Topical Past Paper Questions Workbook

IGCSE Physics (0625) Paper 1 [Core]

Multiple Choice Questions

Exam Series: February/March 2016 - February/March 2022

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Introduction

Each topical past paper questions workbook consists of hundreds of questions and their answer schemes, in the form of worksheets. Questions are assigned to each chapter according to their corresponding topic. Topics, in turn, are based on the items of the latest Cambridge IGCSE or AS/A level syllabus content. This book's specifications are as follows:

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Chapter 1

General physics

1.1 Length and time

1. 0625_m22_qp_12 Q: 1

A student investigates a pendulum.

He measures the time for the pendulum to complete 20 oscillations.

He repeats the experiment three more times.

The readings are shown.

experiment	time for 20 oscillations / s
1	17.6
2	19.8
3	17.6
4	18.6

What is the average period of the pendulum?

A 0.88 s **B** 0.92 s **C** 17.6 s **D** 18.4 s

---

2. 0625_m21_qp_12 Q: 1

A student has a measuring cylinder containing water and also has a balance.

Which of these could she use to find the volume of a small metal sphere?

She has no other apparatus.

A either the measuring cylinder containing water or the balance

B the measuring cylinder containing water only

C the balance only

D neither the measuring cylinder nor the balance

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3. 0625_s21_qp_11 Q: 1

The diagram shows a stone of irregular shape.

Which property of the stone can be found by lowering it into a measuring cylinder half-filled with water?

A length

B mass

C volume

D weight

---

4. 0625_s21_qp_12 Q: 1

Which piece of apparatus is the most suitable for measuring the mass of a pencil sharpener?

A digital balance

B measuring cylinder

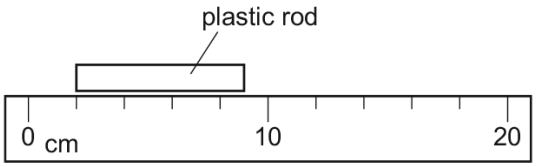
C newton meter

D ruler

---

5. 0625_s21_qp_13 Q: 1

The diagram shows a plastic rod alongside a ruler.



What is the length of the rod?

A 2.5 cm **B** 3.5 cm **C** 7.0 cm **D** 9.0 cm

---

6. 0625_w21_qp_11 Q: 1

A student measures the volume of a quantity of water.

Which apparatus is suitable?

A a balance

B a measuring cylinder

C a ruler

D a thermometer

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7. 0625_w21_qp_12 Q: 1

Which list places units of length in increasing order of magnitude (size)?

A cm → mm → m

B mm → cm → m

C mm → m → cm

D m → mm → cm

---

8. 0625_w21_qp_13 Q: 1

A teacher asks a student to measure the volume of a pencil sharpener.

Which piece of apparatus would **not** be useful?

A beaker

B displacement can

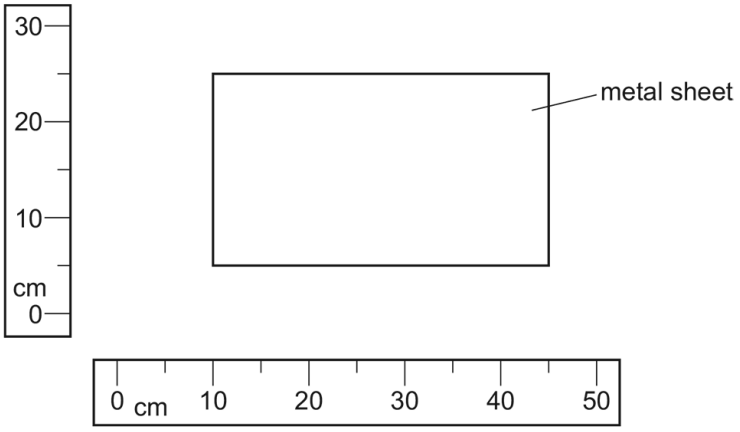
C balance

D measuring cylinder

---

9. 0625_m20_qp_12 Q: 1

The diagram shows a rectangular metal sheet close to two rulers.



What is the area of the metal sheet?

A 700 cm^2 **B** 875 cm^2 **C** 900 cm^2 **D** 1125 cm^2

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10. 0625_p20_qp_10 Q: 2

A measuring cylinder is used to measure the volume of a quantity of water.

Which measuring technique would **not** improve the accuracy of the measurement?

A making sure that the measuring cylinder is vertical

B making sure that the water surface is at eye level

C reading the top of the water meniscus

D using the smallest measuring cylinder available that will contain all the water

---

11. 0625_s20_qp_11 Q: 1

A pendulum makes 50 complete swings in 2 min 40 s.

What is the time period for 1 complete swing?

A 1.6 s **B** 3.2 s **C** 4.8 s **D** 6.4 s

---

12. 0625_s20_qp_12 Q: 1

Five athletes P, Q, R, S and T compete in a race. The table shows the finishing times for the athletes.

athlete	P	Q	R	S	T
finishing time / s	22.50	24.40	25.20	26.50	23.20

Which statement is correct?

A Athlete P won the race and was 0.70 s ahead of the athlete in second place.

B Athlete P won the race and was 1.90 s ahead of the athlete in second place.

C Athlete S won the race and was 1.30 s ahead of the athlete in second place.

D Athlete S won the race and was 2.10 s ahead of the athlete in second place.

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13. 0625_s20_qp_13 Q: 1

Diagram 1 shows a solid, rectangular-sided block.

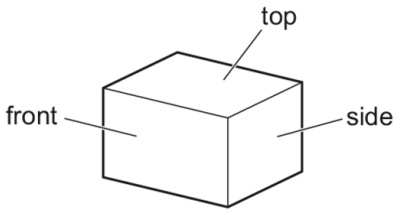

diagram 1

Diagram 2 shows the same block from the front and from the side.

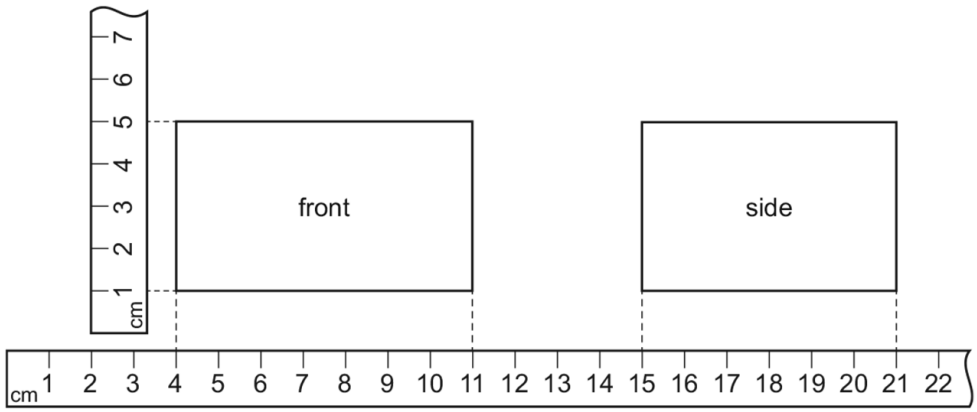

diagram 2

Metre rules have been shown close to the edges of the block.

What is the volume of the block?

A 120 cm^3 **B** 168 cm^3 **C** 264 cm^3 **D** 1155 cm^3

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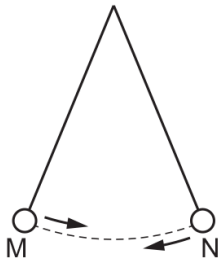
14. 0625_w20_qp_11 Q: 1

The diagram shows a pendulum. The pendulum bob swings repeatedly between points M and N.



A student starts a stop-watch when the bob reaches point M.

He counts each time the bob changes direction and stops the watch on the tenth change in direction.

The watch shows a time of 12.0 seconds.

