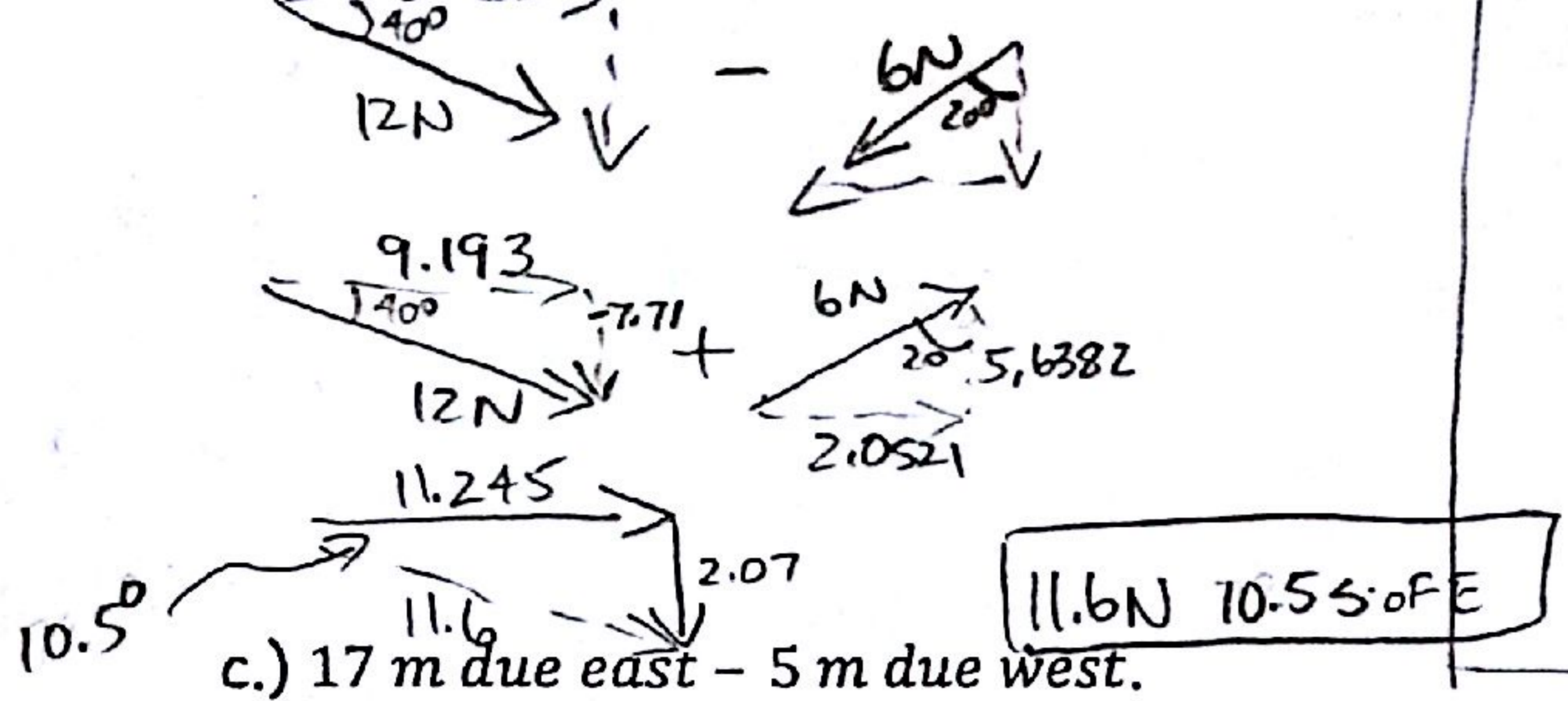


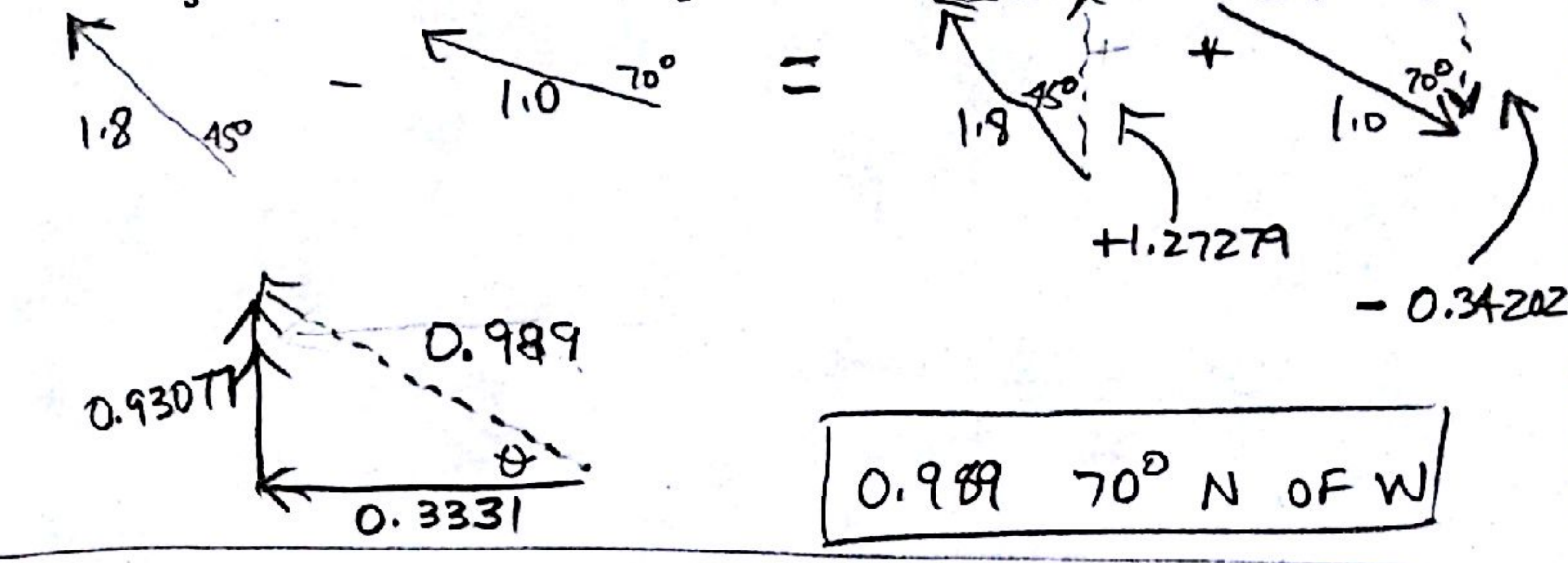
Vector Subtraction

