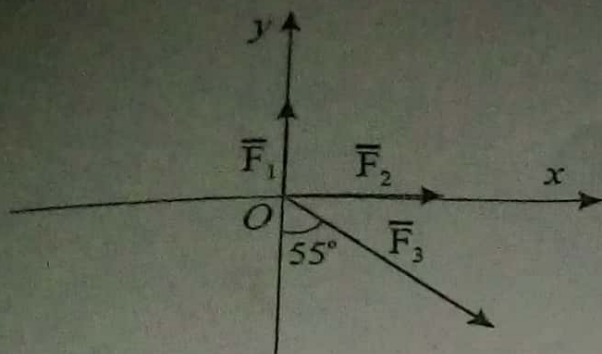
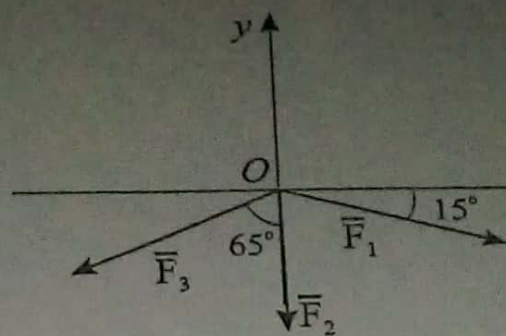


