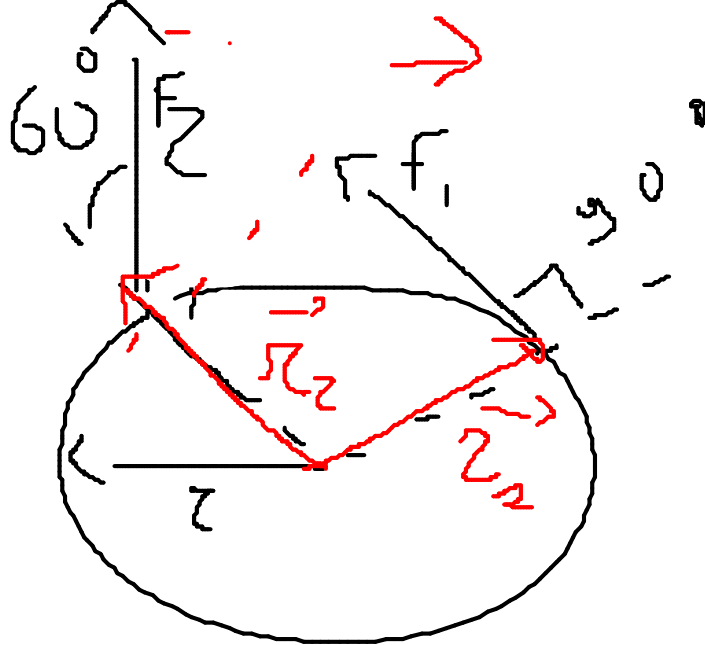


$$r = 0,50 \text{ m}$$

$$F_1 = 10 \text{ N}$$

$$F_2 = 8,5 \text{ N}$$



$$M_1 = F \cdot r \sin(90^\circ) = 10 \text{ N} \cdot 0,5 \text{ m} \sin(90^\circ) = 5 \text{ N}\cdot\text{m}$$

$$M_2 = F \cdot r \sin(60^\circ) \Rightarrow 3,6 \text{ N}\cdot\text{m}$$

$$\vec{M}_1 = \vec{r}_1 \times \vec{F}_1$$

$$\vec{M}_2 = \vec{r}_2 \times \vec{F}_2$$

$$\vec{p} = (p_x, p_y, p_z)$$

$$\vec{r} = (x, y, z)$$

$$\vec{p} \times \vec{r} = (p_y \hat{z} - p_z \hat{y}, p_z \hat{x} - p_x \hat{z}, p_x \hat{y} - p_y \hat{x})$$

$$= (p_y \hat{z} - p_z \hat{y}, p_z \hat{x} - p_x \hat{z}, p_x \hat{y} - p_y \hat{x})$$

$$= (p_y \hat{z} - p_z \hat{y}, p_z \hat{x} - p_x \hat{z}, p_x \hat{y} - p_y \hat{x})$$

$$= p_y \hat{z} - p_z \hat{y} + p_z \hat{x} - p_x \hat{z} + p_x \hat{y} - p_y \hat{x}$$

$$= p_z \hat{x} + p_x \hat{y} + p_y \hat{z} - p_x \hat{z} - p_y \hat{x} - p_z \hat{y}$$

$$a_x b_y \hat{i} \times \hat{j} + a_x b_z \hat{i} \times \hat{k} + a_y b_x \hat{j} \times \hat{i} +$$

$$a_y b_z \hat{j} \times \hat{k} + a_z b_x \hat{k} \times \hat{i} + a_z b_y \hat{k} \times \hat{j}$$

$$\frac{a_x b_y \hat{k} - a_x b_z \hat{j} - a_y b_x \hat{k} + a_y b_z \hat{i} +$$

$$a_z b_x \hat{j} - a_z b_y \hat{i}}$$

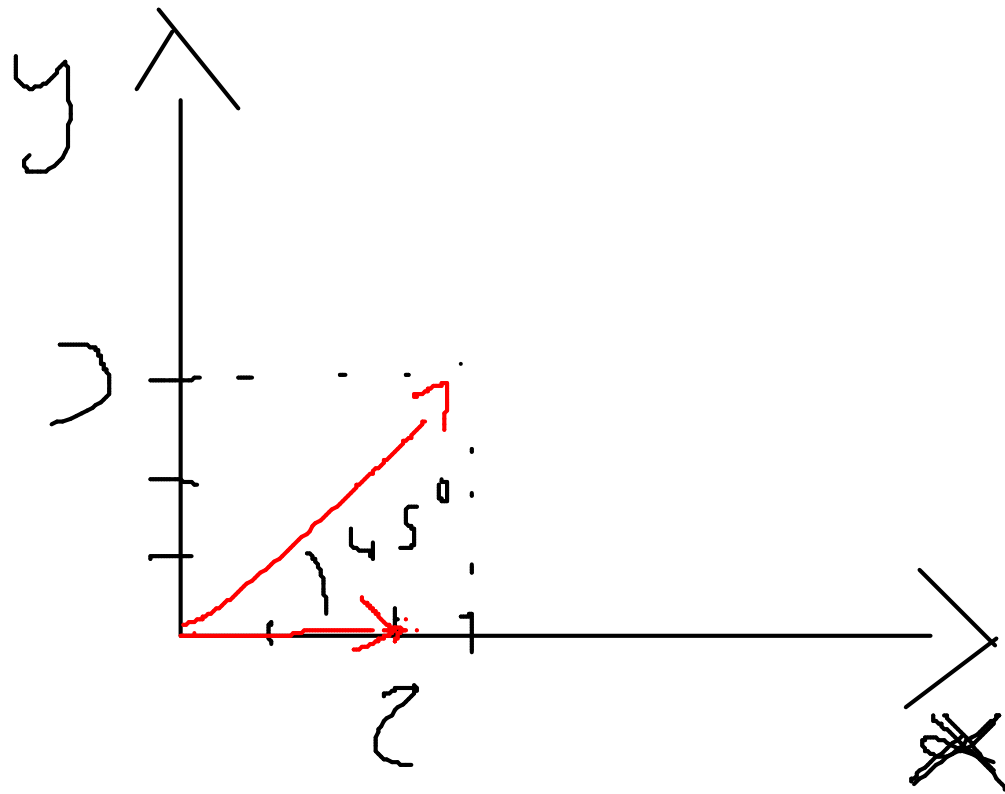
$$(a_x b_y - a_y b_x) \hat{k} - (a_x b_z - a_z b_x) \hat{j} + (a_y b_z - a_z b_y) \hat{i}$$

$$\begin{aligned} &\Rightarrow (2, 0, 0) \\ &\Rightarrow (3, 3, 0) \\ &\Rightarrow (6-0)\hat{k} \end{aligned}$$

$$z = z$$

$$r = 3\sqrt{2}$$

$$r \times \cos = z \cdot 3\sqrt{2} \Rightarrow 6\sqrt{2} \quad \sin(45^\circ) = 6$$



$$\vec{v} = \left(-\frac{1}{\sqrt{2}}, \frac{5}{2}\right) \quad \vec{w} = \left(\frac{3}{\sqrt{2}}, -\frac{15}{2}\right)$$

$$\vec{a} = (-4, 4) \quad \vec{b} = (0, -5)$$

$$\vec{a} = (-2, 3) \quad \vec{b} = \left(\frac{1}{2}, 4\right)$$

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