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VARIANON'S THEOREM . 11 The algebraic sum of the moments of any number of foreir about any point in their plane is equal to the moment of this accultant force about the same point. It is also known as theorem of momente. Fid,+ Fide+ Fada= Rd R= bKN mex bon = 36KN 3 10 (4-0) = 1 n 12 D=112 used for localing the resultant force) Four Parallel forces of magneticular 10N, 15N, 201 and 35N are shown on figure . Determine with magnetide & direction of the resultant. Find the distance of risultant point A. herm SMA = 0 ION 3511 oix.e P2×b) 5 (4×2) 2m h Im 1m



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Magnitude of Resultant R= 10-15-20+35 force Z ION Location 1 ENA = (10×0) + (15×1) + (20×3) - (35×4) = 15+60-140 = - 65 Nm. Moment of Resultant force = RXX RXX = EMA SPAM (E 0X002) ION 151 LOKN 35N E=IDN . 2m Im Im 6.5m 3) Find & & & @ the following figure 150CN Ø: Ó 780 EHIT 1-2M 0.3m \sim 0.25m 0.6 Second



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	A SHE = -500-TOOL - 3 S trattont & that your
	2 -10-50KN
3	* EV 2 - 600 + 300
	BOD KN
	* $(\mathbf{R}_{2}\sqrt{\mathbf{\xi}_{H}\mathbf{e}_{\pm}(\mathbf{\xi}\mathbf{v}^{2})} + (1\times i)) + (1\times i)) = MN_{2}^{2}$
	= 1285.49 W) - = (41 - 08 + 3) C
	+ ac + Ensil Stanting of Same
	= 13.495' (H 3 . x x 3
	+ Apply Vavignon's Theorem
	(500×0·3) - (600×0·25) - (300×0·6) - (750×1·2) - 80
	there we have here R.Z.
	z = 01.902m
	A
	Sin xx Zy
	Sin a z z
	2 - Z my i
	Strip
	$= \frac{2}{2} \left[\frac{1}{2} \left[\frac{1}{2}$
	Sin 13.49
h	x 2 3.867m
	set t