Some things you noticed

* It doesn’t move at a constant speed
* It travels from 1 → 5 → 1 → 11
* It began at 1 , It slowed as it neared 5, Upon reaching 5, it went back towards 1, Slowly returned to 1, Quickly moved towards 11
* After one second the particle stops at 5.
* It is dependent on the value of *t*
* There are no negative numbers
* Toward the end, the speed continually increases
* The value of *t* increases constantly
* The dot changes direction
* The dot slows down when it changes direction
* A gradual acceleration when going toward 11
* The particle begins moving from 1 in the positive direction
* It decelerates, is at constant velocity, then accelerates
* The particle seems to be going at a constant speed from t=0 to t=0.47
* Started at 1. Went to 5 at a certain speed. Went back to 1 with a slower speed then accelerated to .
* It works hard enough to get all that done in 4.5 s.
* The particle never stops at a whole number besides from starting point
* Moved much more quickly the second time it moved up from 1
* t is constantly increasing at the same speed
* The motion is smooth. Not jerky or stop/go
* gradual increase to 5 and back to 1
* t=0 is at point 1
* velocity is positive and negative
* 2nd velocity is faster
* Intercepts at s=1 and 5 (? 11.125)
* Exponential increase
* It travels towards both and
* From far enough out, it appears not to be moving at all
* At first, s increases when t increases
* The speed of the particle at the end of the simulation is faster than it was at the beginning

Some of your questions

* What instructions was it given so that motion is so (i.e., equation)
* Is the graph of motion exponential?
* Is the equation linear or quadratic?
* Are there 2 x-intercepts on said graph?
* Is the particle’s movement related to the graph of a cubic equation?
* What is the equation of the function?
* What kind of function is s(t)?
* Can you attempt to represent this function on an xy axis?
* What does the graph of the function look like
* Does the motion end after it reaches 11 or does it continue?
* Why does the particle accelerate the second time it increases from 1
* Why does the particle move left after s(1) = 5?
* What is it about “s” that would make, say, and ?
* Is t equal to time [This may be an obvious question, but nevertheless here we are]
* What explains the dot’s change in direction? What about its change in speed?
* Why does the function stop at 4.5?
* Is the rate of acceleration from 1-11 constant
  + The rate of acceleration appears to increase from 1-11, yet I don’t know how to prove this mathematically
* Is the rate of acceleration from 1-11 equal to that of 1-5?
* Will the particle have another negative velocity?
* What is the speed of the particle as it approaches 5?
* At what point does the line start to have a negative slope?
  + At point (1,5). I was uncertain because the particle is moving. I didn’t know if (1,5) is accurate.