

Warm Up Question 1

A ship passes the shore at a constant speed. At one instant a passenger, Angela, on the ship throws a basketball straight up (according to her). Brody standing on the shore observes this. According to Brody, will the ball land in Angela's hands, or behind Angela or in front of her? Ignore any air resistance. Explain your choice.

1. In her hands. The x -components of velocity match.
2. Lands behind her. Ship moves forwards while the ball returns.
3. Land in front of her.

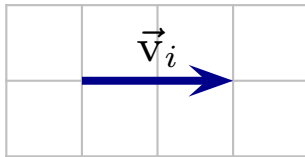
Warm Up Question 2

A projectile is fired from the ground at an angle of 60° . Is the velocity vector zero or not at the highest point of its trajectory? What is the direction of the velocity vector at the highest point? Explain your answers.

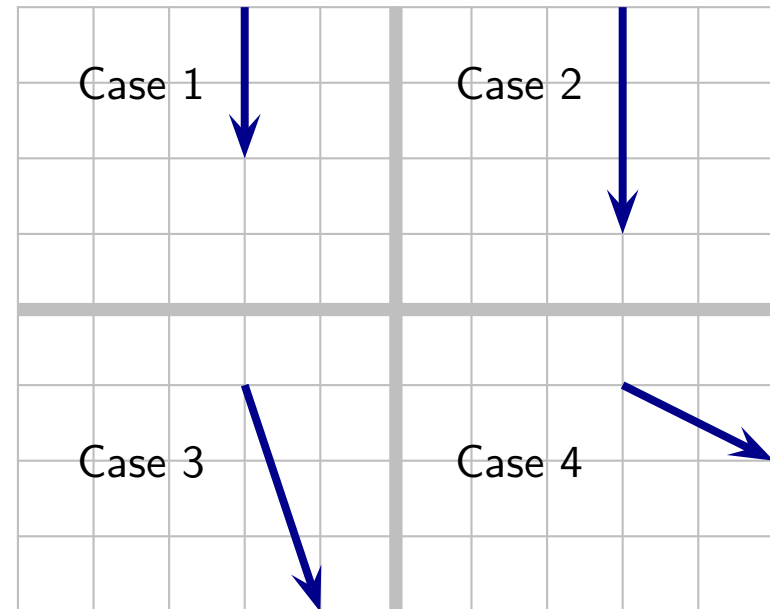
1. Horizontal non-zero. The y -component of velocity is zero.
2. It is zero. Slope is zero.
3. It is zero. Goes from positive to negative.

Question 1

A ball is launched horizontally with the indicated initial velocity.



Which of the following best represents the velocity just before hitting the ground?



Question 2

A ball is launched horizontally above the ground. Which of the following best represents its trajectory?