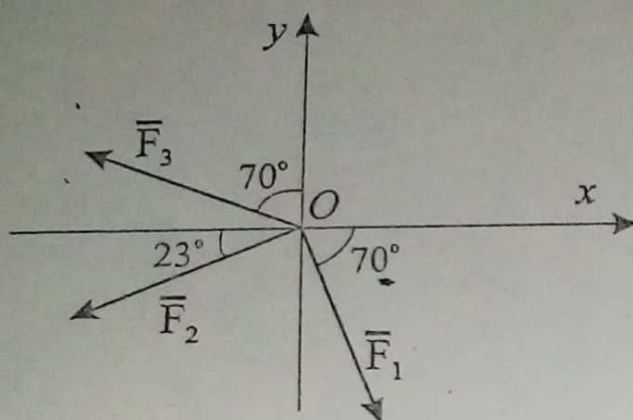
Рис. 1.24.4



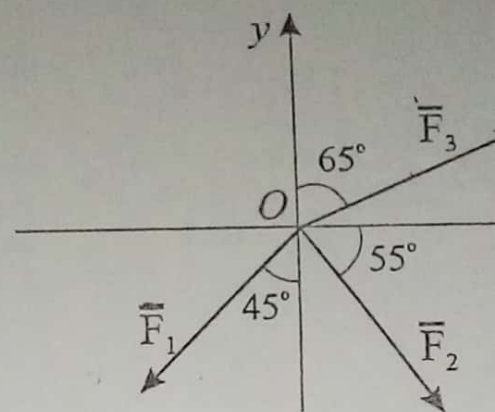
Рыс. 1.9.4



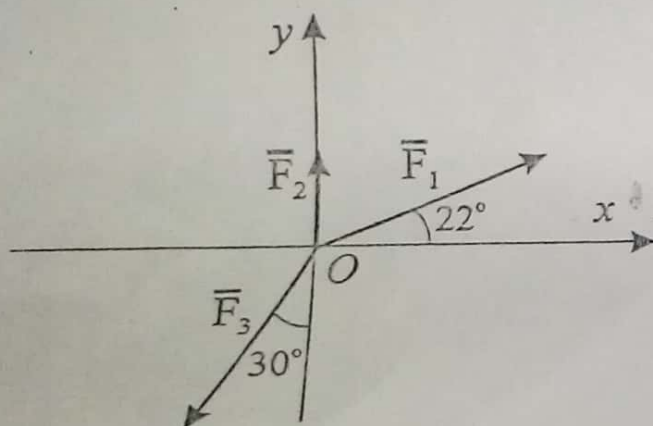
Рыс. 1.10.4



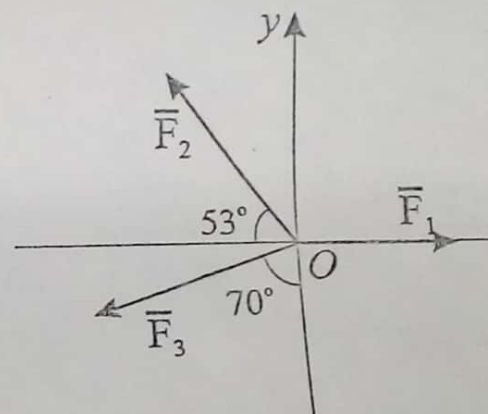
Рыс. 1.11.4



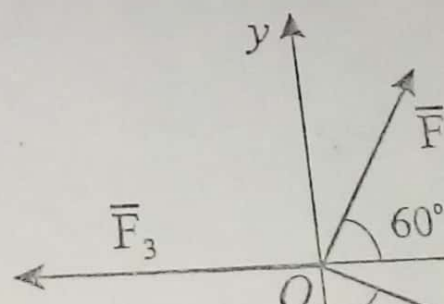
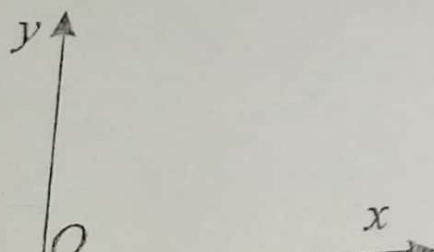
Рыс. 1.12.4



