

Access the new scooter applet by scanning the QR code or following the link:  
<https://www.geogebra.org/m/jtvdrvtx>



Last episode, Haleemah and ET came up with the general equation

$$L = 3v + 4$$

where  $v$  is Hector's velocity in m/sec and  $L$  is his end location.

1. Let's say two friends are talking to each other about the two equations  $L = 3v + 4$  and  $L = 3(-v) + 4$ .

We can use  $v$  for velocity. It's okay to put in negative numbers for  $v$ .

$$L = 3v + 4$$

We need a  $-v$ , because we have negative velocities.

$$L = 3(-v) + 4$$

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- a. Explain which statement you agree with and why.
2. a. Test both equations with the values of  $v = 5$  and  $v = -4/3$  in the applet. What do you notice?
- b. Use your observations from part a) to explain why  $L = 3v + 4$  is *different* from  $L = 3(-v)+4$ .

