

Name \_\_\_\_\_

Date \_\_\_\_\_

### Vector Based Word Problems - Independent Practice Worksheet

Complete all of the problems.

1. Lucy rides a bicycle from her home. She goes north at 30 m/s and east at 22 m/s. What is her velocity relative to her mom waiting at home?

2. A radar station detects a helicopter 140 km away from the base towards east. After 2.00 minutes, the helicopter is 250 km from the radar base towards south. Find the average velocity of the helicopter.



3. Sophie goes to the office. She goes 80 km towards north. After 3.00 minutes, Sophie is 160 km towards east. Find Sophie's average velocity.

4. Elizabeth is leaving the park. She goes 30 km west and 20 km south. How far has she travelled relative to an observer sitting in the park?

5. James rides a car from his office. He goes east at 60 m/s and south at 50 m/s. What is his velocity relative to his friend waiting at James's office?

6. Andrew is driving to the shopping center. He goes 230 km away from his home towards north. After 5.00 minutes, Andrew is 450 km from his home towards west. Find Andrew's average velocity.

7. Tyler is flying a kite at a position 70 km from his front yard towards north. After 2 minutes, the kite is 100 km away from his front yard towards east. Find the average velocity of the kite.

8. Dylan rides a bike from his home. He goes south at 120 m/s and west at 90 m/s. What is his velocity relative to his wife at home?

9. Addison goes to the school. She goes 165 km away from her home towards south. After 2.00 minutes, Addison is 200 km away from her home towards east. Find Addison's average velocity.

10. A radar station detects a glider at a position 120 km away from the base towards north. After 2.00 minutes, the glider is 185 km away from the radar base towards west. Find the average velocity of the glider.

