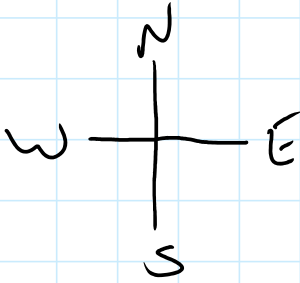


# Vectors I

Tuesday, February 6, 2018

11:11 AM

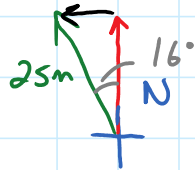
SOH-CAH-TOA



Components:

25 m @ 16° [W of N]

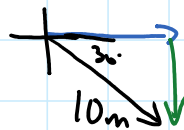
starting side



$$N = 25 \cos 16^\circ = 24.0 \text{ m}$$

$$W = 25 \sin 16^\circ = 6.9 \text{ m}$$

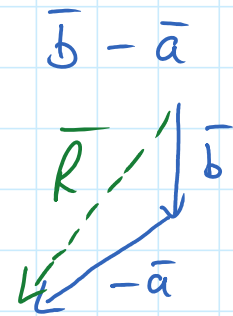
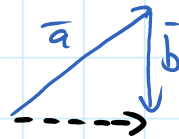
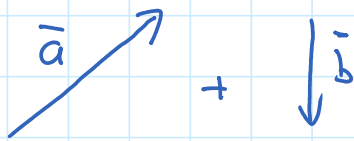
10 m @ 30° [S of E]



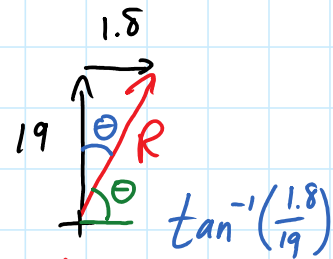
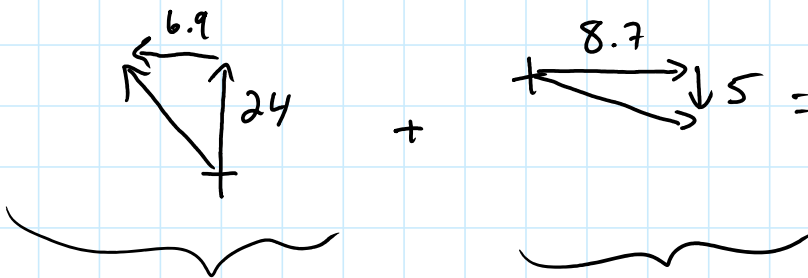
$$S = 10 \sin 30^\circ = 5.0 \text{ m}$$

$$E = 10 \cos 30^\circ = 8.66 \text{ m}$$

Adding / subtracting



1) 25 m @ 16° [W of N] + 10 m @ 30° [S of E]



$$X^2 = 19^2 + 1.8^2$$

$$X = 19.1 \text{ m @ } 5^\circ \text{ [E of N]}$$

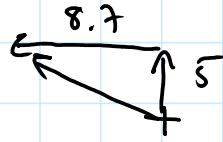
85° [N of E]

2)

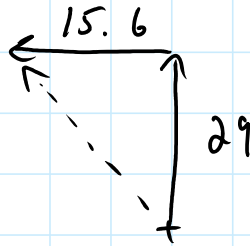




+



$X = 19.1 \text{ m} @ 5^\circ \text{ [E of N]}$   
 $85^\circ \text{ [N of E]}$



$32.9 \text{ m} @ 28^\circ \text{ [W of N]}$