

Reflection and Self-Assessment

Part 1: Circle the statement that best describes how you completed the practice:

- I answered all questions without using the online solutions. I checked my answers against the key at the back of the practice and was able to determine my mistakes and correct them without referring to the online solutions.
- I answered most questions correctly without using the online solutions. I used the online solutions to help me with some questions and was able, with help from the online solutions, to understand every question and answer them correctly.
- I used the online solutions to help me with most of the questions. I was able, with help from the online solutions, to understand each question and answer them correctly.
- Even using the online solutions, I was not able to fully understand the solution to some problems. The questions I had trouble with were:

- I did not attempt all the questions on the practice.

Part 2: Circle the statement that best describes your confidence in answering questions of this type in the future.

- I am confident I can answer nearly any question of this type correctly without using notes or other assistance.
- I am confident I can answer **MOST** questions of this type correctly without using notes or other assistance.
- I am **NOT** confident I can answer most questions of this type correctly without using notes or other assistance.

2D Vector Practice

Name: _____

Adding and Subtracting Vectors

For each of the following draw a diagram and determine the resultant vector (both magnitude and direction). Round all degrees to nearest whole degree, follow sig fig rules otherwise.

1. 15.6m East + 27.9m North

2. 25.4m East + 35.2m North

2D Vector Practice

Name: _____

3. 65 km/hr North – 43 km/hr East

4. 655.8 km/hr North – 759.2 km/hr West

2D Vector Practice

Name: _____

2D Kinematics

5. Someone walks 51 m North, then 39 m West in 32.3 seconds, what is their average velocity?

6. A car turns a corner, they change from travelling 55 m/s North, to 55 m/s West in 3.5 seconds.
What is their acceleration? $a = \frac{\Delta v}{t} = \frac{v_f - v_0}{t}$

2D Vector Practice

Name: _____

Vector Components

7. What are the North and West components of the vector: 269 metres, 23° North of West

8. What are the horizontal and vertical components of the vector: 45.9 m/s, 12° above the horizontal.

2D Vector Practice

Name: _____

9. Use vector components to add:

25 m/s North + 15 m/s at 53° S of E

2D Vector Practice

Name: _____

10. Use vector components to add:

84.5 m at 32° N of E + 29 m at 13° N of W

2D Vector Practice

Name: _____

Answer Key				
1) 32.0 m, 61° North of East OR 32.0 m, 29° East of North	2) 43.4 m, 54° North of East OR 43.4 m, 36° East of North	3) 78 km/hr, 33° West of North OR 78km/hr, 57° North of West	4) 1003km/hr, 49° East of North OR 1003 km/hr, 41° North of East	5) 2.0 m/s, 37° West of North OR 2.0 m/s, 53° North of West
6) 22 m/s ² , 45° South of West OR 22 m/s ² , 45° West of South	7) North component is 110 m West component is 250 m	8) Horizontal component is 45 m/s Vertical component is 9.5 m/s	9) 16 m/s, 35° East of North OR 16 m/s, 55° North of East	10) 67 m, 40° East of North OR 67 m, 50° North of East