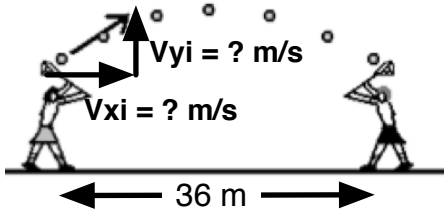
Wk 22 Projectile Motion

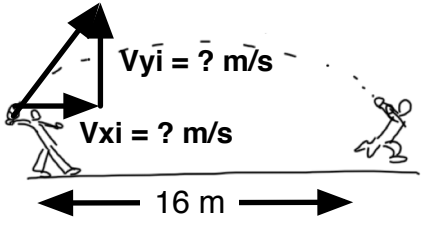
name:

5. Find Vxi & Vyi

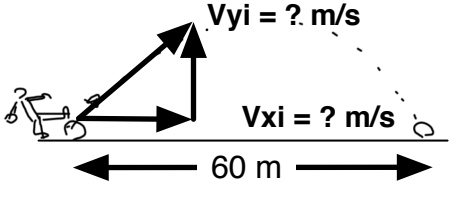
Dx = (Vxi)(t) **Vy = Vyi - 10t**



1. The ball is in the air for 6 seconds. It goes 36 m in the x-direction.
   a) Find the time to get to the top.
   b) Find Vyi.
   c) Find Vxi.



2. The ball is in the air for 8 seconds. It goes 16 m in the x-direction.
   a) Find the time to get to the top.
   b) Find Vyi.
   c) Find Vxi.



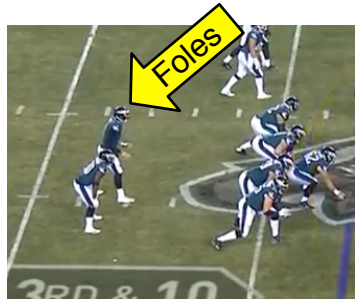
3 The ball is in the air for 10 seconds. It goes 60 m in the x-direction.
   a) Find the time to get to the top.
   b) Find Vyi.
   c) Find Vxi.

Wk 22 Projectile Motion

name:

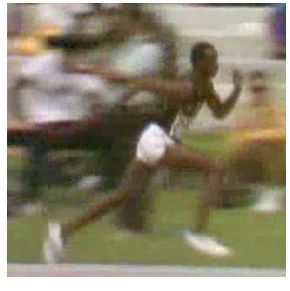
6. Nick Foles & Bob Beamon

Dx = (Vxi)(t) **Vy = Vyi - 10t**



1. In the 2018 NFC Championship Eagles' quarterback Nick Foles threw a pass that was in the air for about 2.9 seconds. The range was 48.5 meters in the x-direction.

   a) What is the time to get to the top?
   b) What was Vy?
   c) What was Vx?
   d) Use the Pythagorean Theorem to find his actual launch velocity.



2. At the 1968 Olympics in Mexico City, Bob Beamon was in the air for approximately 1 second. He jumped 8.9 meters, setting the longest standing Olympic Record.

   a) What is the time to get to the top?
   b) What was Vy?
   c) What was Vx?
   d) Use the Pythagorean Theorem to find his actual total velocity.