Solución de problemas sobre el momento de una fuerza

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1.-Ejercicio:

Calculo del momento en dos direcciones, el momento se
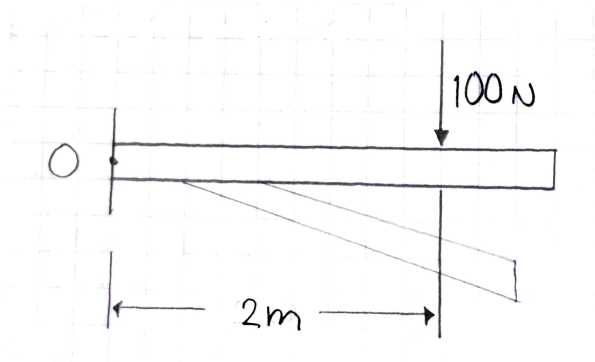
$$Mo = (rxFy - ryFx)\,k$$

Ejemplo:

Figure 1: This is a caption

$rx = 2m$

$ry = 0$

$fx = 0$

$fy = 100N$

Procedemos a realizar la formula:

$$Mo = [(2m)(-100N) - (0)(0)]$$

$$= -200Nm\ k$$

2.- Ejercicio:
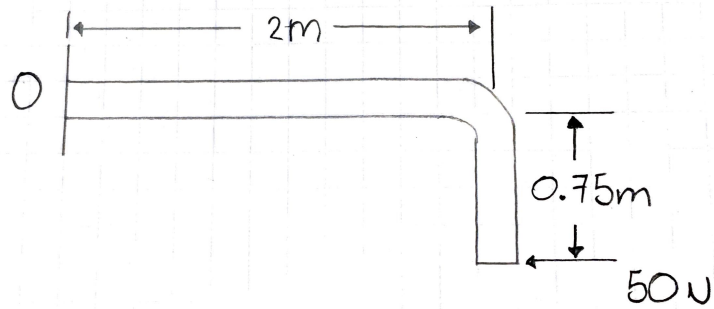
Figure 2: This is a caption

$rx = 2m$

$ry = -0.75m$

$fx = -50N$

$fy = 0$

Procedemos a realizar la formula:

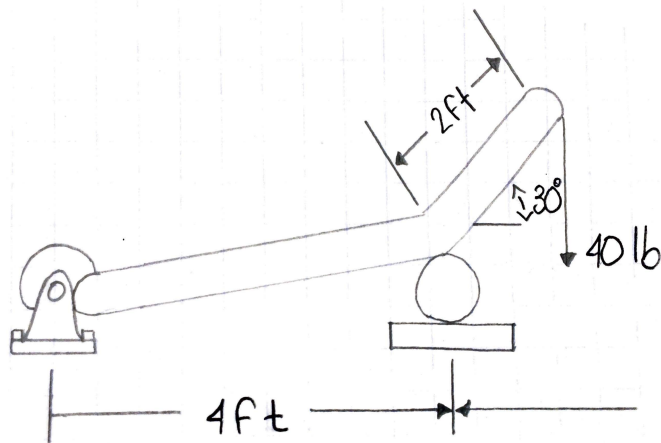$Mo = [(2m)(0) - (-0.75m)(-50N)]$

$= -37.5N \cdot m$

3.- Ejercicio:

Figure 3: This is a caption

$rx = 4ft + 2\cos 30$

$ry = 2 \ \sin \ 30$

$fx = 0$

$fy = -40lb$

Procedemos a realizar la formula:

$Mo = [(4ft + 2ft + \cos 30)(-40lb) - (2 \sin 30)(0)]$
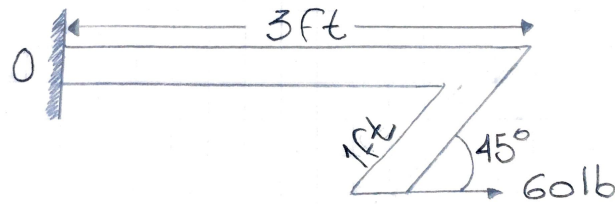
$= -229ft \cdot lb$

4.- Ejercicio:

Figure 4: This is a caption

$rx = 3ft - 1ft \cos 45$

$ry = -1ftsen45$

$fx = 60lb$

$fy = 0$

Procedemos a realizar la formula:

$Mo = [(3ft - 1ft \cos 45)(0) - (1ftsen45)(60lb)]$

$= 42.4ft \cdot lb$