What is the period of the pendulum?

A 0.60 s **B** 1.2 s **C** 2.4 s **D** 12.0 s

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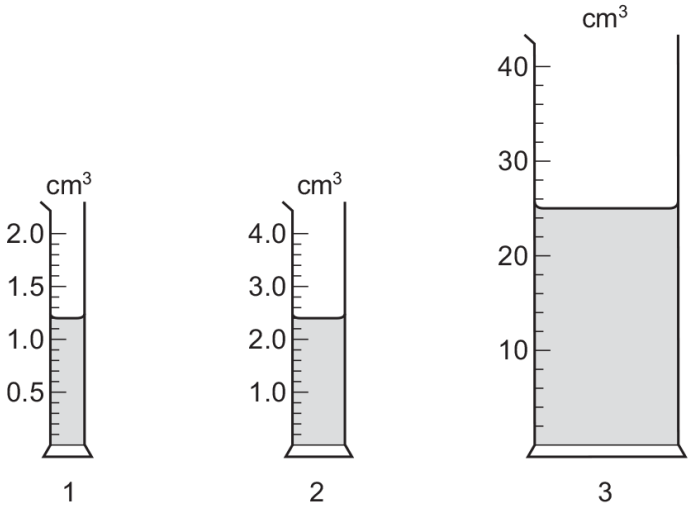
15. 0625_w20_qp_12 Q: 1

A student measures the volumes of three liquids using three different measuring cylinders.



The table shows the volumes recorded by the student.

measuring cylinder	volume / cm^3
1	1.2
2	2.2
3	25

Which readings are correctly recorded?

A 1, 2 and 3 **B** 1 and 2 only **C** 1 and 3 only **D** 1 only

---

16. 0625_w20_qp_13 Q: 1

A student uses a metre rule to measure the length of a sheet of paper.

Which measurement is shown to the nearest millimetre?

A 0.3 m **B** 0.29 m **C** 0.293 m **D** 0.2932 m

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17. 0625_m19_qp_12 Q: 1

Water drips from a tap into a measuring cylinder.

The table shows the volume of water in the cylinder every minute for four minutes.

time / minutes	volume of water / cm^3
0	0
1.0	27
2.0	57
3.0	83
4.0	112

What is the average volume of water collected in the cylinder each minute?

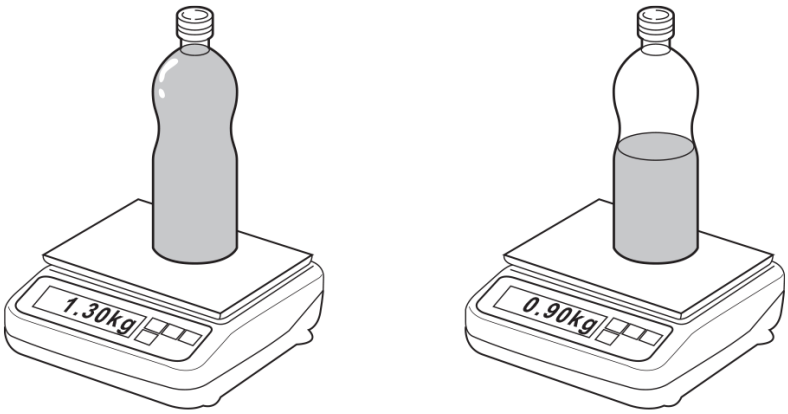
A 22 cm^3 **B** 28 cm^3 **C** 56 cm^3 **D** 57 cm^3

---

18. 0625_m19_qp_12 Q: 5

The mass of a full bottle of cooking oil is 1.30 kg.

When exactly half of the oil has been used, the mass of the bottle plus the remaining oil is 0.90 kg.



What is the mass of the empty bottle?

A 0.40 kg **B** 0.50 kg **C** 0.65 kg **D** 0.80 kg

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19. 0625_s19_qp_11 Q: 1

A digital stop-clock measures time in minutes and seconds.

The stop-clock reads 00:50 when it is started (i.e. 00 minutes 50 seconds).

It reads 02:10 when it is stopped.

What is the shortest possible time that has elapsed between starting and stopping the stop-clock?

A 1 minute 20 seconds

B 2 minutes 00 seconds

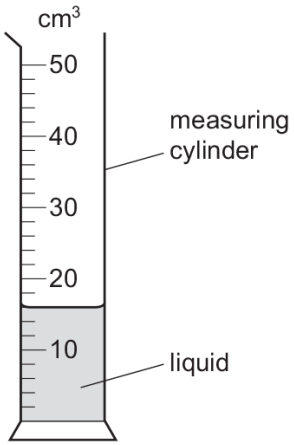
C 2 minutes 10 seconds

D 3 minutes 00 seconds

---

20. 0625_s19_qp_13 Q: 1

The diagram shows a measuring cylinder containing liquid.



What is the reading for the volume of liquid in the cylinder?

A 13.0 cm^3 **B** 13.5 cm^3 **C** 16.0 cm^3 **D** 17.0 cm^3

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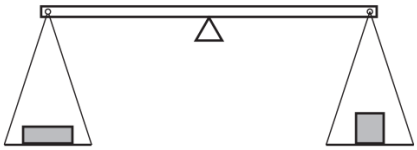
21. 0625_s19_qp_13 Q: 5

Two objects are placed on a balance, one on each side:



Which properties of the objects can be compared using the balance?

A weight, mass and volume

B weight and mass only

C volume and density

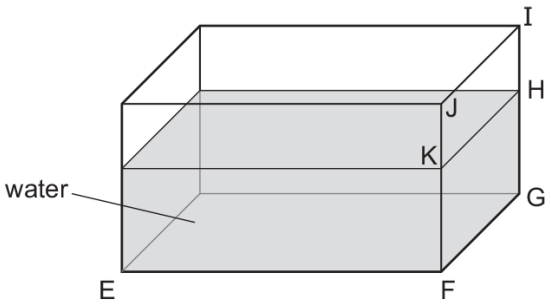
D density only

---

22. 0625_w19_qp_13 Q: 1

A student uses a ruler to find the volume of water in a tank.

She measures the lengths EF and FG.



What other length does she need to measure?

A FJ **B** FK **C** HI **D** IJ

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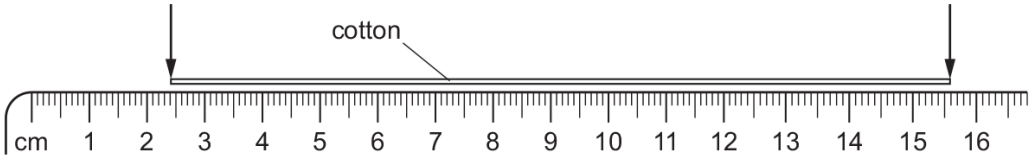
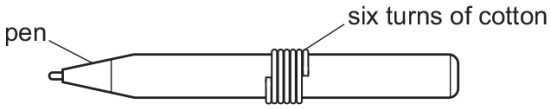
23. 0625_s18_qp_13 Q: 1

A length of cotton is measured between two points on a ruler.



When the length of cotton is wound closely around a pen, it goes round six times.



What is the distance once round the pen?

A 2.2 cm **B** 2.6 cm **C** 13.2 cm **D** 15.6 cm

---

24. 0625_w18_qp_13 Q: 1

A pendulum is set in motion and timed. The time measured for 20 complete swings is 30 s.

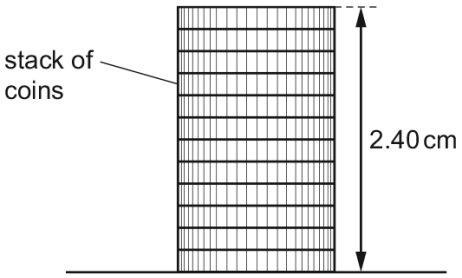
What is the time for one complete swing of the pendulum?