Рыс. 1.13.4



Рыс. 1.14.4



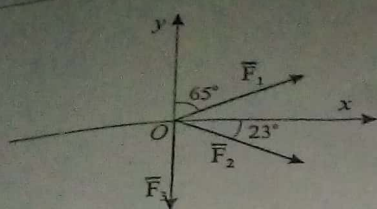


Рис. 1.1.4

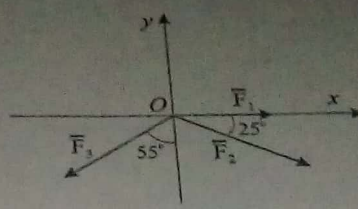


Рис. 1.2.4

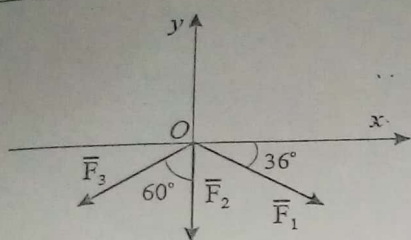


Рис. 1.3.4

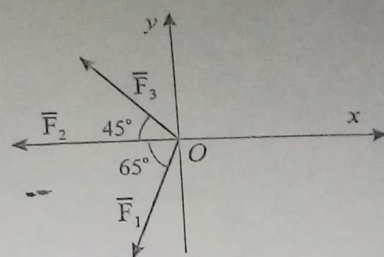


Рис. 1.4.4

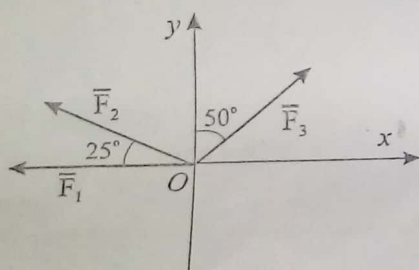


Рис. 1.5.4

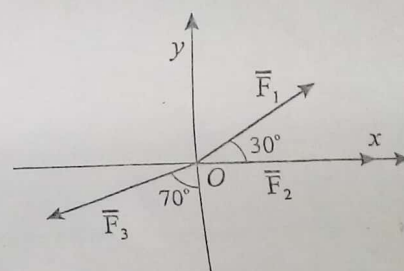


Рис. 1.6.4

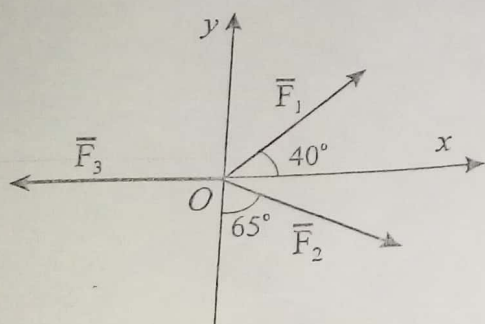


Рис. 1.7.4

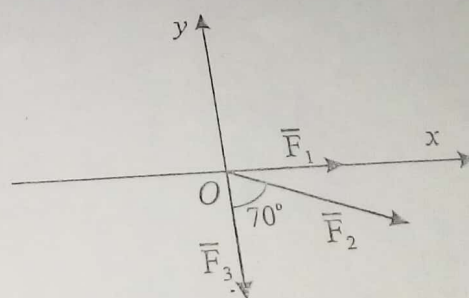


Рис. 1.8.4

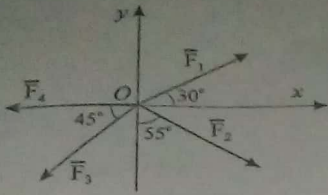


Рис. 1.25.3

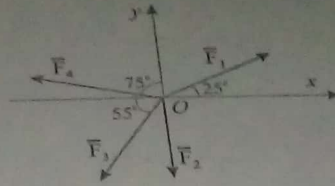


Рис. 1.26.3

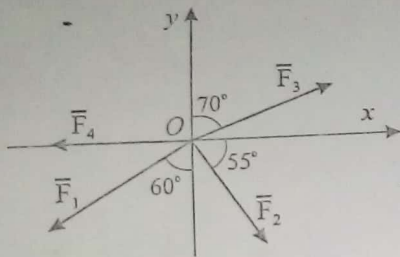


Рис. 1.27.3

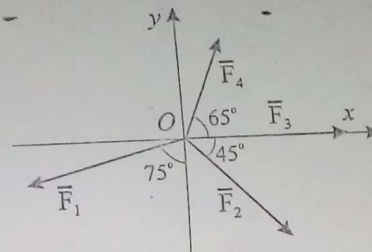


Рис. 1.28.3

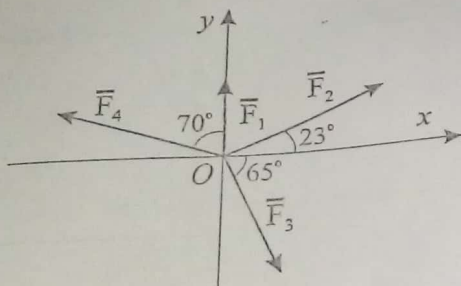


Рис. 1.29.3

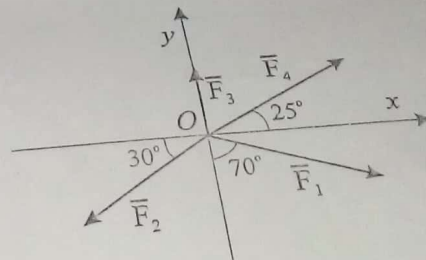


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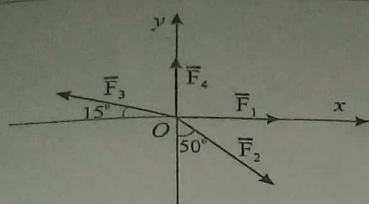


Рис. 1.17.3

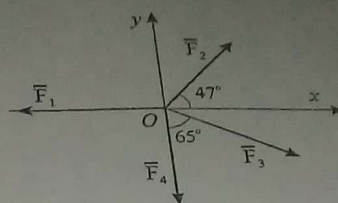


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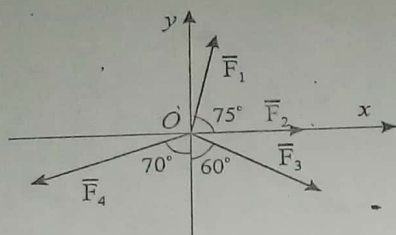


