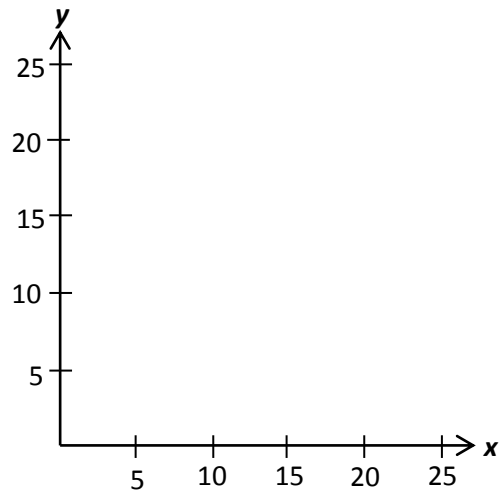


SLIDING LADDER

A ladder **25** feet long is leaning against the wall of a house. The bottom of the ladder slides away from the wall at a rate of **2** feet per second. Let x represent the horizontal distance (ft.) from the bottom of the ladder to the base of the wall and let y represent the vertical distance (ft.) from the ground to the top of the ladder.

1. Complete the table (to nearest tenth) and graph:

t	x	y
	0	
	5	
	10	
	15	
	20	
	25	



2. How fast, in feet per second, is the top of the ladder sliding down the wall when the base of the ladder is at **7** feet, at **15** feet, and at **24** feet from the wall? (Find the rates of change of vertical distance with respect to time.)

Remember: The rate of change of horizontal distance with respect to time is **2** feet per second. Write answers as fractions and to nearest tenth. Also, write the units.