SECTION B

Answer ALL questions in the spaces provided.

11 The photograph shows a rocket. This rocket is launched vertically.

(Source: https://www.nasa.gov/image-feature/the-spacex-falcon-9-rocket-in-vertical-position-on-the-launch-pad)

(a) The rocket's engines give a total upward thrust of 7.3×10^7 N.

Calculate the initial acceleration of the rocket.

mass of rocket = 5.0×10^6 kg

(3)

.....

.....

.....

.....

.....

.....

Initial acceleration = ...

(b) Give one reason why the acceleration will increase as the rocket rises.

(1)

.....

.....

(Total for Question 11 = 4 marks)