Рис. 1.19.3

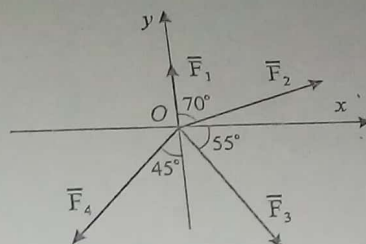


Рис. 1.20.3

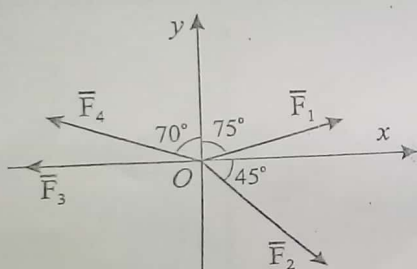


Рис. 1.21.3

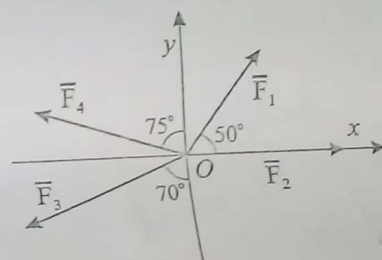


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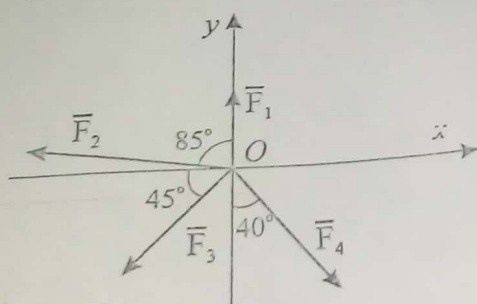


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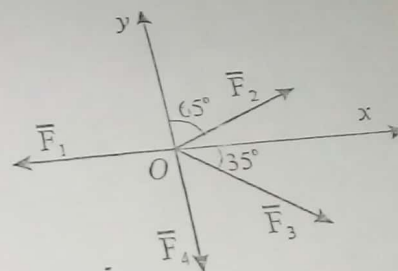


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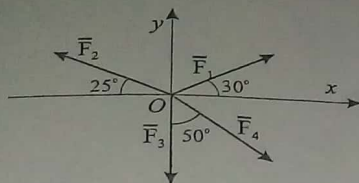


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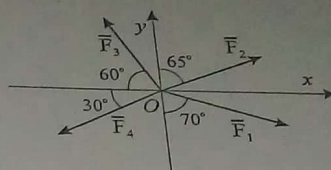


Рис. 1.10.3

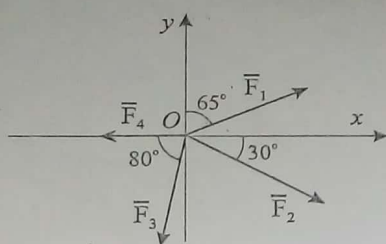


Рис. 1.11.3

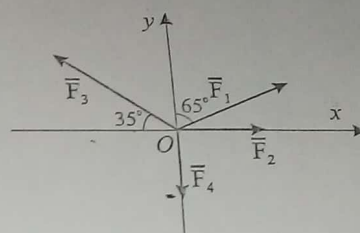


Рис. 1.12.3

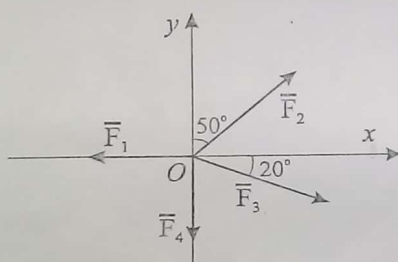


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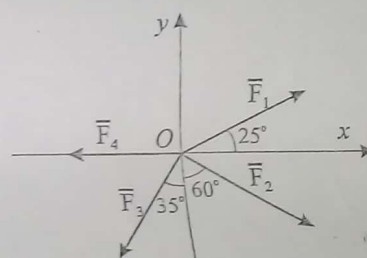