A 0.67 s **B** 0.75 s **C** 1.5 s **D** 3.0 s

---

25. 0625_m17_qp_12 Q: 1

The diagram shows the height of a stack of identical coins.



What is the thickness of one coin?

A 0.20 mm **B** 2.0 mm **C** 0.24 cm **D** 2.0 cm

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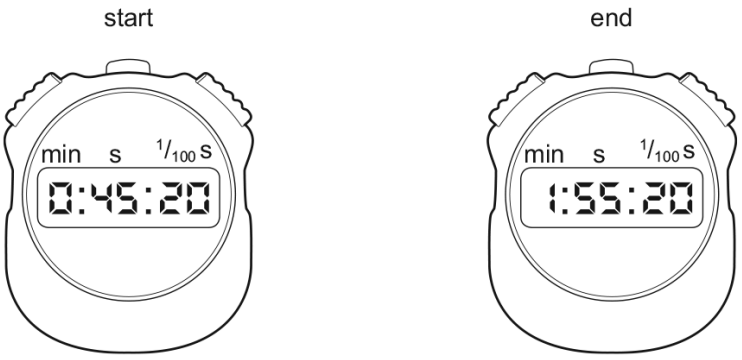
26. 0625_s17_qp_11 Q: 1

A stopwatch is used to time a runner in a race. The diagrams show the stopwatch at the start and at the end of the race.



How long did the runner take to run the race?

A 70.00 seconds

B 110.00 seconds

C 115.20 seconds

D 155.20 seconds

---

27. 0625_s17_qp_12 Q: 1

Which device is used to measure the time it takes for a 10 cm^3 block of ice to melt in a laboratory at room temperature?

A measuring cylinder

B ruler

C stopwatch

D thermometer

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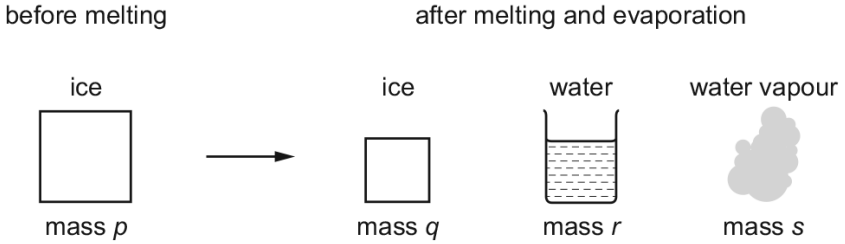
28. 0625_s17_qp_12 Q: 5

A block of ice is removed from a freezer. Some of the ice melts to produce water. Some of the water that is produced evaporates.

The original mass of the ice is *p*. The mass of the ice that has not yet melted is *q*. The mass of the water is *r*. The mass of the water vapour is *s*.

The diagram shows these changes.



Which equation gives the relationship between *p*, *q*, *r* and *s*?

A $p = q + r$

B $p = q + r + s$

C $p = q + r - s$

D $p = q + s$

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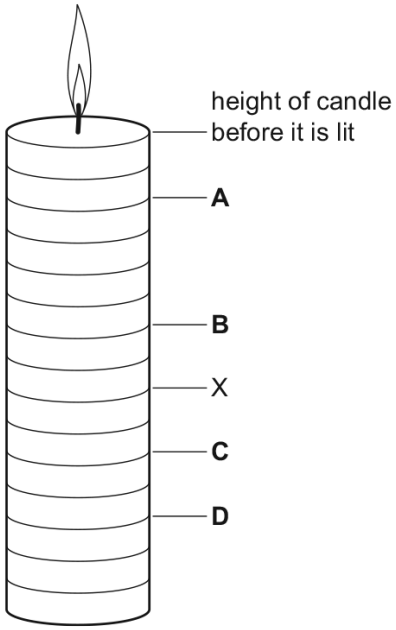
29. 0625_s17_qp_13 Q: 1

A candle burns evenly. It is used as a timer.

The candle is lit and burns down to point X in 2 hours.

To which labelled point does the candle burn down after a further 30 minutes?



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30. 0625_s17_qp_13 Q: 2

A pendulum is swinging. Five students each measure the time it takes to swing through ten complete swings.

Three students measure the time as 17.2 s. Another student measures it as 16.9 s, and the fifth student measures it as 17.0 s.

What is the average period of the pendulum?

A 1.69 s **B** 1.70 s **C** 1.71 s **D** 1.72 s

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31. 0625_w17_qp_11 Q: 1

A student measures the volume of a cork.

He puts some water into a measuring cylinder and then one glass ball. He puts the cork and then a second, identical glass ball into the water as shown.

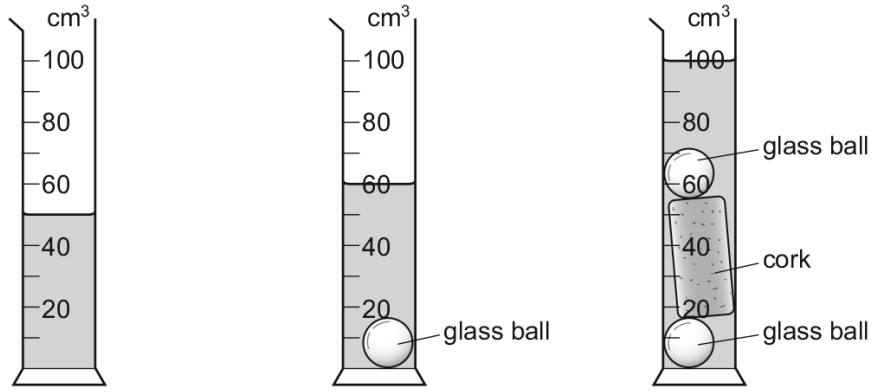

diagram 1 diagram 2 diagram 3

Diagram 1 shows the first water level.

Diagram 2 shows the water level after one glass ball is added.

Diagram 3 shows the water level after the cork and the second glass ball are added.

What is the volume of the cork?

A 30 cm^3 **B** 40 cm^3 **C** 50 cm^3 **D** 100 cm^3

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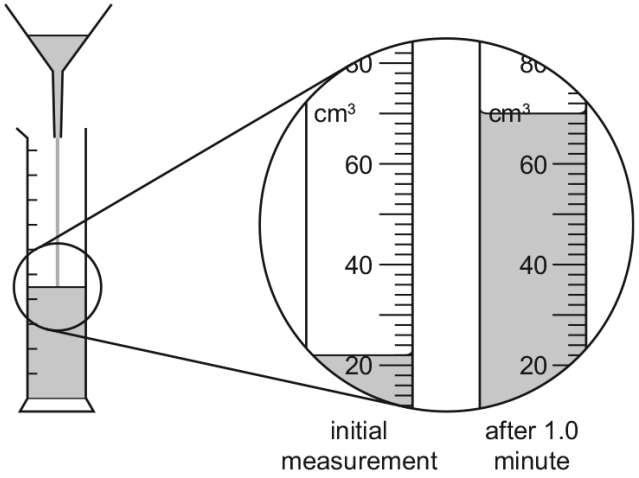
32. 0625_w17_qp_12 Q: 1

A student investigates the rate of flow of oil through a funnel.

The diagrams show the experiment and the volume of oil in the measuring cylinder at the start of the experiment, and one minute later.



What is the rate of flow of oil through the funnel during the one minute?

