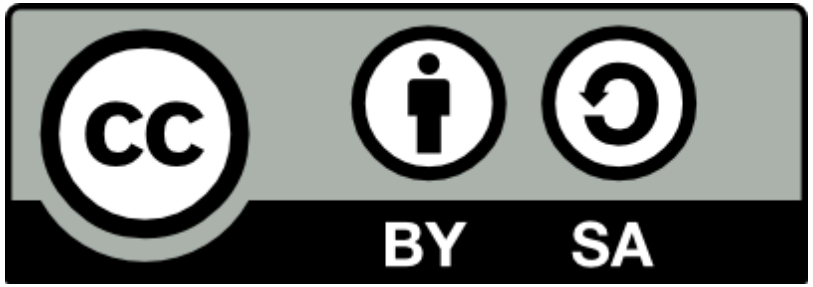
Walking Graphs



This material is provided by the FunThink team, responsible institution: Ludwigsburg University of Education

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Walking graphs

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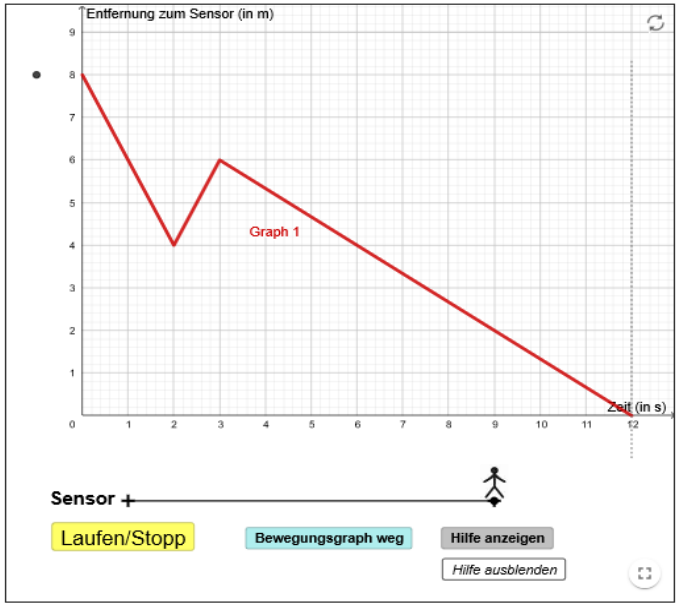
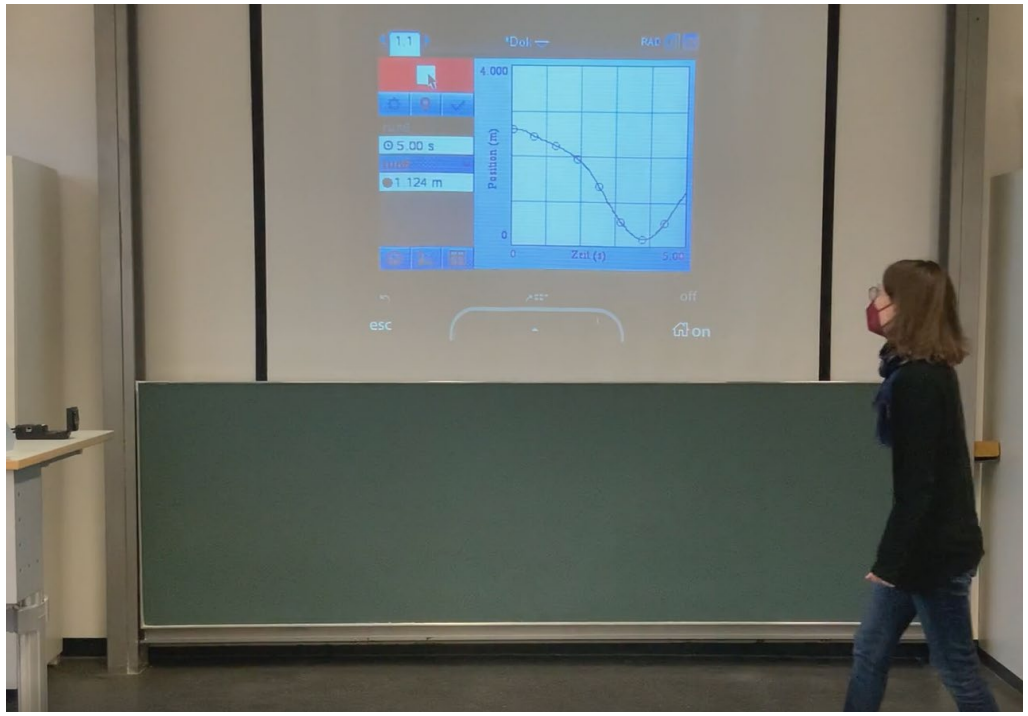
from primary to upper secondary school

