CMGT 340	Exam #1	Fall 2018

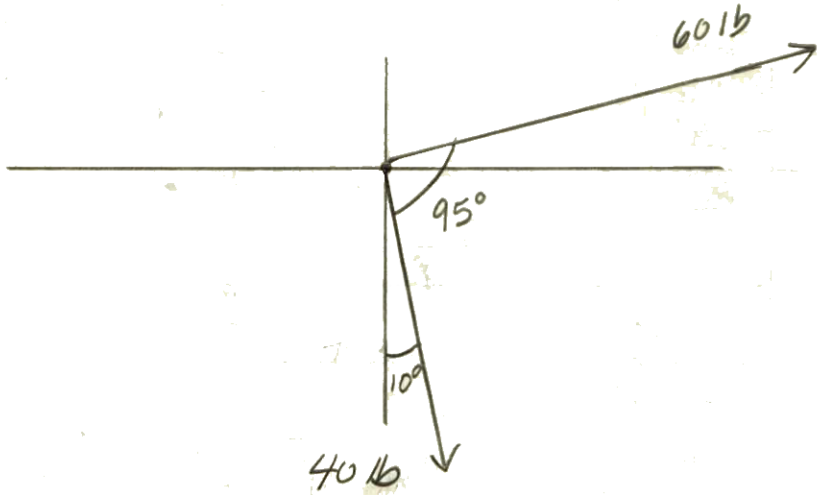
One page of notes (Front & Back) hand written by You.
Algebra & Trig Cheat sheets
Show ALL work for full credit

NO CELL PHONES

All angles are to be measured ccw from the +x-axis

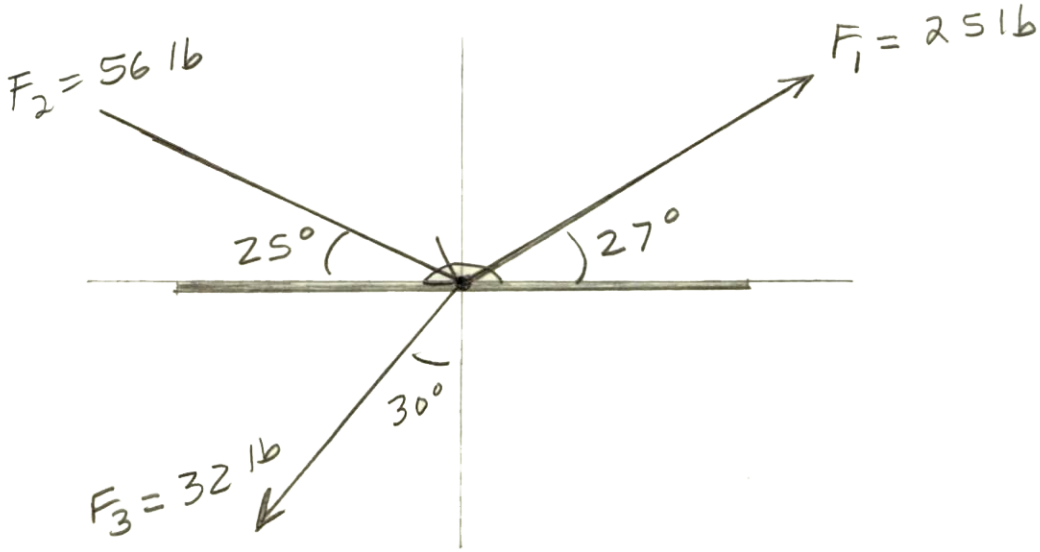
Name _____

1. Determine the magnitude and direction of the resultant force using the <u>parallelogram Law</u>



2. Determine the magnitude and direction of the resultant force using the Triangle Rule.

3. Determine the magnitude and direction of the resultant force for the system shown.



Solution. use positive angles measured ccw from the + x-axis

Force (lb)	Direction (θ)	$F_x = F\cos\theta$ (lb)	$F_y = F\sin\theta$ (lb)
		$\Sigma F_x =$	$\Sigma F_y =$