1.) Subtract the following vectors:

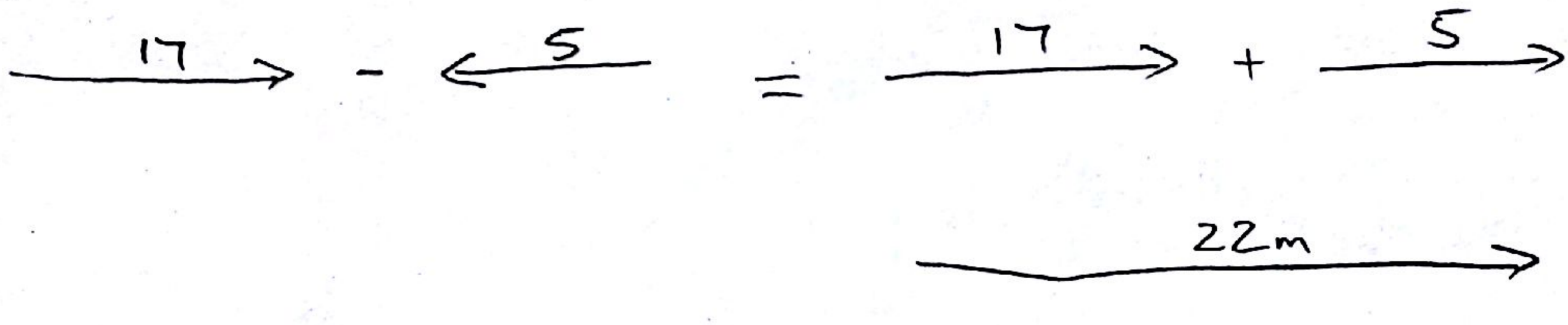
a.) 12 N at 40° S of E - 6 N at 20° W of S