Рис. 1.14.3

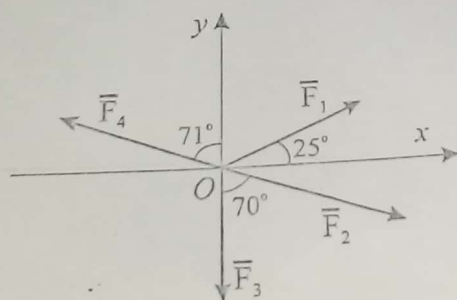


Рис. 1.15.3

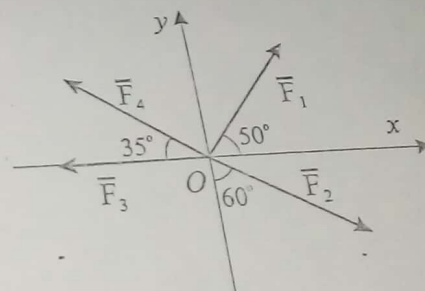


Рис. 1.16.3

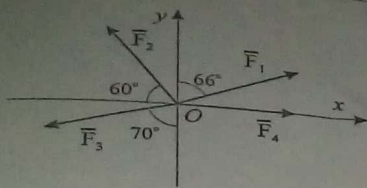


Рис. 1.1.3

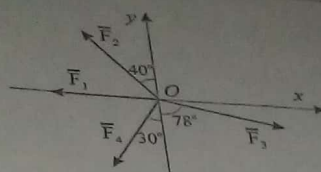


Рис. 1.2.3

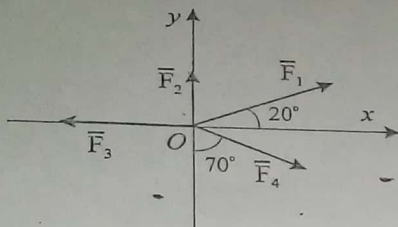


Рис. 1.3.3

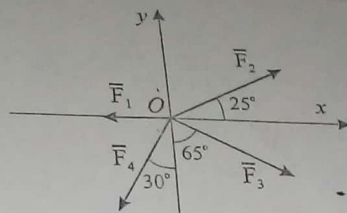


Рис. 1.4.3

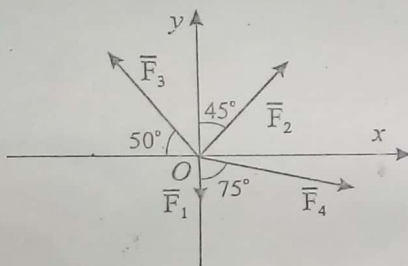


Рис. 1.5.3

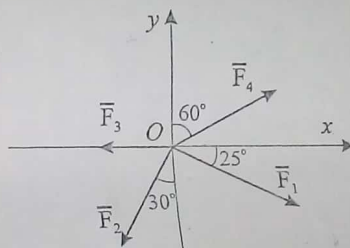


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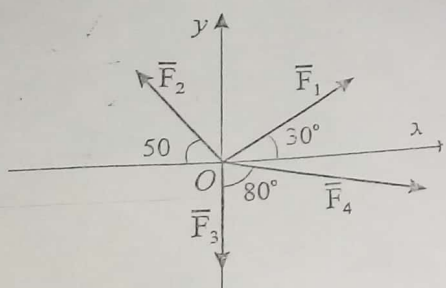


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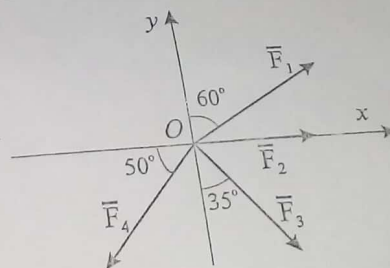


Рис. 1.8.3