Sangam SKM College -Nadi

Year 11

Physics

Worksheet 4

Questions

1. A 6g feather on Earth is dropped on the moon from a height of 1.40 meters. The acceleration of gravity on the moon is $1.67 m / s^2$.

   a. What physical quantity of the feather would change on the moon?
   b. Determine the feathers weight and mass on the moon.
   c. Determine the time for the feather to fall to the surface of the moon.

2. Position-time information for a giant sea turtle, a cheetah, and the continent of North America are shown in the data tables below. Assume that the motion is **uniform** for these three objects.

   a. Record the position of these three objects.

Giant Sea Turtle

Time (hr)	Position (mi)
0	0
1	0.23
2	0.46
3	_____
4	0.92
5	_____
6	_____

Cheetah

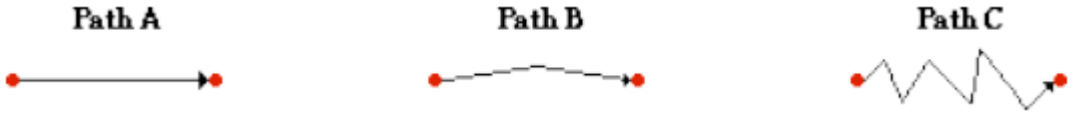
Time (s)	Position (m)
0	0
0.5	12.5
1	_____
1.5	_____
2	_____
2.5	_____
3	75.0

North America

Time (yr)	Position (cm)
0	0
0.25	_____
0.50	0.50
0.75	0.75
1.0	_____
1.25	_____
1.50	1.50

   b. Sketch a suitable graph for the motion of the Cheetah.
   c. Determine the speed of the Cheetah.

3. Suppose you are considering three different paths (A, B and C) between the same two locations



Along which path would you have to move with the greatest speed to arrive at the destination in the same amount of time? _____

Explain your answer_____

_____