Forscherauftrag 2 (Graph 1)

Autor: Kowalk

Welche Bewegung erzeugt den Graphen?





https://www.geogebra.org/m/rxtznqvc

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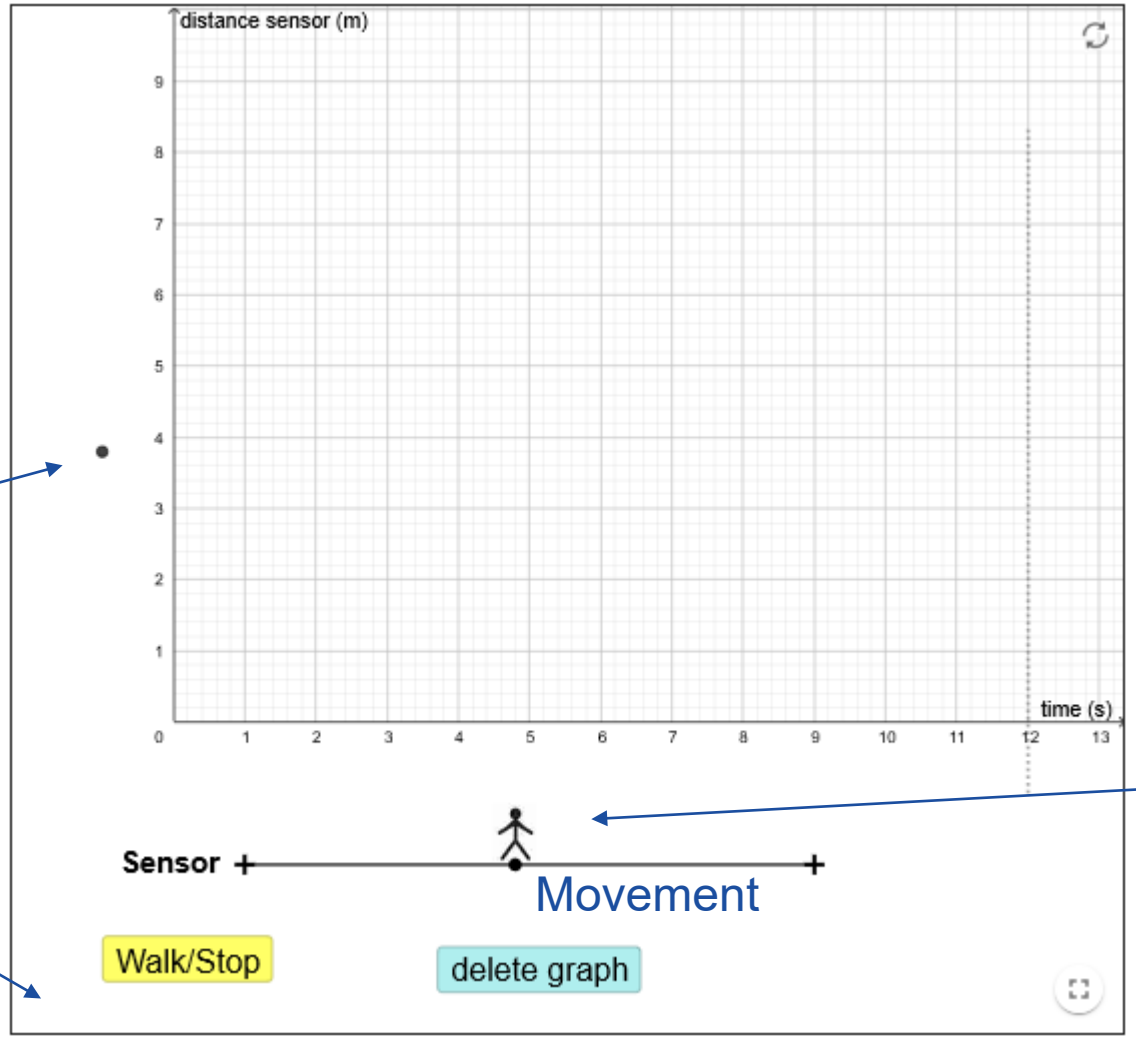
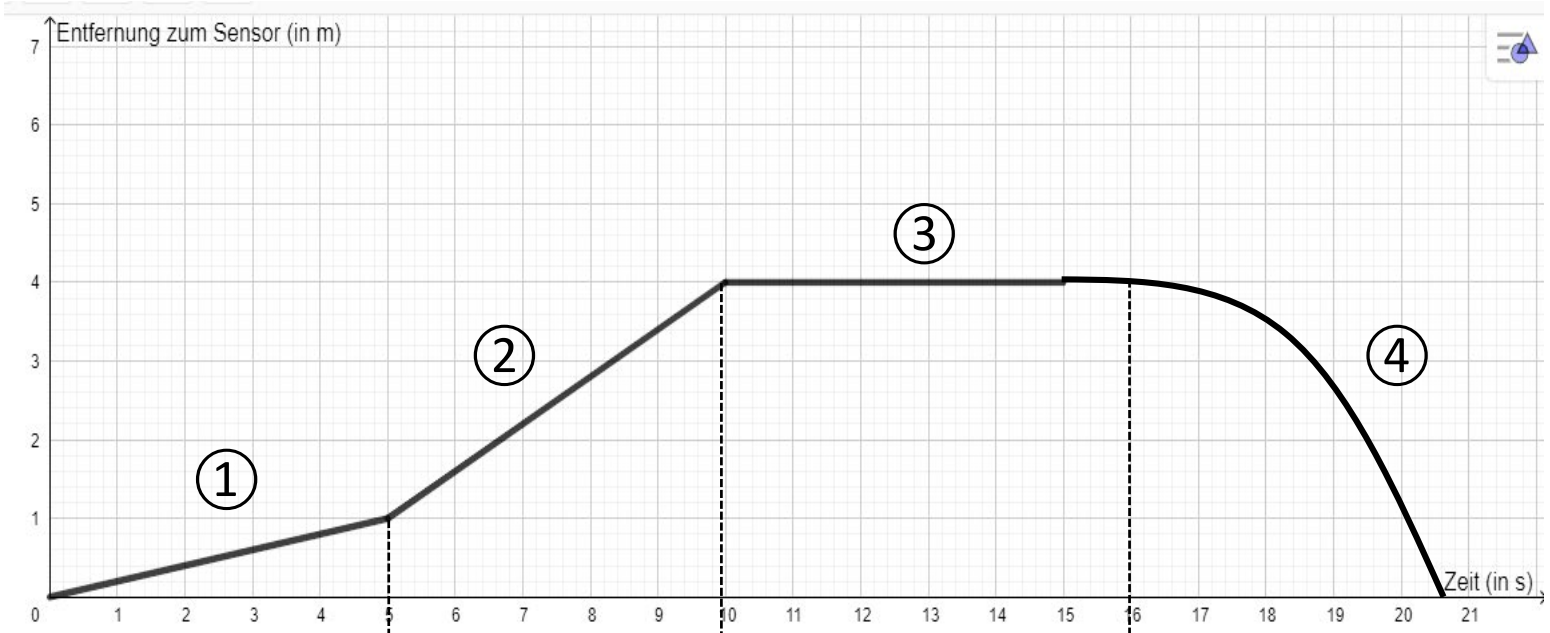
Your position at the beginning



