

**0 1 . 1** Which of these is a scalar quantity?

**[1 mark]**

Tick **one** box.

displacement

distance

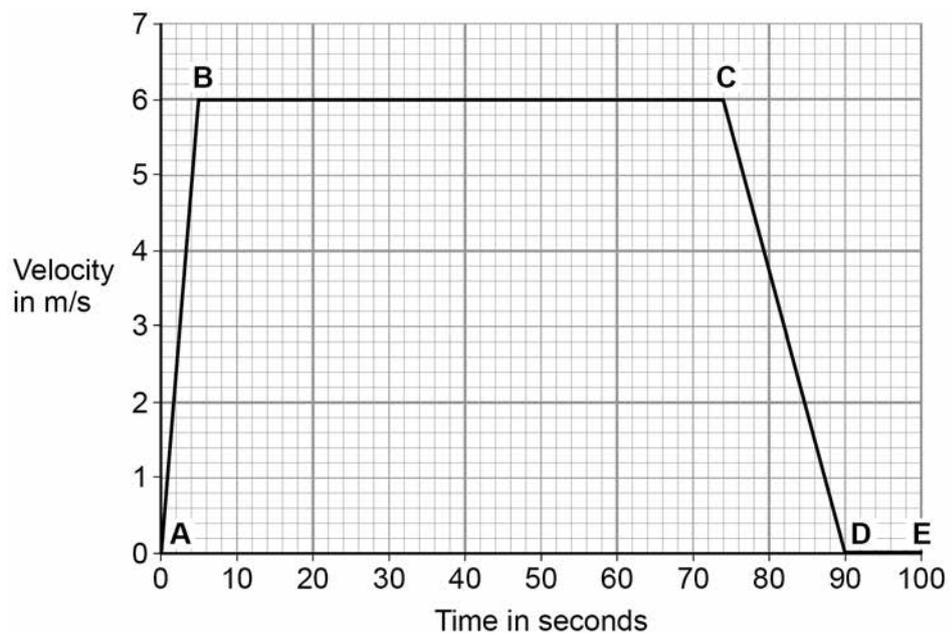
force

velocity

**0 1 . 2** A woman cycled along a straight flat road.

**Figure 1** shows how the woman's velocity changed with time.

**Figure 1**



Which part of the graph shows the woman moving at constant velocity?

**[1 mark]**

Tick **one** box.

**BC**

**CD**

**DE**



**0 1 . 3** Which part of the graph shows the woman stationary?

[1 mark]

Tick **one** box.

BC       CD       DE

Between points **A** and **B** the woman was accelerating.

**0 1 . 4** Use **Figure 1** to determine the total time for which she was accelerating.

[1 mark]

\_\_\_\_\_

Time = \_\_\_\_\_ s

**0 1 . 5** Use **Figure 1** to determine her increase in velocity between points **A** and **B**.

[1 mark]

\_\_\_\_\_

Increase in velocity = \_\_\_\_\_ m/s

**0 1 . 6** Calculate her acceleration between points **A** and **B**.

Use the equation:

$$\text{acceleration} = \frac{\text{change in velocity}}{\text{time taken}}$$

[2 marks]

\_\_\_\_\_

\_\_\_\_\_

Acceleration = \_\_\_\_\_ m/s<sup>2</sup>

**Question 1 continues on the next page**

**Turn over ►**



0 1 . 7

Estimate how a typical cycling speed of 6 m/s compares with a typical walking speed.

[1 mark]

Tick **one** box.

about twice as fast

about four times faster

about eight times faster

Do not write  
outside the  
box

8



Question	Answers	Extra information	Mark	AO / Spec. Ref.
01.1	distance		1	AO1 6.5.1.1
01.2	BC		1	AO3 6.5.4.1.5
01.3	DE		1	AO3 6.5.4.1.5
01.4	5.0 (s)	allow 5 (s)	1	AO2 6.5.4.1.5
01.5	6.0 (m/s)	allow 6 (m/s)	1	AO2 6.5.4.1.5
01.6	6.0 / 5.0 = 1.2 (m/s <sup>2</sup> )	an answer of 1.2 scores <b>2</b> marks allow ecf from questions <b>01.4</b> and <b>01.5</b>	1 1	AO2 6.5.4.1.5
01.7	about four times faster		1	AO2 6.5.4.1.2
<b>Total</b>			<b>8</b>	