

Name: _____ Block: _____

Level Projectiles #1

1. A tiger leaps horizontally from a 7.5 m high rock with a speed of $4.5 \frac{\text{m}}{\text{s}}$. How far from the base of the rock will he land?

5.6 m

2. A diver running $1.6 \frac{\text{m}}{\text{s}}$ dives out horizontally from the edge of a vertical cliff and reaches the water below 3.0 s later.

(a) How high was the cliff?

44 m

(b) How far from the base did the diver hit the water?

4.8 m

3. A ball is thrown horizontally from the roof of a building 56 m tall and lands 45 m from the base. What was the ball's initial speed?

$$13 \frac{\text{m}}{\text{s}}$$

4. The pilot of an airplane traveling $45 \frac{\text{m}}{\text{s}}$ wants to drop supplies to flood victims isolated on a patch of land 160 m below. The supplies should be dropped when the plane is how far from the island?

$$257 \text{ m}$$