Your graph is being recorded starting at time=0

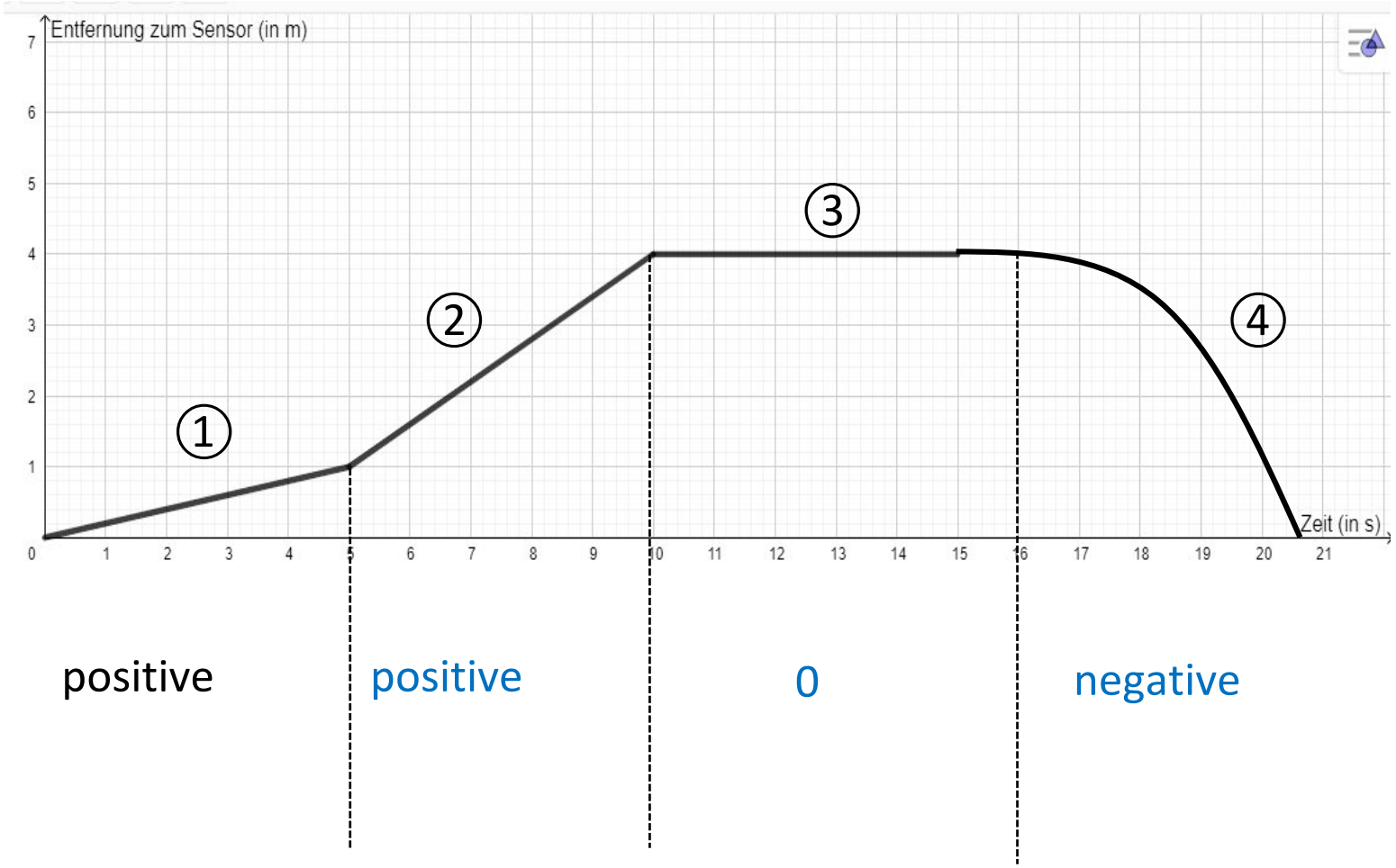
This is you.

