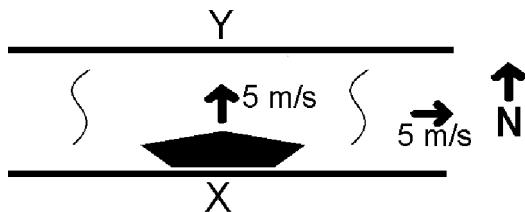1. A ship travels 5 miles due east and then 12 miles due north. What is the net displacement of the ship?

   1) 7 miles

   2) 13 miles

   3) 16 miles

   4) 17 miles

   5) 19 miles

2.

In still water a ship can produce a maximum velocity of 5 m/s in any direction. This same ship is placed in a river with a current of 5 m/s eastward. With what velocity should the boat be operated with in order to reach point Y from point X? (Note: Point Y is due north of point X)

   1) 5 m/s due West until the ship is far enough out, then 5 m/s due North.

   2) Simultaneously, 2.5 m/s due West and 2.5 m/s due North.

   3) 5 m/s due North.

   4) 5 m/s due North until the ship has reached the northern shore. Then 5 m/s due West until the ship reaches point Y.

   5) The ship's engine is not powerful enough to reach point Y.

3. A ship can travel at a maximum speed of 8 km/h in any direction in still water. What is the maximum velocity of the ship relative to the shore if it is moving perpendicular to a 6 km/h current?

   1) 4 km/h

   2) 6 km/h

   3) 8 km/h

   4) 9 km/h

   5) 10 km/h

4. A truck traveled 1200 meters south in 80 seconds and then 500 meters west in 20 seconds. The magnitude of the average velocity of the truck is most nearly

   1) 10 m/s

   2) 13 m/s

   3) 17 m/s

   4) 25 m/s

   5) 30 m/s

5. A car, starting from rest, experiences a constant acceleration for 5 seconds such that it moves 200 m west and 150 m north. What was the magnitude of this acceleration?

   1) 5 m/s^2

   2) 10 m/s^2

   3) 20 m/s^2

   4) 40 m/s^2

   5) 100 m/s^2

1. ___2___

2. ___5___

3. ___5___

4. ___2___

5. ___3___

Name _____   Class _____   Date _____

1. _____

2. _____

3. _____

4. _____

5. _____