Physics Acclerated - Introduction Test Practice

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| A plane flies east for 50.0 km, then at an angle of 30.0° north of east for 75.0 km. | |
| 30.0° north of east for 75.0 km. | |
| In what direction should it now fly and how far | |
| In what direction should it now fly and how far, such that it will be 200 km northwest of its original | |
| position? | |
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| The velocity of an aircraft is 200 km/hr due west. A northwest wind of 50 km/hr is blowing, | |
| (a) What is the velocity of the aircraft relative to the ground? | |
| (b) If the pilot's destination is due west, at what | |
| angle should he point his plane to get there? (c) If his destination is 400 km due west, how long will it take him to get there? | |
| long will it take him to get there? | |
| Note that all winds are defined in terms of the direction | |
| Note that all winds are defined in terms of the direction from which the wind blows. Hence, a northeast wind blows out of the northeast and blows toward the | |
| southwest | |
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Physics Acclerated - Introduction Test Practice

| A policewoman driving at 80.0 km/hr observes a car 50.0m ahead of her speeding at 120 km/hr. If the county line is 400 m away from the police car, what must the acceleration of the police car be in order to catch the speeder before he leaves | |
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| the speeder before he leaves the county? | |
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| A body with unknown initial velocity moves with constant acceleration. At the end of 8.00 s, it is moving at a velocity of 50.0 m/s and it is 200 m from where it started. Find the body's acceleration and its initial velocity. | |
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