

Planet Holloway **websheet 3.3**

Cp Physics Chapter 3

You may print this out and write on it or work on your own paper.

Show all work.

1. An orangutan is thrown up at 35° at a speed of 27 m/s. What is the orangutan's speed at the top of his parabolic arc?
2. In the problem above, how high does the orangutan travel vertically?
3. While visiting the dentist, Jasmine grabs the drill from the dentist and hurls it across the room in a statement of protest. If she throws the drill with a vertical component of 12 m/s and a horizontal component of 4 m/s, what is the speed of the drill 1.5 seconds later?
4. In the above problem, what is the final position of the drill after 1.5 s? (Give the position as a horizontal position and a vertical position). Jasmine did not get a sticker after this visit.
5. Hyung is trying to impress Alice. He attempts to jump his bike over a car that is 2.2 m high. If Hyung uses a ramp that is angled at 40° , how fast must he be going in order to reach 2.2 m high?

Answers:

1. 22.12 m/s
2. 11.99 m
3. 5 m/s (on its way downward) (-3 m/s vert. and still 4 m/s horizontal)
4. 6.75 m vertically, 6 m horizontally (that would be a really big dentist's office)
5. 10.32 m/s