

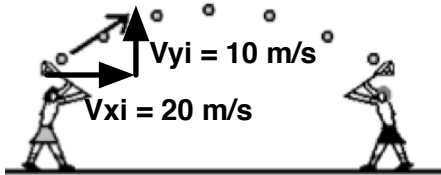
**Wk 22 Projectile Motion**

name: \_\_\_\_\_

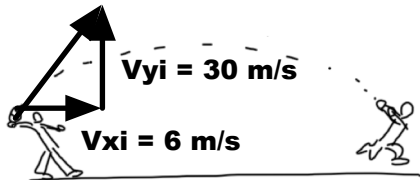
## 3. Find Time &amp; Dx

$$Dx = (V_{xi})(t)$$

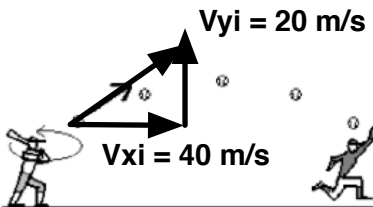
$$V_y = V_{yi} - 10t$$



- 1a) Find the time to get to the top.
- b) Find the time to go all the way.
- c) Find Dx (the range of the projectile).



- 2a) Find the time to get to the top.
- b) Find the time to go all the way.
- c) Find Dx (the range of the projectile).



- 3a) Find the time to get to the top.
- b) Find the time to go all the way.
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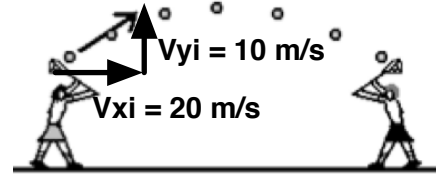
**Wk 22 Projectile Motion**

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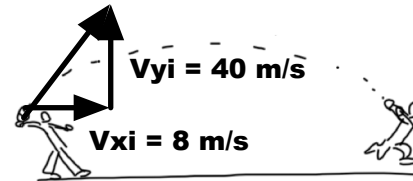
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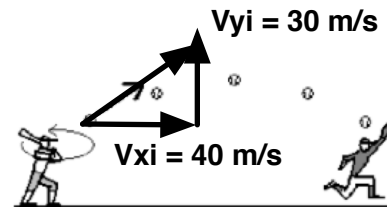
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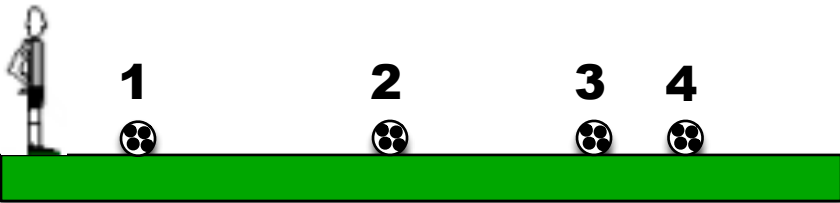
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1. The soccer player kicked balls at various angles. See if you can match up where the ball landed to the angles.

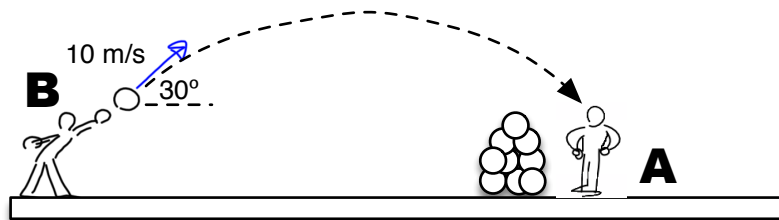
\_\_\_\_\_ a)  $45^\circ$  \_\_\_\_\_ b)  $80^\circ$  \_\_\_\_\_ c)  $40^\circ$  \_\_\_\_\_ d)  $30^\circ$

e) What other angle could the soccer player use to hit the same spot as the  $40^\circ$  shot?



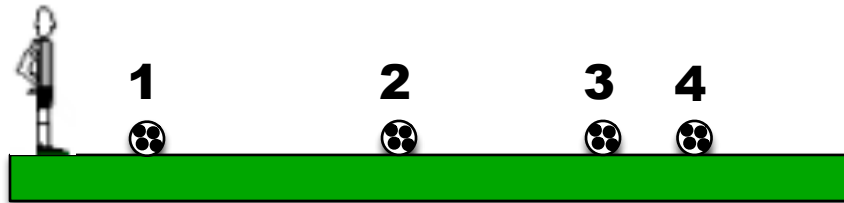
2. Person A on the right has built a snow-fort. There are always two complementary angles that will hit the same spot - a high and a low angle.

- a) If person B wants to knock the wall down, he should throw at the  
 high angle    low angle
- b) If person B wants to actually hit person A, he should throw at the  
 high angle    low angle



(Optional) Person B actually throws with the velocity shown (speed & angle).

- a) Find the  $V_{xi}$  and the  $V_{yi}$ .  
 b) Find the time to go all the way.  
 c) Find the  $D_x$  (the range of the projectile.)



1. The soccer player kicked balls at various angles. See if you can match up where the ball landed to the angles.

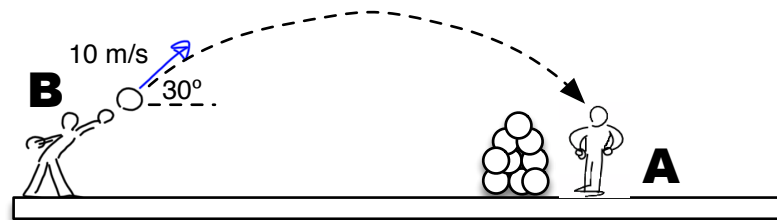
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