“The language of graphs”



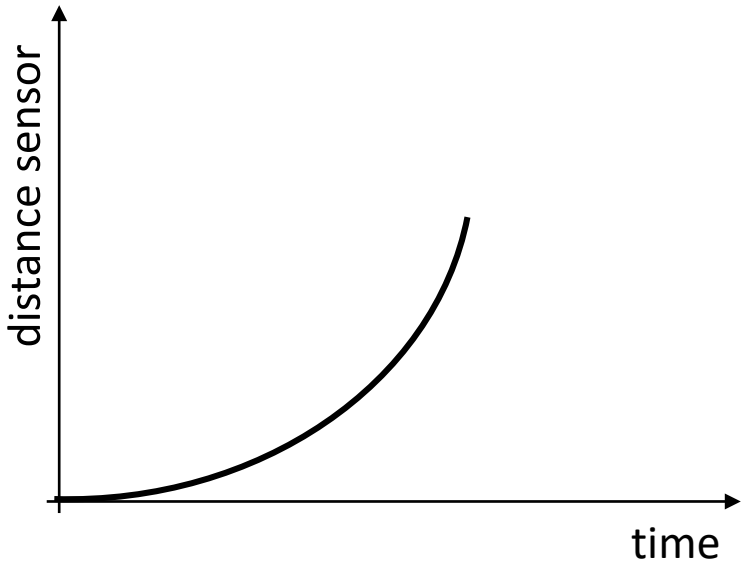
movement	I move slowly and evenly away from the sensor.	I move fast and evenly away from the sensor.	I don’t move.	I move first slowly, then faster and faster towards the sensor.
graph	The graph rises/increases steadily, fairly flat.	The graph rises/increases steadily, fairly steep.	The graph runs parallel to the x-axis.	The graph decreases irregularly.

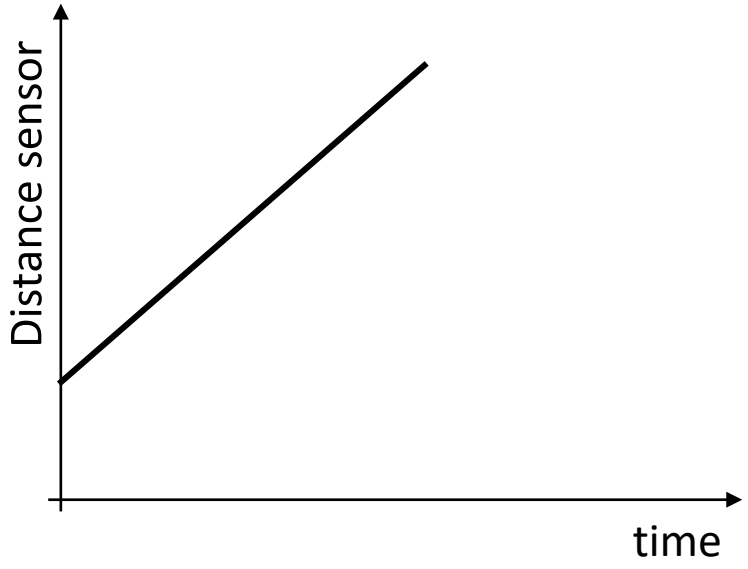
“The language of graphs”



slope	positive	positive	0	negative

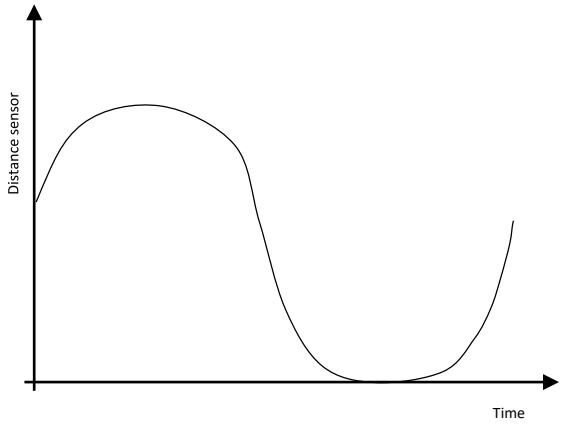
How do these graphs differ?
Argue with the help of movements and the shape of the graphs.