A $0.73\,cm^3/s$ **B** $0.80\,cm^3/s$ **C** $44\,cm^3/s$ **D** $48\,cm^3/s$

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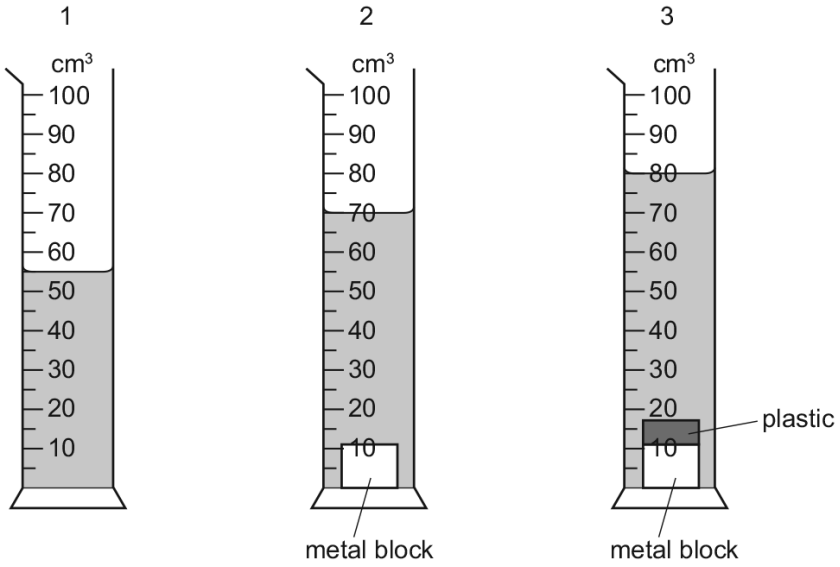
33. 0625_w17_qp_13 Q: 1

A measuring cylinder contains some water. A small metal block is slowly lowered into the water and is then removed.

Finally a piece of plastic is attached to the metal block and the block is again slowly lowered into the water.

The diagrams show the measuring cylinder at each stage of this process.



What is the volume of the piece of plastic?

A 10 cm³ **B** 25 cm³ **C** 70 cm³ **D** 80 cm³

---

34. 0625_p16_qp_10 Q: 2

A measuring cylinder is used to measure the volume of a quantity of water.

Which measuring technique would **not** improve the accuracy of the measurement?

A making sure that the measuring cylinder is vertical

B making sure that the water surface is at eye level

C reading the top of the water meniscus

D using the smallest measuring cylinder available that will contain all the water

---

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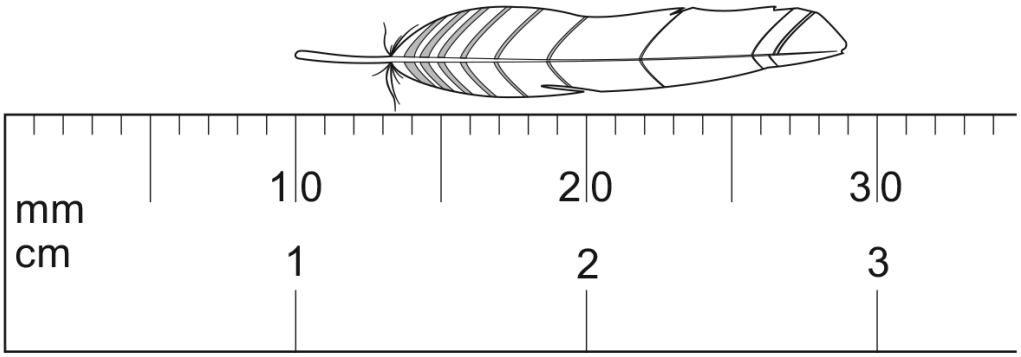
35. 0625_s16_qp_13 Q: 1

The diagram shows an enlarged drawing of the end of a metre rule. It is being used to measure the length of a small feather.



What is the length of the feather?

A 19 mm **B** 29 mm **C** 19 cm **D** 29 cm

---

36. 0625_w16_qp_11 Q: 1

A student has a can of oil.

Which quantity can be measured using only a measuring cylinder?

A density of the oil

B mass of the oil

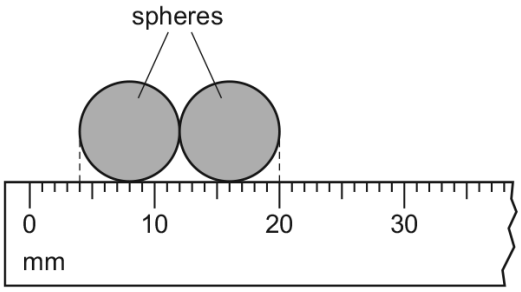
C volume of the oil

D weight of the oil

---

37. 0625_w16_qp_12 Q: 1

The diagram shows two identical spheres placed beside a ruler.



What is the radius of one sphere?

A 4.0 mm **B** 5.0 mm **C** 8.0 mm **D** 10 mm

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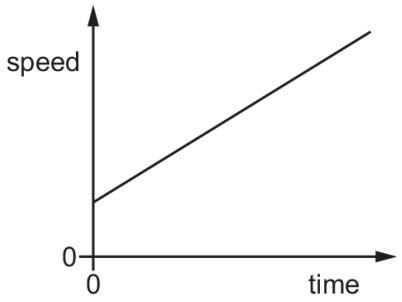
1.2 Motion

38. 0625_m22_qp_12 Q: 2

The diagram shows a speed–time graph for a moving object.



Which statement describes the motion of the object?

A The speed of the object is increasing with constant acceleration.

B The speed of the object is increasing with an acceleration that is not constant.

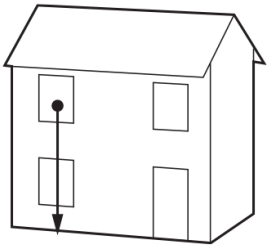
C The speed of the object is decreasing with constant deceleration.

D The speed of the object is decreasing with a deceleration that is not constant.

---

39. 0625_m22_qp_12 Q: 3

A tennis ball falls from the upstairs window of a house.



What can be said about the acceleration of the ball if air resistance is ignored?

A It depends on the density of the ball.

B It depends on the mass of the ball.

C It increases as the ball falls.

D It stays the same as the ball falls.

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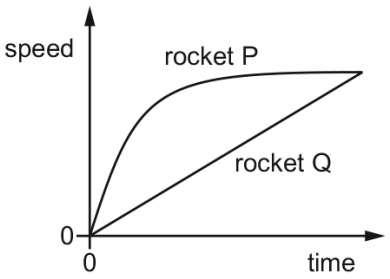
40. 0625_m21_qp_12 Q: 2

Two rockets are launched at the same time from the surface of the Earth. The graph shows how the speeds of the rockets change with time.



Which statement about the rockets is correct?

A Both rockets travel the same distance.

B Rocket P accelerates and then decelerates.

C Rocket P travels further than rocket Q.

D Rocket Q has zero acceleration.

---

41. 0625_m21_qp_12 Q: 3

A train begins a journey from a station and travels 60 km in a time of 20 minutes.

What is the average speed of the train?

A 3.0 m/s **B** 5.0 m/s **C** 50 m/s **D** 60 m/s

---

42. 0625_s21_qp_11 Q: 2

Two stones of different weights fall at the same time from a table. Air resistance may be ignored.

What will happen and why?

	what will happen	why
A	Both stones hit the floor at the same time.	Acceleration of free fall is constant.
B	Both stones hit the floor at the same time.	They fall at constant speed.
C	The heavier stone hits the floor first.	Acceleration increases with weight.
D	The heavier stone hits the floor first.	Speed increases with weight.

