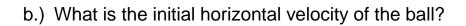
UNIT 3 – PROJECTILE MOTION

Type I Projectiles

| Projectile – the object moving (ex. ball, bullet) |
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| Trajectory – the path of the projectile |
| Range – the horizontal displacement of the projectile |
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| * Because the horizontal and vertical motions of a projectile are perpendicular to each other, they are <u>independent</u> . |
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| Horizontal Motion Vertical Motion |

| Which component determines the time that a projectile is in the air? |
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| ex. An object rolls off a 4 m high cliff with a horizontal velocity of 5 m/s. a.) How long will the object take to hit the ground? |
| b.) What is the range? |

| <u>ex</u> . |
|---|
| A soccer ball is kicked horizontally from a roof and hits the street 40 |
| meters away. The ball is in the air for 4.8 seconds. |
| a.) What is the height of the roof that it was kicked from? |
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c.) What is the velocity of the ball after 2.5 seconds?