

(ii) Calculate, for the girl,

- the average speed,

$$\text{average speed} = \dots \text{ms}^{-1} [1]$$

- the magnitude of the average velocity v and its angle with respect to the direction of the initial path.

$$\text{magnitude of } v = \dots \text{ms}^{-1}$$

$$\text{angle} = \dots {}^\circ [3]$$

[Total: 7]

- 2 (a) Describe the effects, one in each case, of systematic errors and random errors when using a micrometer screw gauge to take readings for the diameter of a wire.

systematic errors:
.....

random errors:
.....

[2]

- (b) Distinguish between precision and accuracy when measuring the diameter of a wire.

precision:
.....

accuracy:
.....

[2]

[Total: 4]