7 The photograph shows a toy train as it moves around a circular track.
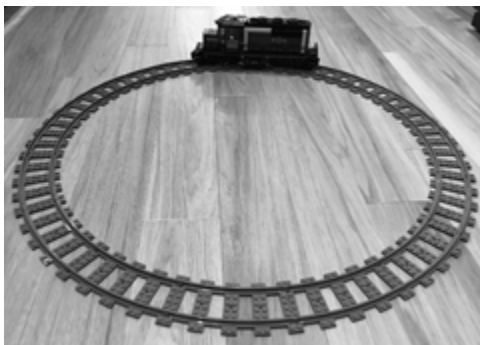
A student wants to find the average speed of the toy train.

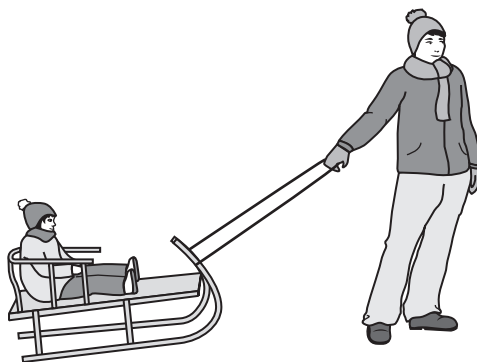Describe a method that the student could use to find the average speed.

(5)

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(Total for Question 7 = 5 marks)

8 (a) The diagram shows a man pulling a child on a sledge.

The mass of the child and sledge is 45 kg.

The unbalanced force acting on the sledge is 49 N.

(i) State the equation linking unbalanced force, mass and acceleration.

(1)

(ii) Calculate the acceleration of the child and sledge.

(2)

acceleration = ... m/s^2

(iii) Suggest a reason why the man must pull the sledge with a force that is greater than 49 N.

(1)

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