

9C First Two SUVAT Equations

1. A cyclist is travelling along a straight road. She accelerates at a constant rate from a speed of 4ms^{-1} to a speed of 7.5ms^{-1} in 40 seconds. Find:

a) The distance travelled over this 40 seconds

b) The acceleration over the 40 seconds

2. A particle moves in a straight line from a point A to B with constant deceleration of 1.5ms^{-2} . The speed of the particle at A is 8ms^{-1} and the speed of the particle at B is 2ms^{-1} . Find:
- a) The time taken for the particle to get from A to B

- b) The distance from A to B

After reaching B the particle continues to move along the straight line with the same deceleration. The particle is at point C, 6 seconds after passing through A. Find:

- c) The velocity of the particle at C

- d) The distance from A to C