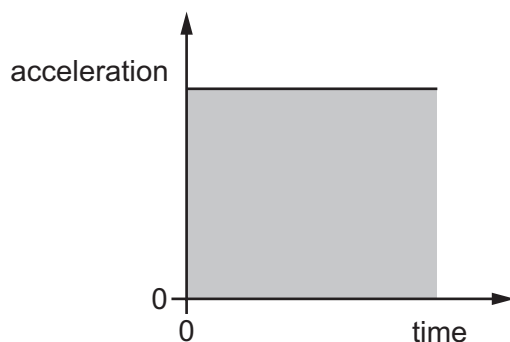


- 6 The graph shows the variation with time of the acceleration of a car.



What **must** the shaded area under the graph represent?

- A the average velocity of the car
  - B the change in velocity of the car
  - C the final velocity of the car
  - D the initial velocity of the car
- 7 A stone is thrown horizontally off a cliff and then lands in the sea. Air resistance is negligible.
- Which statement about the stone's motion is **not** correct?
- A The final displacement of the stone depends upon its initial horizontal velocity.
  - B The stone travels with a constant horizontal component of velocity until it hits the water.
  - C The stone travels with an increasing vertical component of velocity.
  - D The time taken for the stone to hit the surface of the water depends on its initial horizontal velocity.
- 8 Water is pumped through a hose-pipe at a rate of 90 kg per minute. Water emerges horizontally from the hose-pipe with a speed of  $20 \text{ m s}^{-1}$ .
- What is the minimum force required from a person holding the hose-pipe to prevent it moving backwards?
- A 30 N                      B 270 N                      C 1800 N                      D 110 000 N