

Multiple Choice Answers

Q5: B

Multiple Choice Answers

Q4: C

Multiple Choice Answers

Q6: C

Multiple Choice Answers

Q6: C

Multiple Choice Answers

Q7: C

Multiple Choice Answers

Q6: C

Multiple Choice Answers

Q6: A

Multiple Choice Answers

Q6: C

Multiple Choice Answers

Q6: B

Multiple Choice Answers

Q6: C

2(a)	force (on droplet of water) in horizontal direction is zero.
2(b)	(time taken =) $3.5 / 6.6 = 0.53$ (s)
2(c)	$s = ut + \frac{1}{2}at^2$
	$s = \frac{1}{2} \times 9.81 \times 0.53^2$
	$h = 1.4$ m

2(d)	displacement is straight-line distance (from P to Q) so less (than distance along path) or displacement is the shortest distance (from P to Q).
2(e)	$(\text{displacement})^2 = 3.5^2 + 1.4^2$
	displacement = 3.8 m

2(a)(i)	$t = 1.8 / 4.9$ $= 0.37$ s
2(a)(ii)	$v = u + at$ $= 9.81 \times 0.37$
	$= 3.6$ m s ⁻¹
2(a)(iii)	$v^2 = 3.6^2 + 4.9^2$
	$v = 6.1$ m s ⁻¹
	$\theta = \tan^{-1} (3.6 / 4.9)$ $= 36^\circ$