$R_x = \Sigma F_x =$ _____

$R_y = \Sigma F_y =$ _____

} the resultant lies in Quad _____

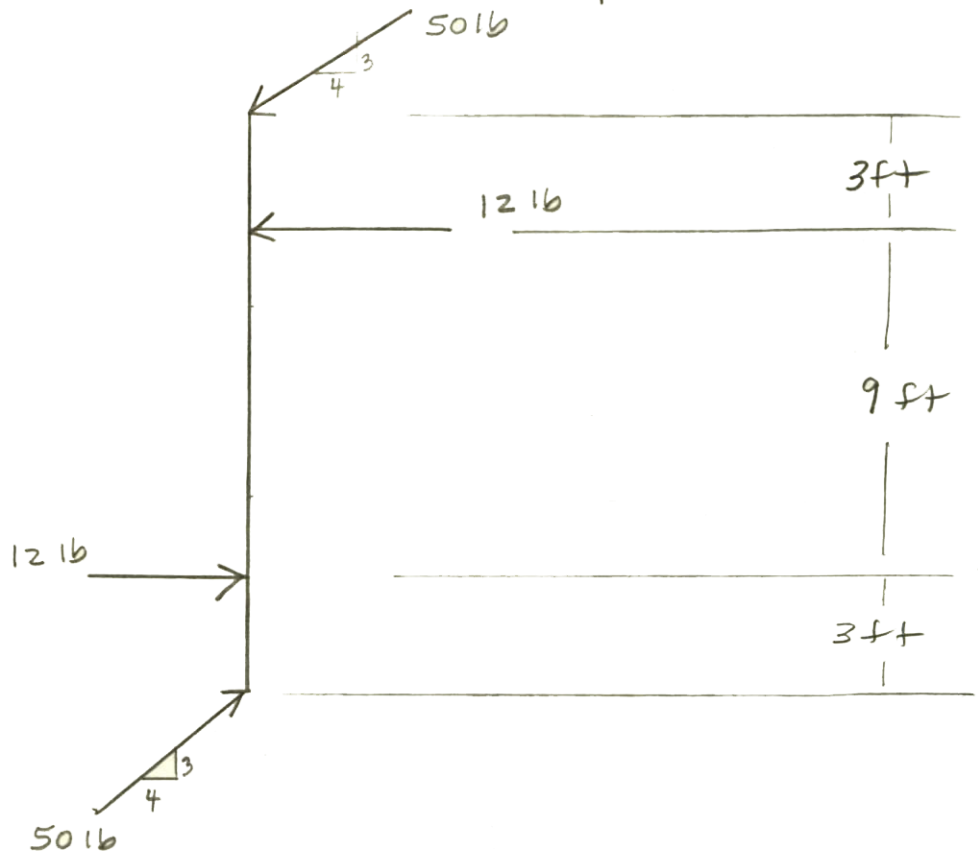
$R =$ _____

$\alpha = \tan^{-1}\left|\frac{R_y}{R_x}\right| =$ _____

$\Theta =$ _____

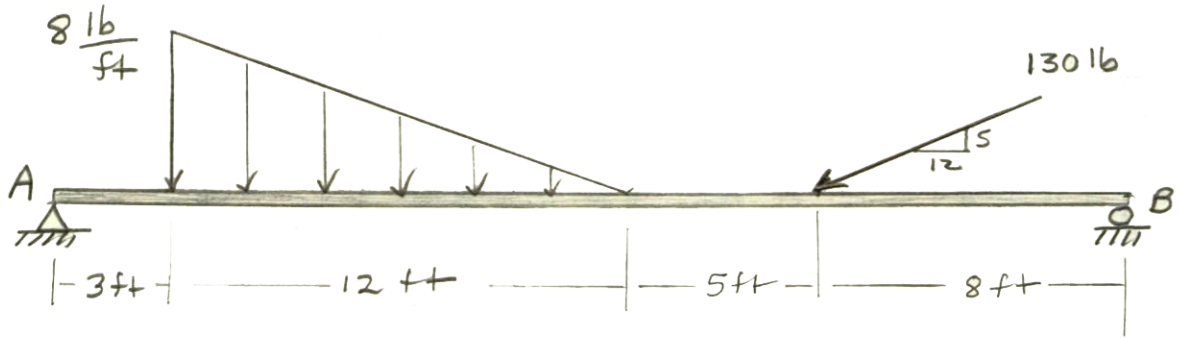
$R =$ _____ (magnitude) _____ (Direction (θ))

4. Determine the moment due to the couples.



Solution.

5. Determine the magnitude, direction, and location of the resultant force for the force system shown wrt point A.



Solution.