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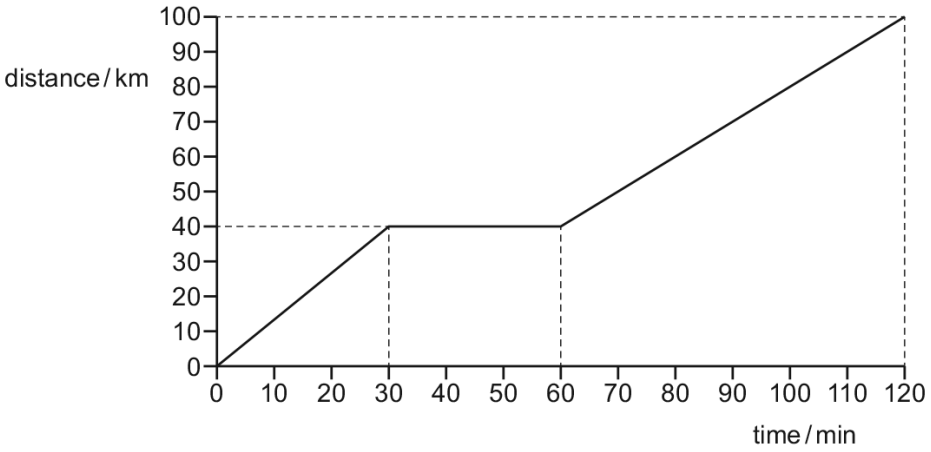
43. 0625_s21_qp_11 Q: 3

The distance–time graph for a motorway journey is shown.



What is the average speed for the journey?

A 50 km / h **B** 67 km / h **C** 70 km / h **D** 83 km / h

---

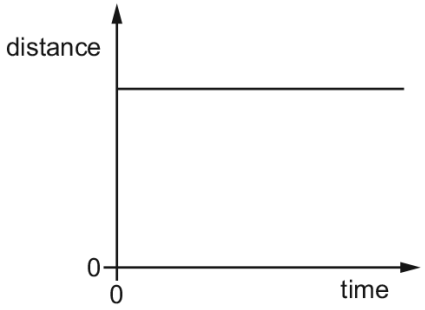
44. 0625_s21_qp_12 Q: 2

A cyclist records his speed and the distance travelled during a journey.

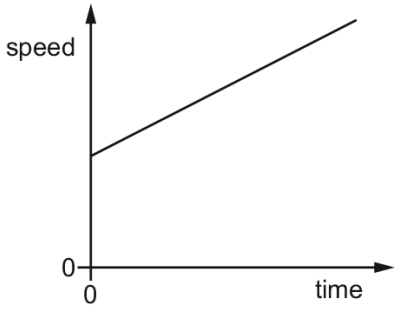
He then plots the data against time for different sections of his journey.

Which graph shows a section when he is moving with constant speed?

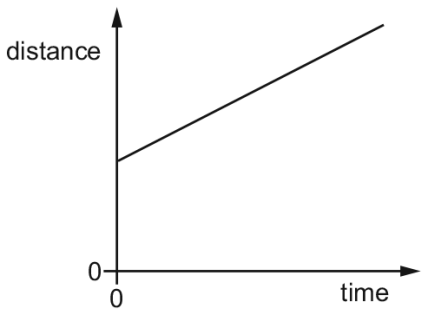
A



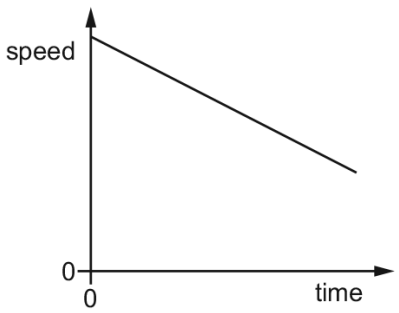
B



C



D



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45. 0625_s21_qp_12 Q: 3

Two stones of different weights fall at the same time from a table. Air resistance may be ignored.

What will happen and why?

	what will happen	why
A	Both stones hit the floor at the same time.	Acceleration of free fall is constant.
B	Both stones hit the floor at the same time.	They fall at constant speed.
C	The heavier stone hits the floor first.	Acceleration increases with weight.
D	The heavier stone hits the floor first.	Speed increases with weight.

---

46. 0625_s21_qp_13 Q: 3

A cyclist rides 300 m up a slope in 50 s.

She then rides down the slope in 25 s.

What is her average speed for the whole journey?

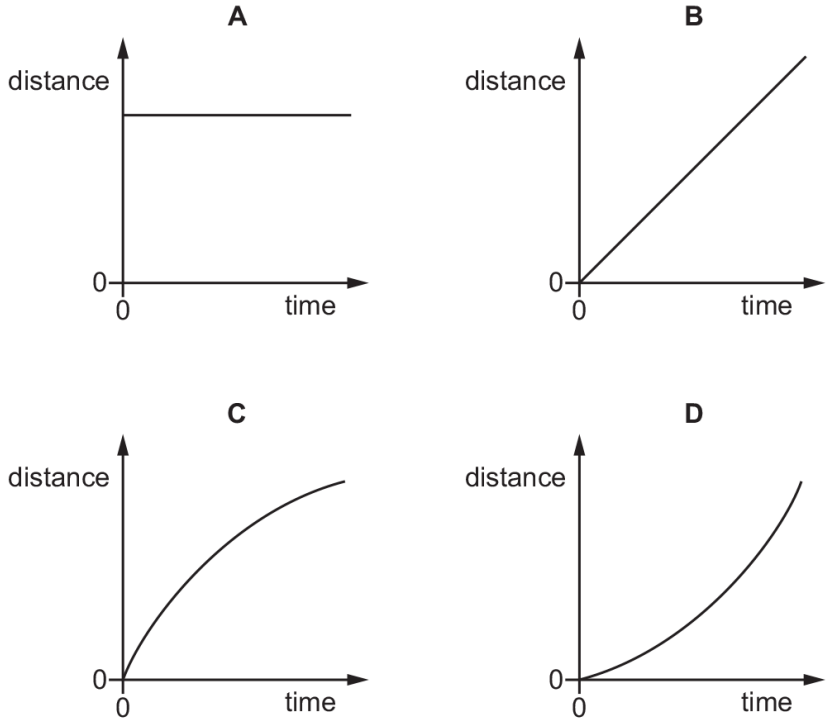
A 4.0 m/s **B** 8.0 m/s **C** 9.0 m/s **D** 16 m/s

---

47. 0625_w21_qp_11 Q: 2

The diagrams show distance–time graphs for four objects.

Which graph represents an object moving with an increasing speed?



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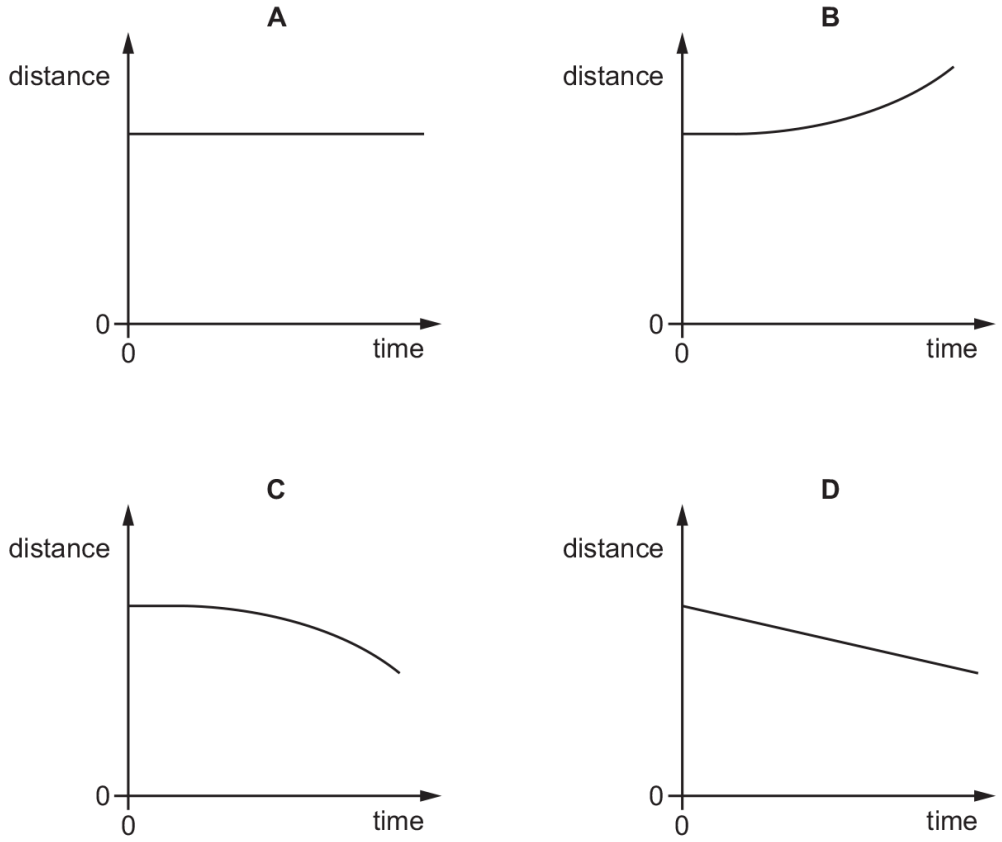
48. 0625_w21_qp_12 Q: 2

Which graph represents an object that is moving at constant speed?



