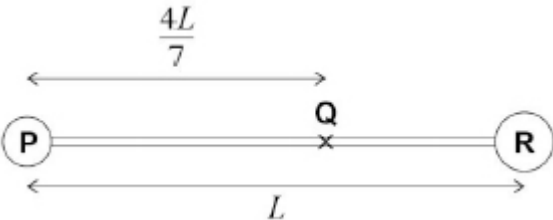
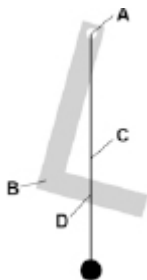


Mark schemes

1.	B	$\sqrt{2}v$	[1]
2.	D	$\frac{mv^2}{2}$	[1]
3.	D	Only total momentum is conserved.	[1]
4.	C		[1]
5.	B	190 m	[1]
6.	D	moving up with a decreasing velocity.	[1]
7.	C	80 m s^{-1}	[1]
8.	C	The acceleration of X is the same as that of Y.	[1]
9.	C	The terminal speed of Y is greater than that of Z.	[1]
10.	D	9.6 N	[1]

11. C



[1]

12. C

$G > F$

[1]

13. C

250 J

[1]

14. A

the acceleration of the car increases.

[1]

15. A

[1]

16. C

[1]

17. D

[1]

18. C

[1]

19. B

[1]

20. D

[1]

21. A

[1]

22. B

[1]

23. B

[1]

24. D

[1]

25.	D	[1]
26.	A	[1]
27.	A	[1]
28.	D	[1]
29.	A	[1]
30.	A	[1]
31.	C	[1]
32.	D	[1]
33.	D	[1]
34.	C	[1]
35.	B	[1]