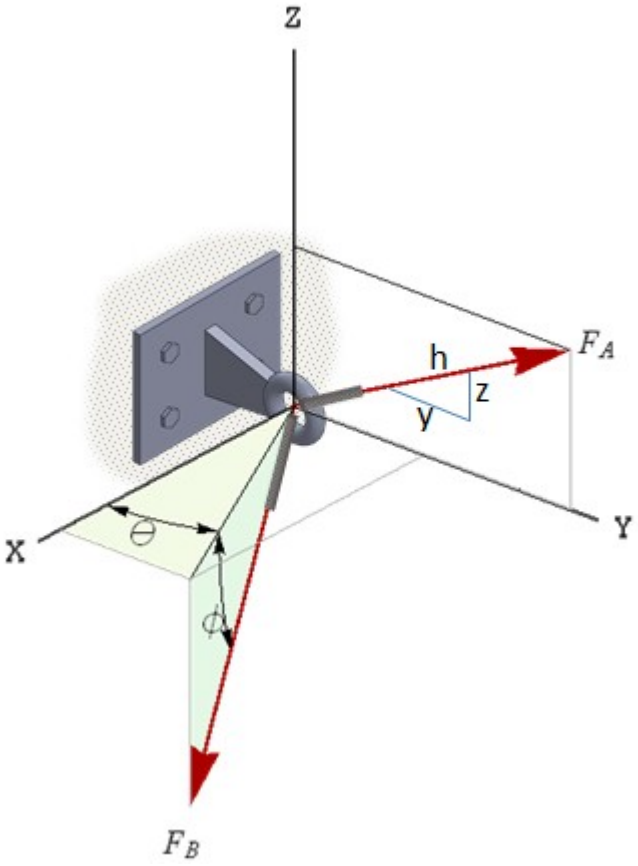
Online Homework System

Assignment Worksheet
6/7/22 - 3:19:22 PM MDT

Name: _____ **Class:**
Class #: _____ **Section #:** _____
Instructor: Parker Schnepf **Assignment:** 2.1 Homework Exercises

Question 1: (10 points)



Find the resultant force acting on the bracket due to forces $\mathbf{F_A}$ and $\mathbf{F_B}$, given:
$\mathbf{F_A}$ = 350 *N*, **y**,**z**,**h**=12,5,13, respectively
$\mathbf{F_B}$ = 600 *N*, **θ** = 35°, **Φ** = 40°
(ans: $\bar{\mathbf{F}}$ = <377, 587, -251> N)

Select problem completion status from drop-down list:

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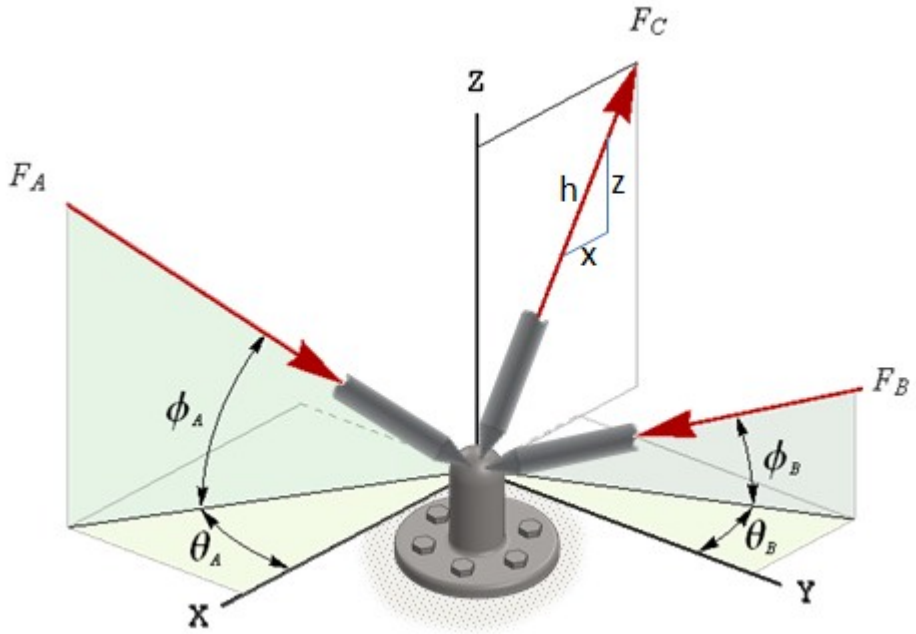
Question 2: (10 points)



Find the magnitude and direction coordinate angles of the resultant force $\mathbf{F_R}$, given:

$\mathbf{F_A}$ = 170 *lbs*, $\boldsymbol{\theta_A}$ = 25°, $\boldsymbol{\Phi_A}$ = 60°

$\mathbf{F_B}$ = 180 *lbs*, $\boldsymbol{\theta_B}$ = 65°, $\boldsymbol{\Phi_B}$ = 65°

$\mathbf{F_C}$ = 230 *lbs*, **x**,**z**,**h** = 12,5,13, respectively

(ans: $\boldsymbol{F_R}$ = 313 lbs, $\boldsymbol{\alpha}$ = 135.°, $\boldsymbol{\beta}$ = 89.3°, $\boldsymbol{\gamma}$ = 135°)

Select problem completion status from drop-down list:

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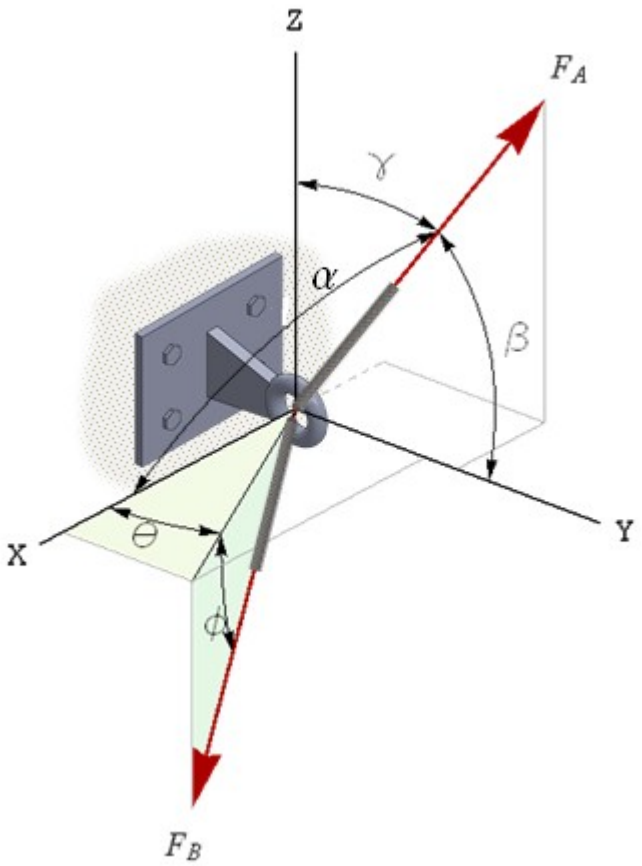
Question 3: (10 points)



Find the magnitude and direction coordinate angles of force $\mathbf{F_A}$, given:

$\mathbf{F_B}$ = 500 *N*, **θ** = 40°, **Φ** = 30°

$\bar{\mathbf{F}}_\mathbf{R}$ = <-250, 500, 400> *N*

*(ans: $\mathbf{F_A}$ = 900 N, **α** = 130°, **β** = 75.7°, **γ** = 43.8°)*

Select problem completion status from drop-down list:

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