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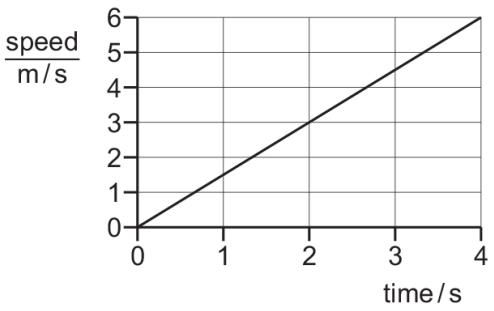
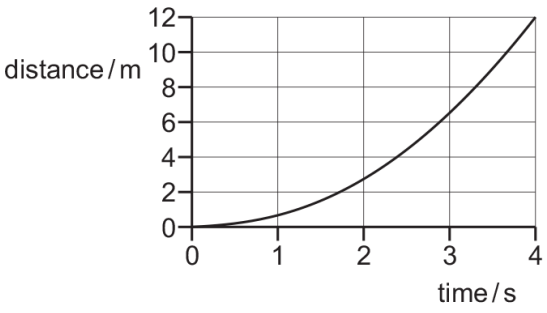
49. 0625_w21_qp_13 Q: 2

The graph shows how the speed of a car varies with time at the start of a journey.

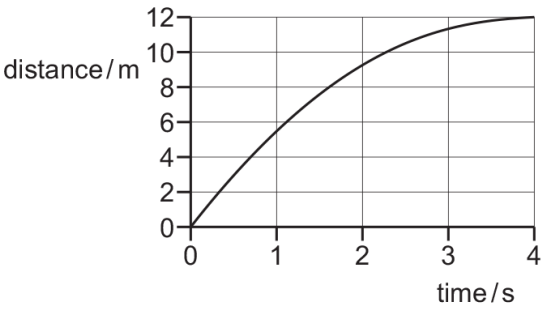


Which distance–time graph represents the motion of the car over the same time period?

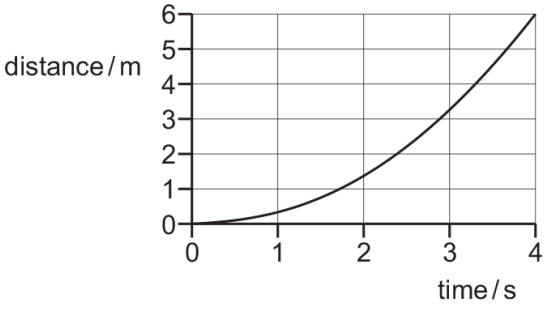
A



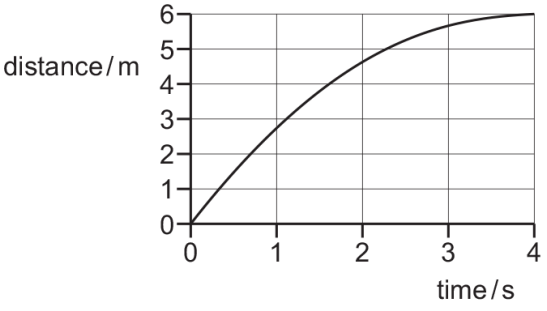
B



C



D



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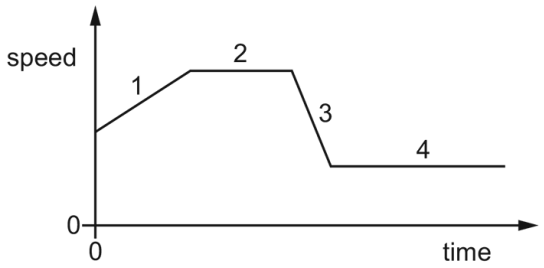
50. 0625_m20_qp_12 Q: 2

The graph shows how the speed of a car changes with time over part of a journey.



Which section of the graph shows acceleration and which section of the graph shows deceleration?

	acceleration	deceleration
A	1	2
B	1	3
C	2	4
D	3	1

---

51. 0625_m20_qp_12 Q: 3

A steel ball is dropped from the top floor of a building. Air resistance can be ignored.

Which statement describes the motion of the ball?

A The ball falls with constant acceleration.

B The ball falls with constant speed.

C The ball falls with decreasing speed.

D The ball falls with increasing acceleration.

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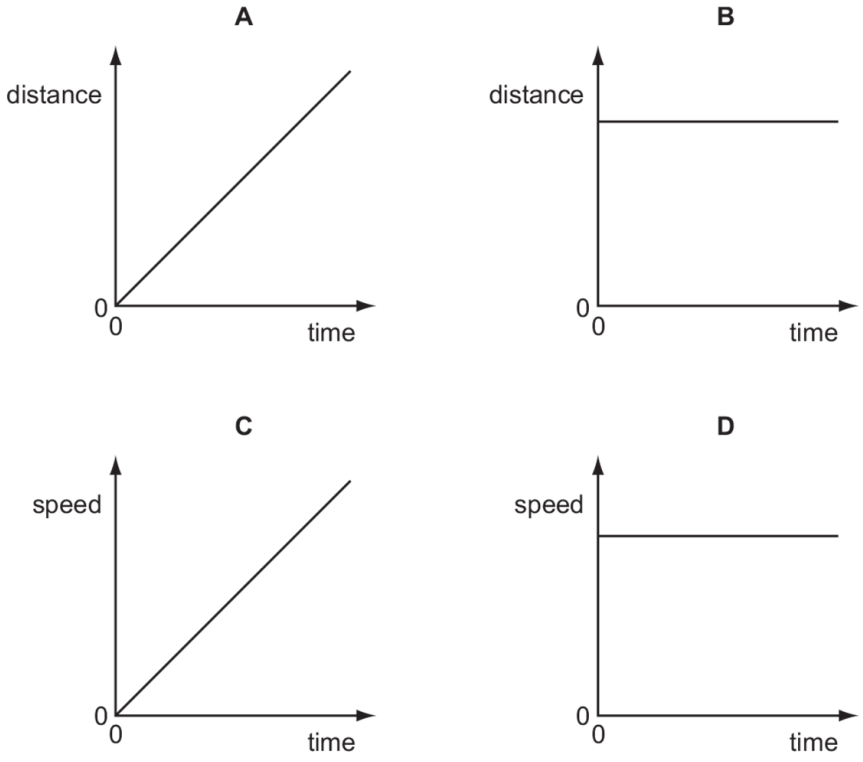
52. 0625_p20_qp_10 Q: 3

Two distance-time graphs and two speed-time graphs are shown.

