

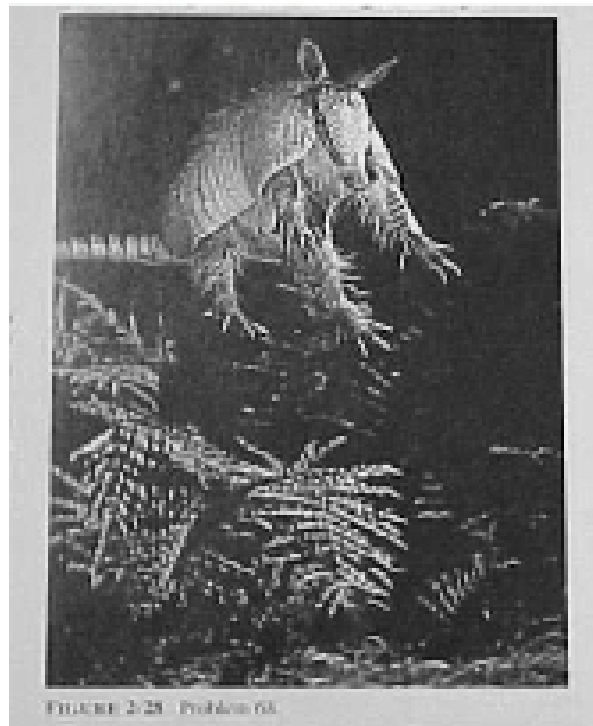
Due date: Tue Jan 27 10:59:59 pm 2015 (EST)

A ball is dropped from rest. After T seconds, the ball has fallen a distance d . Relative to this location, how much farther does it fall after another $3T$ seconds?

- A. $9d$
- B. $3d$
- C. $15d$
- D. $8d$

You are correct. Your receipt no. is 156-1547

(hrwc2p42) A startled armadillo leaps upward (see the figure), rising 0.524 m in 0.150 s .



What was its initial speed?

You are correct. Your receipt no. is 156-9163

What is its speed at this height?

You are correct. Your receipt no. is 156-3602

How much higher does it go?

You are correct. Your receipt no. is 156-2477

A model rocket is launched straight upward with an initial speed of 48.3 m/s . It accelerates with a constant upward acceleration of 2.02 m/s^2 until its engines stop at an altitude of 145 m . What is the maximum height reached by the rocket?

You are correct. Your receipt no. is 156-8679

How long after lift off does the rocket reach its maximum height?

You are correct. Your receipt no. is 156-1344

How long is the rocket in the air?

You are correct. Your receipt no. is 156-9278

A ball is thrown upward from the ground with an initial speed of 24.3 m/s ; at the same instant, a ball is dropped from a building 13.1 m high. After how long will the balls be at the same height?

You are correct. Your receipt no. is 156-7053

A hot air balloon has just lifted off and is rising at the constant rate of 1.00 m/s . Suddenly, one of the passengers realizes she has left her camera on the ground. A friend picks it up and tosses it straight upward with an initial speed of 11.4 m/s . If the passenger is 3.00 m above her friend when the camera is tossed, how much time does it take for the camera to reach her?

You are correct. Your receipt no. is 156-3660

How high is the passenger when the camera reaches her?

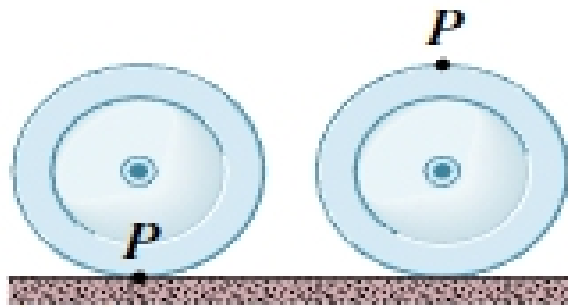
You are correct. Your receipt no. is 156-3795

Choose whether each of the following statements is true or false.

Choices: True, False.

- A vector's component can never be larger than the magnitude of the vector.
- It is possible for a component of a vector to be zero if the vector itself is not zero.
- The magnitude of the sum of two vectors is always less than the sum of the magnitudes of the two vectors.
- It is possible for a vector to be zero, while a component of the vector is not zero.

You are correct. Your receipt no. is 156-9286



At time t_1

At time t_2

(hrw7c3p1) A wheel with a radius of 40 cm rolls without slipping along a horizontal floor (see the figure). At time t_1 the dot P painted on the rim of the wheel is at the point of contact between the wheel and the floor. At a later time t_2 , the wheel has rolled through one-half of a revolution.

What is the magnitude of the displacement of P during this interval?

You are correct. Your receipt no. is 156-5112

Angle of the displacement of P during this interval?

You are correct. Your receipt no. is 156-3904

x-component of the displacement of P during this interval?

You are correct. Your receipt no. is 156-8084

y-component of the displacement of P during this interval?

You are correct. Your receipt no. is 156-3903