

Additional Applications and Problem Solving

Average Rate

total distance = average rate · total time

$$d = rt$$

Ex 1.

Let's say you leave at 8 A.M. from Los Angeles and travel 150 miles. You stop to rest for one hour, and then continue traveling for another 90 miles. You stop again and check the time: it's 12 P.M. Find your average rate of travel (not including the rest time).

Ex 2.

You travel on the Pacific Coast Highway at an average rate of 30 miles per hour. How long would it take to travel 120 miles?

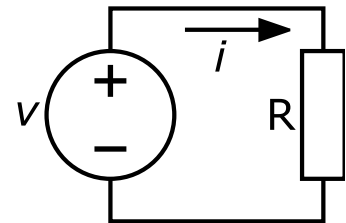
Voltage

$$V = ir$$

V is voltage (measured in volts (V))

i is current (measured in amps (A))

r is resistance (measured in ohms (Ω))



Ex 3.

The voltage in a circuit is -120 V across a 40-ohm resistor. What is the current (in amps)?