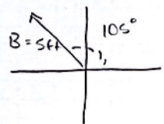
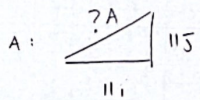


1-5-Prac.

9-2-2022

Isaac Abella

A) x_{com} of A+Bgiven vector $A = (11\hat{i} + 11\hat{j})$, Vector $B = 5\text{ ft}$ @ 105° ccw from x-axis

$$x = -1.29$$

$$y = 4.83$$

$$\vec{A} = 11.55\text{ ft}$$

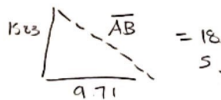
$$\vec{B} = 5\text{ ft}$$

$$a_{xcom} + b_{xcom} = 12.29 + 1.67\text{ ft}$$

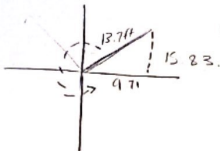
B)

$$(11\hat{i} + 4.83) + (11 + -1.29)$$

$$15.83 \quad 9.71$$



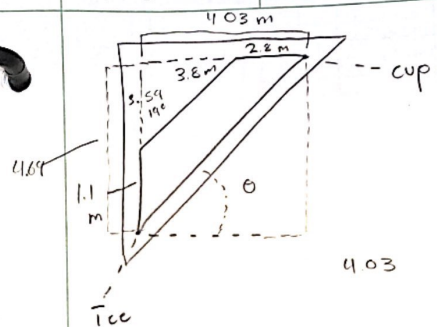
C)



1-5-2

9-2-22

Isaac Abella

A) x_{com} of 3 & vec. with 19° of EN

$$|\vec{A}| = 3.8 \quad 3.8 \frac{\sin(19^\circ)}{\sin(90^\circ)} = 3.54\text{ ft} = 1.23\text{ m}$$

$$B) 1.23 + 2.2 = 4.03\text{ m}$$

$$C) 1.1 + 3.54 = 4.64\text{ m}$$

$$D) \sqrt{(4.03)^2 + (4.64)^2} = 6.19\text{ m}$$

$$E) \tan^{-1}\left(\frac{4.64}{4.03}\right) = 49.3\text{ deg.}$$