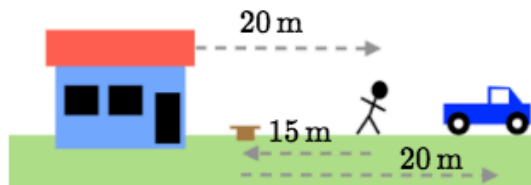


Calculate the average speed and velocity

As shown in the figure below, Justin walks from the house to his truck on a windy day. He walks 20 m toward the truck, 15 m back to retrieve his wind-blown hat, and another 20 m to reach the truck. He walked a total time of 75 s.

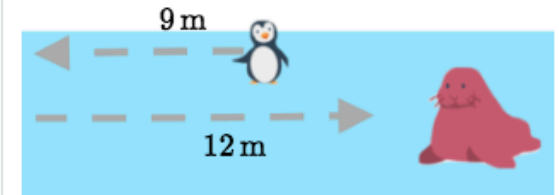


As shown in the figure below, Felipe walks from the house to his truck on the way to work. He walks 20 m to the truck and drives another 60 m in his truck for a total time of 20 s.



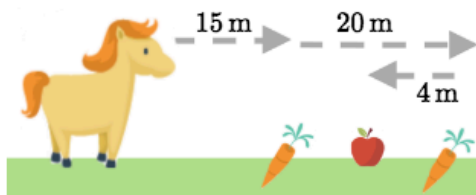
What is Felipe's average velocity over the 20 s period?

As shown in the figure below, a seal and penguin are playing a fun game of catch. The penguin swims leftward 9 m then dodges rightwards another 12 m. The penguin swims a total time of 8 s.

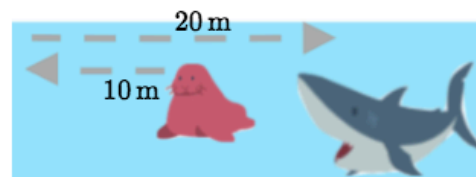


Round answer to two significant digits.

As shown in the figure below, a horse is grazing for food. It trots rightward 15 m to eat a carrot, then walks rightward 20 m to another carrot, then turns leftwards to walk 4 m to bite an apple. The horse walks a total time of 74 s.



As shown in the figure below, a seal and shark are playing a fun game of tag. The seal swims leftward 10 m then dodges rightwards another 20 m. The seal swims a total time of 6 s.



What is the seal's average velocity during the chase?

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

As shown in the figure below, a seal swims rightward 3 m, but then notices a shark behind it. The seal speeds up rightward for 12 m and swims a total time 4 s.



What is the seal's average velocity for the swim?

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

