Name: Period:

River Vector Problems III

1. An airplane with an air speed of 200 km/hr heads due north. It encounters a 100km/hr east wind, what is the velocity of the plane relative to the ground?

2. An airplane with an air speed of 200 km/hr heads due north. It encounters a 100km/hr northeast wind, what is the velocity of the plane relative to the ground?

3. A boat can travel at 3 m/s in still water. If the boat heads directly across the river with a current of 2 m/s, what is the velocity vector of the boat relative to the shore? If the stream is 1000 m wide how long does it take to cross? What is the displacement of the boat when it arrives at the far side?

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2. An airplane with an air speed of 200 km/hr heads due north. It encounters a 100km/hr northeast wind, what is the velocity of the plane relative to the ground?

3. A boat can travel at 4 m/s in still water. If the boat heads directly across the river with a current of 2 m/s, what is the velocity vector of the boat relative to the shore? If the stream is 1000 m wide how long does it take to cross? What is the displacement of the boat when it arrives at the far side?