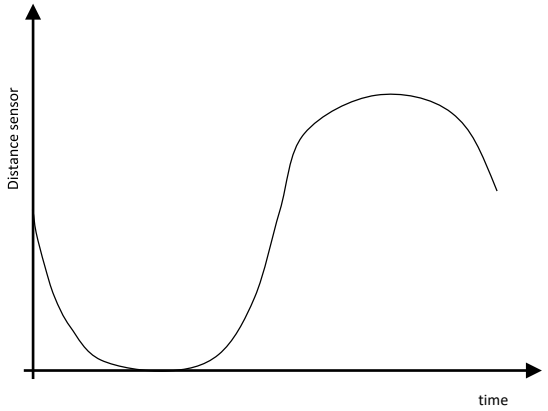


Which graph matches the described movement?

I start moving at some distance from the sensor. I first move away from the sensor and slow down. Then, I move first slowly and then faster and faster towards the sensor. At some distance from the sensor, I slow down again and almost stop. I move slowly away from the sensor again and become faster and faster.



①



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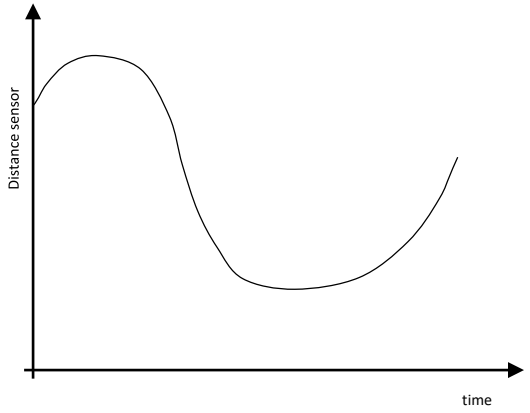
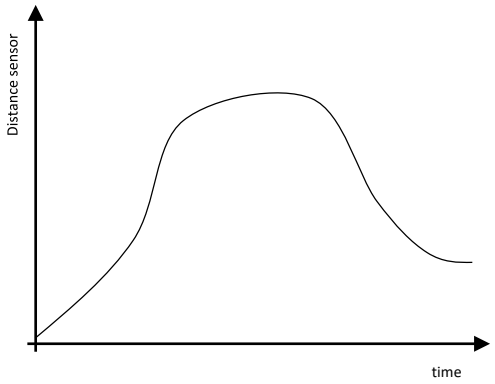


③

Which graph cannot be walked?



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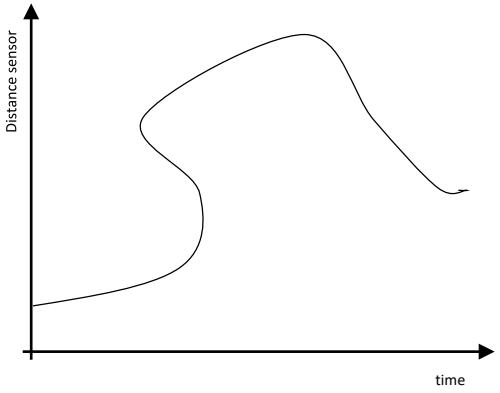

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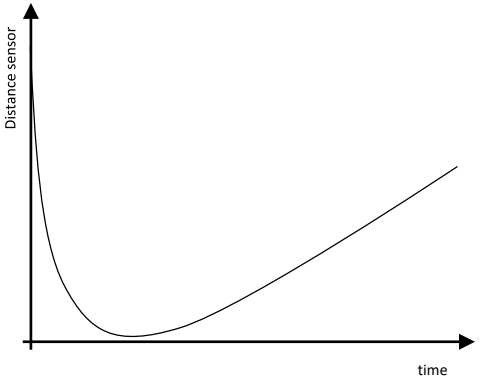

③

Comment on the following statement:

"With this graph, you move in a zigzag away from the sensor. Just the way the graph looks..."