Name: _____ Period: _____ Date: _____

Motion Map Madness, Part 2

Construct a motion map to illustrate each of the motions described below. Assume that the motion is uniform between the given measurements. Please use 1 dot for each second.

1. These measurements show the position of a buggy at different moments:

Time (s)	Position (cm)
0	50
1	50
2	50
3	50
4	100
5	150
6	200

2. A marble was located at $x=50$ cm when a timer read 0 s. By $t=2$ s, it was at the 90 cm mark, and it stayed there for two more seconds.

3. A visiting zoologist noticed an anole moving around in a region far from her reference point. She recorded these measurements from afar:

Clock reading (s)	Position (cm)
0	763
1	723
2	683
3	673
4	663
5	653

4. Starting at $x=0$ cm when a clock reads 12 s, a bus moves to $x=30$ cm, arriving there when the clock says 15 s. The bus then shifts into reverse and goes the other direction. At the moment $t=20$ s, it is located at 0 cm again.

5. It took 3 s for a mysterious, unknown object to move from x=-20 cm to x=-14 cm, starting at t=0 s. The object then stayed motionless until t=8 s, then finally moved the whole way to x=2 cm in just 2 s more.

6. Just as the clock's second hand reached "15", a tiny walking robot was on the 26 cm mark of a meter stick. When the clock read 21 s, the robot arrived at the meter stick's 8 cm mark, then turned around. Over the next 4 seconds, it moved to a position of 12 cm. Then it turned again, and left the meter stick completely (0 cm) when the clock read 27 s.

Honors students:

7. While driving to work, I spotted a confused squirrel in the road. It moved back and forth a few times as it decided which way to run. These are the measurements I collected, using the middle of my car's grille as my reference point. Please use 1 dot for each 0.5 seconds on this motion map.

Clock reading (s)	Position (cm)
0.0	40
0.5	40
1.0	20
1.5	-10
2.0	-10
2.5	-10
3.0	0
3.5	10
4.0	0
4.5	-20
5.0	-50
5.5	-90
6.0	-140