

ALUNO: \_\_\_\_\_ TURMA \_\_\_\_\_ Nº \_\_\_\_\_ DATA : \_\_\_/Fev/ 2017



ERASMUS+ “Science 4 all”

This publication reflects only the author’s view and the European Commission is not responsible for any use that may be made of the information it contains.

### Qual dos carros alugar? Which car to rent? (Resolução de problemas usando funções afim)

A young student on vacation arrives at the railway station of the Portuguese village and must use a rental car to travel to a village located at the top of the mountain, 40 km from the station.

He was immediately approached by a little boy who, very solicitous, asked him which of the two cars parked there wanted him to use,

Facing the student's surprise, he explained:

"- Here, there are only these two cars, but they charge different prices. Mr. Mota charges € 2.5 for the transport of the luggage and € 0.40 for the kilometer; Mr. Passos charges € 0.60 per kilometer, but does not charge anything for the transportation of the luggage. You know? People from the Ver-o-Rio village, which is 8 km from here, just want to go in Mr. Passos's car and those in Beira-Serra, which is just over 12 km from the station, say how much ... "



After a little thought, our young tourist decided to go in Mr. Mota's car because he needed to save money ....

1. Does it seem like a wise choice?

And do the inhabitants of the two villages know how to manage their transportation expenses?

2. Represent in a reference the graphs of the two functions. Use the graphs you constructed to properly justify the answers given in question 1.

3. For each of the rental cars, write an equation that allows you to calculate the price of the trip according to the number of kilometers and the price of transport of the luggage.