Velocity - Trolley with electric drive

Objects of the experiment

- 1. Measuring the time *t* required by a body for covering a given path s
- 2. Deriving statements related to the velocity of the body

Setup



Apparatus

1 Trolley with electric drive	337 07
1 Table stop-clock	313 05
1 Steel tape measure, 2 m	311 77
2 Stand rod, 25 cm, 10 mm diam	301 26
2 Support block	301 25
1 Pointer, pair	301 29
1 Batteries, 1.5 V (AA), set of 4	685 44ET4

Carrying out the experiment

- Set up the marking rods at a distance of 2 m.
- Set a low velocity with the knob of the trolley.
- Place the trolley at about 25 cm before the first marking rod.
- Push the start switch of the trolley so that the trolley moves forward.
- When the front edge of the trolley reaches the first marking rod, press the green start key of the stop-clock.
- When the trolley reaches the second marking rod, press the red stop key of the stop-clock.
- Read the time from the stop-clock, and enter it into the ta-
- Repeat the measurement at other velocities of the trolley.

Measuring example

Measurement	Path s in m	time t in s	
1	2	26	
2	2	20	
3	2	16	

Evaluation

- The velocity is a measure of how fast or slowly a body is moving.
- 2. If the body covers a given path in a shorter time, its velocity is greater.