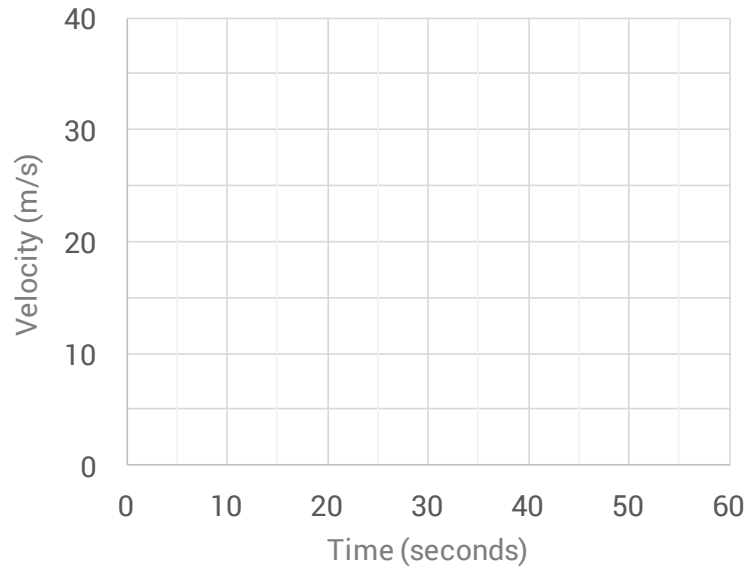| 0 | 1 |

Motorbike A travels with a velocity of 25 m/s for 40 seconds before decelerating uniformly to rest over a period of 20 seconds.

| 0 | 1 | . | 1 |

Sketch a velocity-time graph for the motion of this motorbike using the below axes. Label your line **Motorbike A**.

[3 marks]

| 0 | 1 | . | 2 |

Calculate the **deceleration** of Motorbike A in the last 20 seconds of its motion.

Deceleration = _____ m/s^2

[3 marks]

| 0 | 1 | . | 3 |

Calculate the total distance travelled by Motorbike A.

Distance = _____ m

[3 marks]

| 0 | 1 | . | 4 |

Motorbike B travels **side-by-side with motorbike A** for the first 40 seconds of its motion. At t = 40 seconds however, it begins to **accelerate at an *increasing* rate**.

Sketch a velocity-time graph for the motion of motorbike B using the above axes. Label this line **Motorbike B**.

[3 marks]

0	2

Jason tries skydiving while on holiday in New Zealand. The below graph shows how his velocity changes from the moment he jumps out of the plane to the moment he lands on the ground.
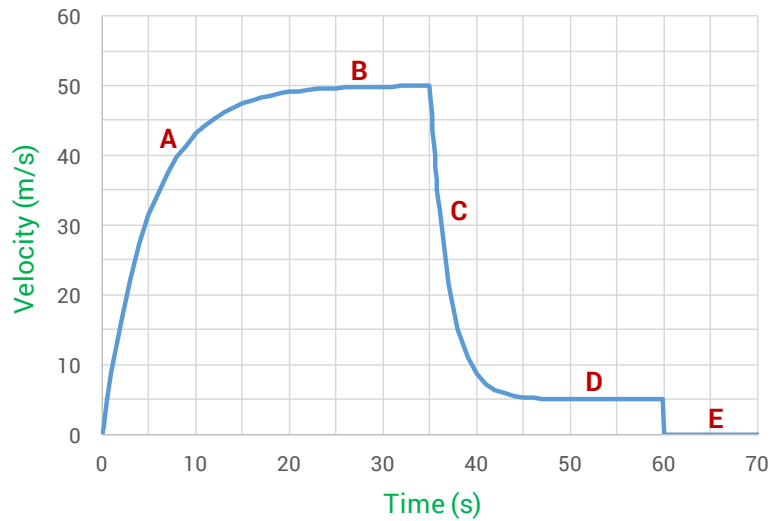
0	2	.	1

Using the below table, describe his motion in each of the labelled sections of the graph.

Section	Description
A	
B	
C	
D	
E	

[5 marks]

0	2	.	2

Estimate the altitude from which he jumped. Show all of your working clearly in the space below.

Altitude = _____ m

[5 marks]