

Mathlit Gr 10: RATE:

CONSTANT RATE: DOES NOT CHANGE OVER THE COURSE OF AN ACTIVITY.

AVERAGE RATE: CONSIDER A CAR TRAVELLED AT A SPEED OF 120km/h. THE VALUE OF 120km/h IS THE AVERAGE SPEED THAT THE CAR TRAVELLED OVER A JOURNEY.

UNIT RATE: WHEN ONE OF THE QUANTITIES IN THE RATE IS WRITTEN AS A UNIT (1).

Activity:

1. How much will it cost to buy 8kg of wors advertised at R46,95/kg.
2. How many kg of wors can be bought for R350.
[HINT: Find out how much wors can be bought with R1,00]
3. Another butcher is offering a pack of 9kg for R275,65. Which butcher is offering a better deal?

Exercise 1

Write in the simplest form:

- 1.1 $\frac{1}{2} : \frac{1}{4}$ 1.2 12 : 30 1.3 0,3 : 2,1

Express the following as a rate (unit rate):

- 2.1 231 km travelled in 3 hours
2.2 790,5 km travelled and 85 litres petrol used.
2.3 Potatoes cost R25 for 10 kg
2.4 5 m of material cost R 95.

Write the following as a ratio and simplify.

- 3.1 3km to 12km
3.2 25cm to 1m
3.3 350g to 3kg
3.4 80c to R 3,60

ACTIVITY:

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THE FUEL CONSUMPTION OF A CAR IS 8 LITRES PER 100 km.

1. HOW FAR CAN THE CAR TRAVEL ON A FULL TANK OF 40 LITRES OF PETROL.
2. IF THE COST OF PETROL IS R10.05 PER LITRE, CALCULATE HOW FAR THE CAR WILL BE ABLE TO TRAVEL IF R150,00 WORTH OF PETROL IS FILLED IN THE CAR.
3. HOW MUCH FUEL WILL THE CAR USE IF DRIVEN FROM PE TO DBN (A DISTANCE OF 927 km) AND HOW MANY TIMES WILL THE DRIVER NEED TO STOP DURING THE TRIP TO FILL UP WITH PETROL?
4. REWRITE THE FUEL CONSUMPTION RATE TO DESCRIBE THE NUMBER OF KILOMETRES THE CAR CAN TRAVEL PER LITRE OF PETROL (km/l).
5. WHICH FORMAT OF THE RATE (L/100km or km/L) DO YOU THINK IS THE MORE USEFUL FORMAT? EXPLAIN.
6. CALCULATE THE AVERAGE FUEL CONSUMPTION OF A CAR (in L/100km and in km/L) IF THE CAR CAN TRAVEL 600km USING 42L OF FUEL