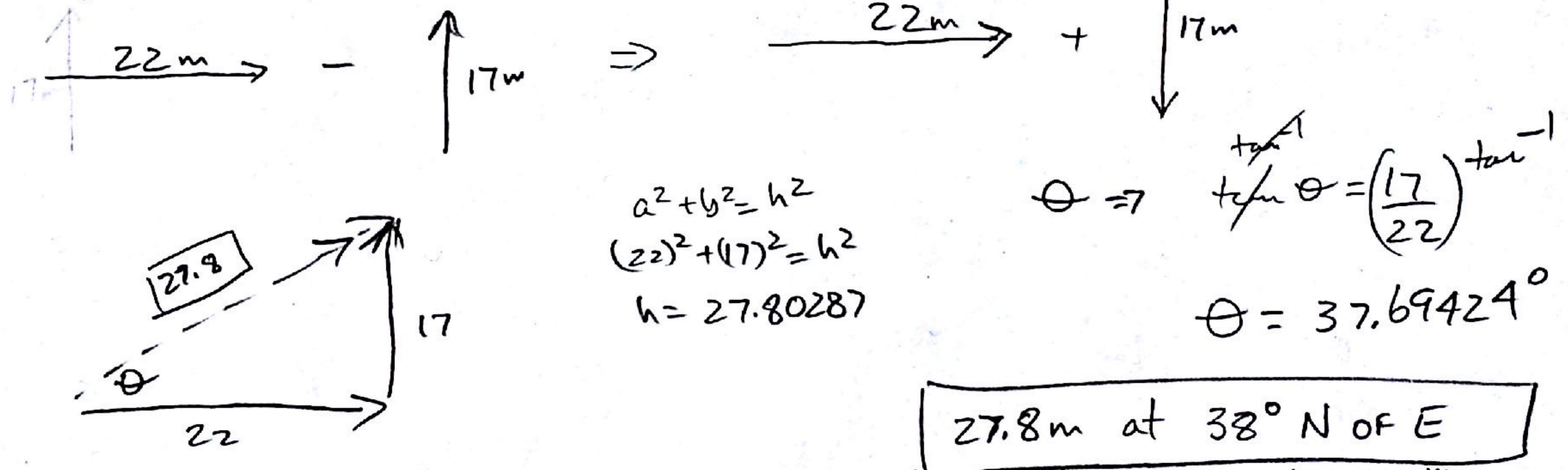
b.) 1.8 m/s at 45° W of N - 1.0 m/s at 70° W of N



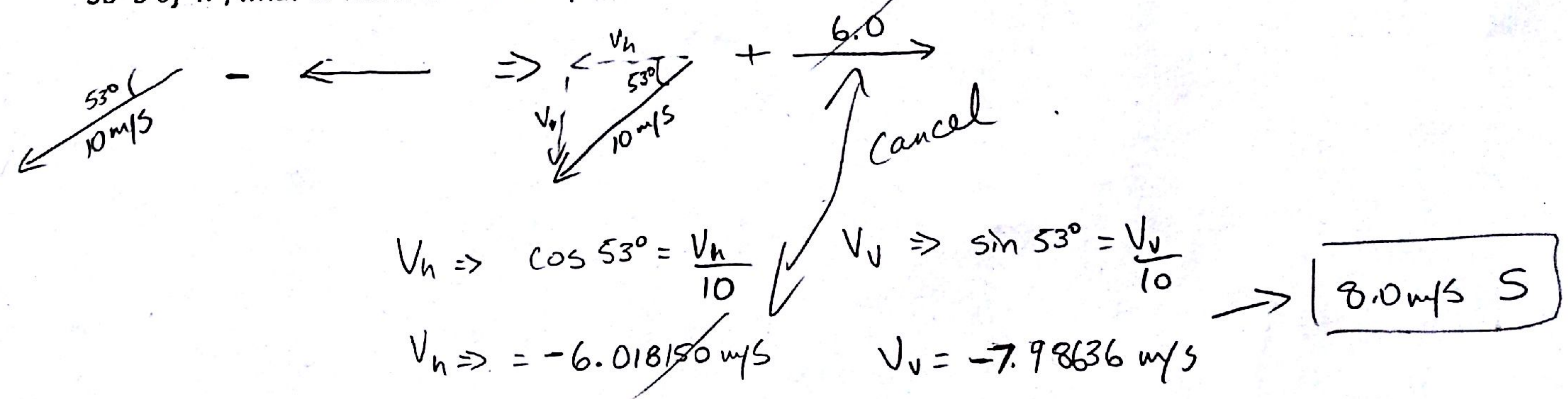
c.) 17 m due east - 5 m due west.



2.) A cat walks 17 m due north. It is later seen 22 m due east of its starting point. What was its change in displacement?



3.) A bird can fly at 6.0 m/s and is pointed due west. From the ground it appears to be travelling at 10.0 m/s at 53° S of W, what is the wind's velocity?



- Answers -
- 1a.) 11.6 N at 10.5° S of E
 - 1b.) 0.99 m/s at 20° W of N
 - 1c.) 22 m [E]
 - 2.) 27.8 m at 38° N of E
 - 3.) 8.0 m/s due south