

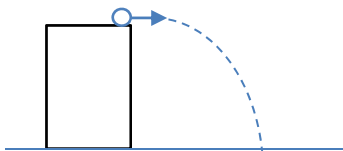
2-D Problem Types

AP Physics B

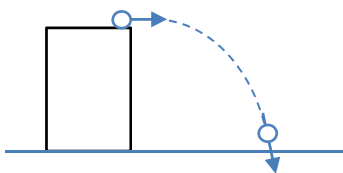
Name _____

2-3a 3b-4 5-6a 6b-7

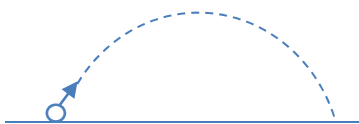
1. A ball rolls horizontally off a cliff. If the ball is rolling at 4.2 m/s, and it lands 13m from the base of the cliff, what is the height of the cliff?



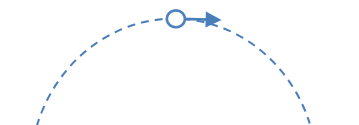
2. After rolling horizontally off of a cliff, a ball lands at a final velocity of 50 m/s at -80° . What is the Δx of the object?



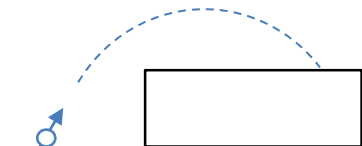
3. A ball is shot at 52 m/s at 43° . Where will the ball be at its highest position? (give both Δy and Δx)



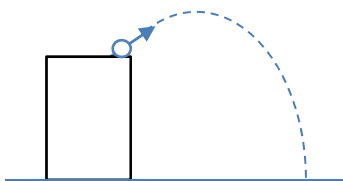
4. A ball shot through the air reaches a maximum height of 23m with a launch angle of 20° . At what speed was the ball shot?



5. A ball is shot at 90m/s at 60° , 20 meters from the edge of a 30 meter tall cliff. Where will the ball land?



6. A ball is shot at a 40° at an unknown velocity off of a 50m cliff. If the ball lands 85m from the base of the cliff, what was the launch speed?
(the previous version of this question “a ball is shot at 40m/s at an unknown angle” was too difficult)



7. A ball was launched from a 45 meter cliff. If the ball spends 1.5 seconds in the air, give two possible launch velocities (give both magnitude and direction).