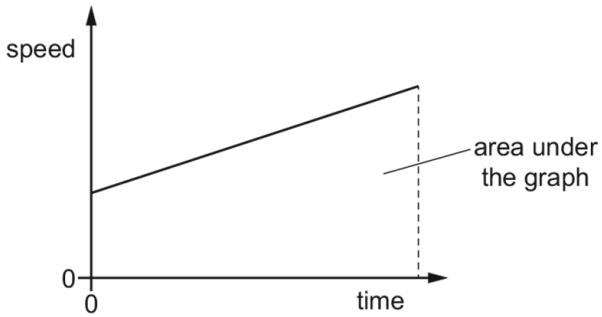
Which graph represents an object that is at rest?



---

53. 0625_s20_qp_11 Q: 2

The motion of an object is represented by the speed–time graph shown.



Which quantity is equal to the area under the graph?

A acceleration

B average speed

C distance travelled

D kinetic energy

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54. 0625_s20_qp_11 Q: 3

Which statement about acceleration is correct?

A It is related to the changing speed of an object.

B It is the distance an object travels in one second.

C It is the force acting on an object divided by the distance it travels in one second.

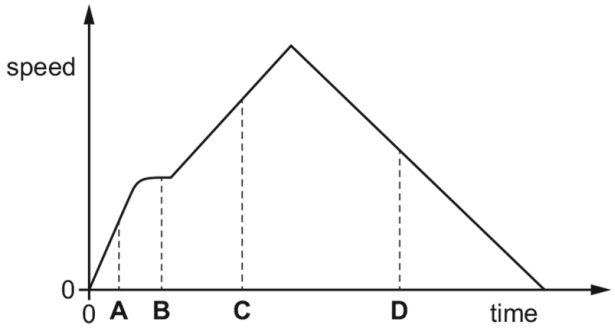
D It is the force acting on an object when it is near to the Earth.

---

55. 0625_s20_qp_12 Q: 2

The graph shows how the speed of an object varies with time.

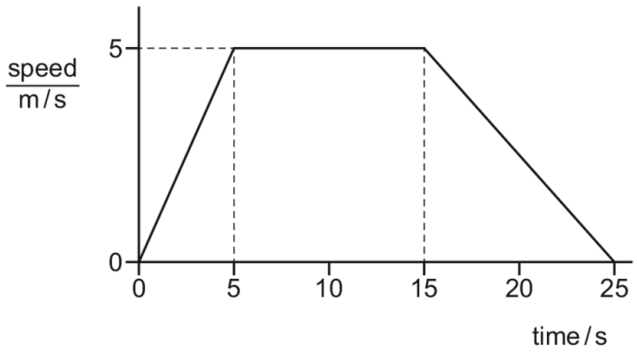
At which labelled time is the acceleration greatest?



---

56. 0625_s20_qp_13 Q: 2

The speed–time graph shows the motion of an object.



How far does the object travel at constant speed?

A 25 m **B** 50 m **C** 75 m **D** 125 m

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57. 0625_s20_qp_13 Q: 3

Which statement about acceleration is correct?

A It is related to the changing speed of an object.

B It is the distance an object travels in one second.

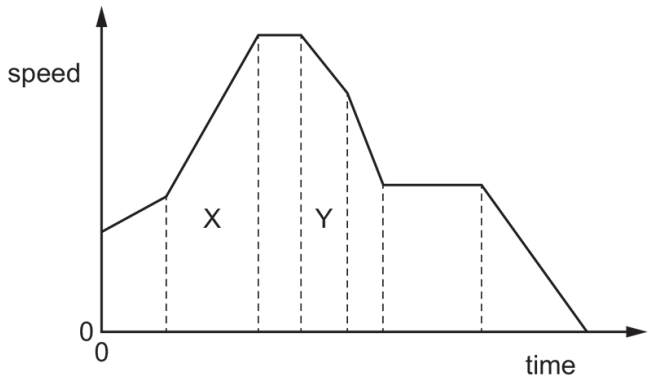
C It is the force acting on an object divided by the distance it travels in one second.

D It is the force acting on an object when it is near to the Earth.

---

58. 0625_w20_qp_11 Q: 2

The speed–time graph represents a journey.



How does the graph show that the distance travelled in section X of the journey is greater than the distance travelled in section Y?

A The area below section X of the graph is greater than the area below section Y.

B The gradient of section X of the graph is greater than the gradient of section Y.

C The speed at the end of section X of the journey is greater than the speed at the end of section Y.

D The time for section X of the journey is greater than the time for section Y.

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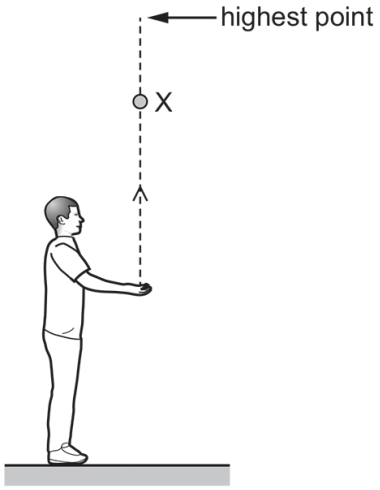
59. 0625_w20_qp_11 Q: 3

A boy throws a ball vertically upwards with a speed *v*.



Which row describes the speed and the acceleration of the ball at point X on the way upwards?

	speed	acceleration
A	decreasing	upwards
B	decreasing	downwards
C	increasing	upwards
D	increasing	downwards

---

60. 0625_w20_qp_12 Q: 2

A car driver measures the time taken to complete four separate journeys.

In which journey does the driver have the greatest average speed?

	distance / km	time / h
A	60	2
B	60	3
C	120	3
D	120	4

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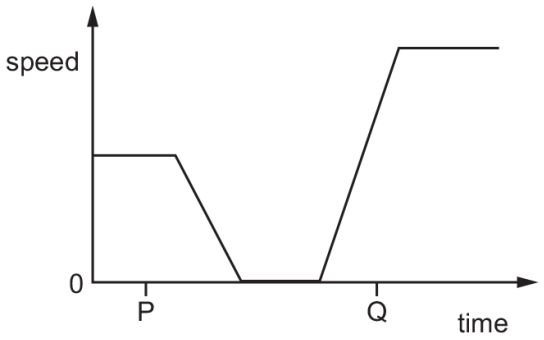
61. 0625_w20_qp_12 Q: 3

The graph shows how the speed of an object varies with time.



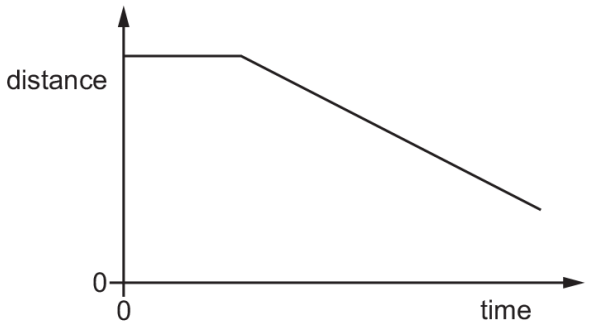
Which row describes the motion of the object at times P and Q?

	P	Q
A	at rest	accelerating
B	at rest	decelerating
C	moving with constant speed	accelerating
D	moving with constant speed	decelerating

---

62. 0625_w20_qp_13 Q: 2

The diagram shows the distance–time graph for the motion of an object.



How can the motion of the object be described?

A at rest, then constant deceleration

B at rest, then constant speed

C constant speed, then constant acceleration

D constant speed, then constant deceleration

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63. 0625_w20_qp_13 Q: 3

An athlete runs 300 m up a hill in 100 s.

She then runs down the same hill in 50 s.

What is her average speed for the whole run?

A 2.0 m/s **B** 4.0 m/s **C** 8.0 m/s **D** 9.0 m/s

---

64. 0625_m19_qp_12 Q: 2

An object is moving with uniform deceleration.

Which statement describes its motion?

A Its rate of change of speed is decreasing.

B Its speed is constant.

