1   Fig. 1.1 shows a velocity-time graph for a rocket.
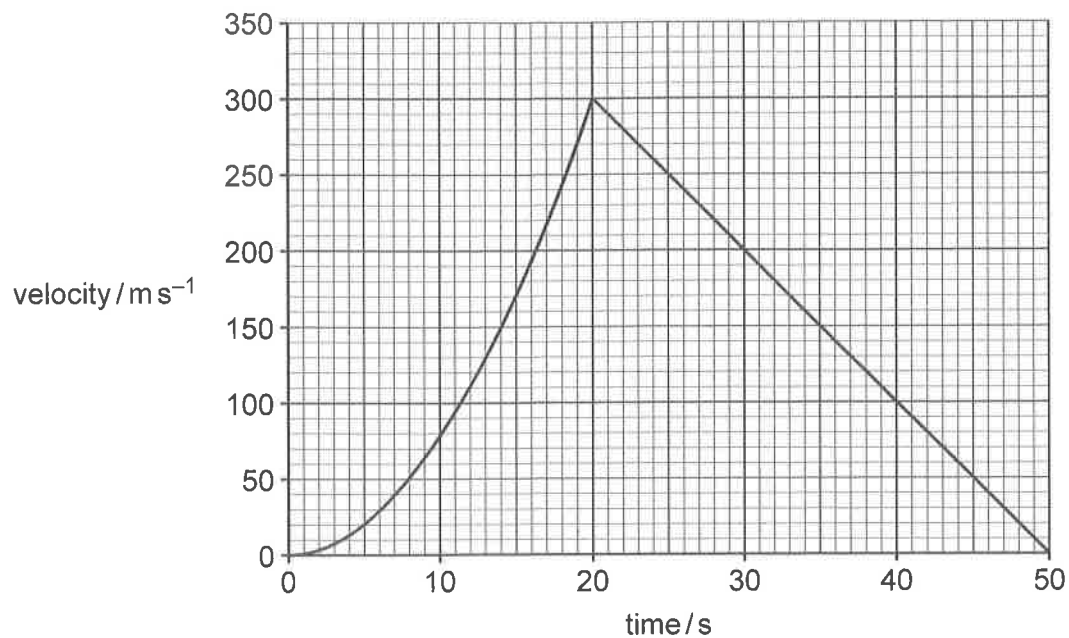

Fig. 1.1

(a) Determine the acceleration of the rocket at time = 10 s.

acceleration = ... m s^{-2} [3]

(b) (i) Suggest and explain what happens at time = 20 s.

....

....

.... [2]

(ii) State the time when the acceleration of the rocket reaches a maximum value and suggest a reason why the acceleration is a maximum at this time.

....

....

.... [2]

(iii) Describe the motion of the rocket **after** time = 20 s.

....

....

....

.... [3]

(c) Explain how Fig. 1.1 is used to determine the maximum height reached.

....

.... [1]

[Total: 11]