**Physics**

**FA 3.2 - Cliff Problems**

Name

Show your work and circle your answers to receive full credit. Ignore air friction, use the convention that down is negative, and use g = 9.80 m/s/s.

When you have finished this, go to the website and check your answers. If you got a problem wrong, cross it off on the front, and do it correctly on the back.

**A ball rolls off the edge of a 15.0 m tall cliff with a purely horizontal velocity, and strikes the ground at a distance of 12.4 m from the base of the cliff.**

|  |  |
| --- | --- |
| 1. What time was the ball in the air?  2. What was the ball’s horizontal velocity?  3. What is the final vertical velocity?  (Just before it hits the ground)  4-5: Draw a picture of the final velocity of impact. Calculate the speed it is traveling, and find the angle below horizontal the velocity makes. |  |