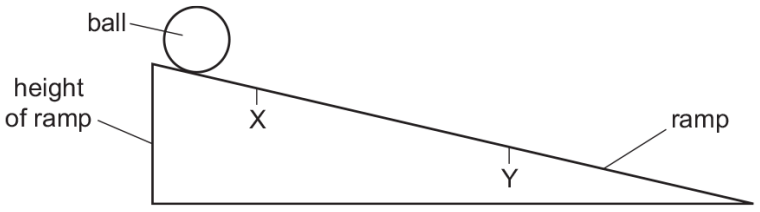
C Its speed is decreasing.

D Its speed is increasing.

---

65. 0625_m19_qp_12 Q: 3

A ball rolls down a ramp. The time it takes to move from X to Y is measured.



Which other quantity must be measured in order to calculate the average speed of the ball between point X and point Y?

A angle of slope

B diameter of ball

C distance between X and Y

D height of ramp

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66. 0625_s19_qp_11 Q: 2

A long-distance runner wishes to calculate her average speed for a race.

Which calculation should she use?

A average speed = $\frac{\text{total distance}}{\text{total time}}$

B average speed = total distance × total time

C average speed = $\frac{\text{total time}}{\text{total distance}}$

D average speed = total distance + total time

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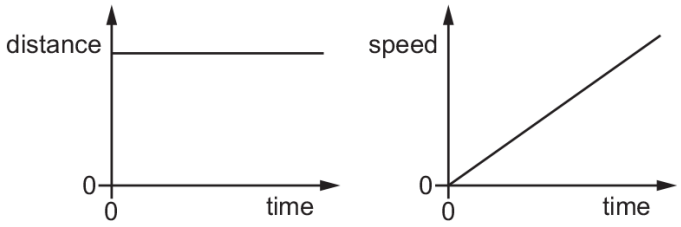
67. 0625_s19_qp_12 Q: 2

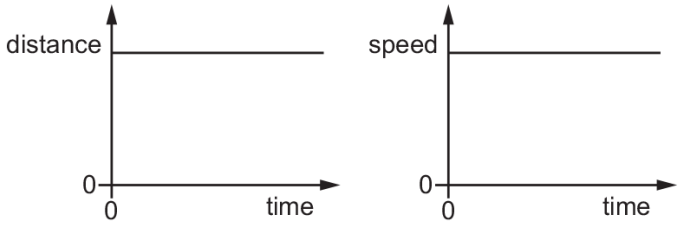
A car travels at constant speed.

Which pair of graphs show how the distance travelled by the car **and** how the car's speed vary with time?

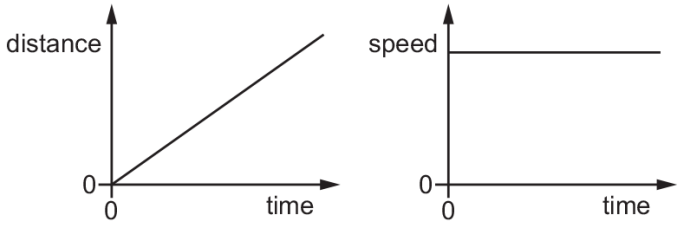
A



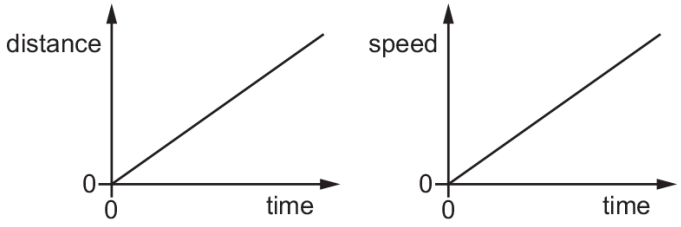
B



C



D



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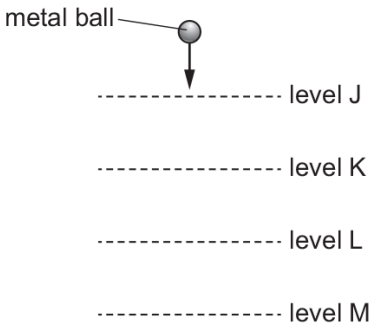
68. 0625_s19_qp_12 Q: 3

A heavy metal ball falls vertically downwards through air past four equally spaced levels J, K, L and M.



The times taken to fall from one level to the next are measured.

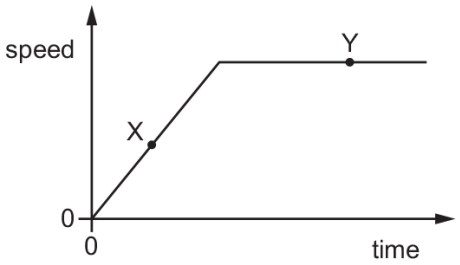
Where is the speed of the ball greatest and which time is shortest?

	speed is greatest between	time is shortest between
A	J and K	J and K
B	J and K	L and M
C	L and M	J and K
D	L and M	L and M

---

69. 0625_s19_qp_13 Q: 2

The diagram shows the speed-time graph for a car.



Which row describes the motion of the car at point X and at point Y?

	point X	point Y
A	at rest	moving with constant speed
B	moving with constant speed	at rest
C	moving with changing speed	at rest
D	moving with changing speed	moving with constant speed

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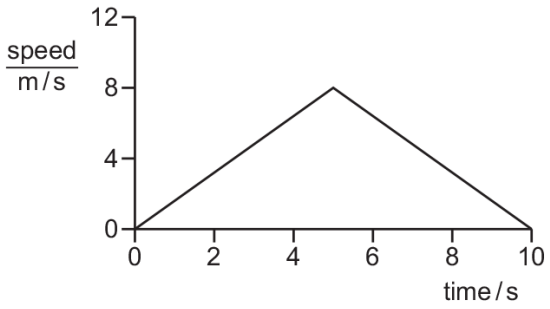
70. 0625_w19_qp_11 Q: 2

The graph shows how the speed of an object changes with time.



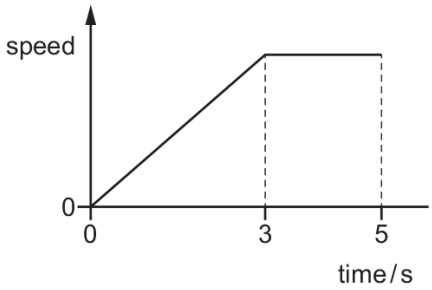
How far does the object travel in 10 seconds?

A 8 m **B** 10 m **C** 40 m **D** 80 m

---

71. 0625_w19_qp_12 Q: 2

The graph shows the motion of a car for a five-second period.



Which row is correct?

	the car is at rest at	the car is moving at a constant speed at
A	0.0 s	2.0 s
B	0.0 s	4.0 s
C	4.0 s	0.0 s
D	4.0 s	2.0 s

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72. 0625_w19_qp_13 Q: 2

An object begins to fall close to the Earth's surface. Air resistance can be ignored.

Which statement about the object's acceleration is correct?

A The acceleration is constant.

B The acceleration decreases as the body falls.

C The acceleration increases as the body falls.

D The acceleration is zero.

---

73. 0625_w19_qp_13 Q: 3

A car travels at an average speed of 60 km / h for 15 minutes.

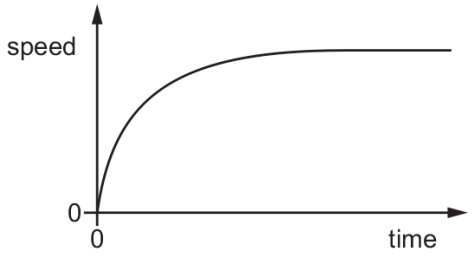
How far does the car travel in 15 minutes?

A 4.0 km **B** 15 km **C** 240 km **D** 900 km

---

74. 0625_m18_qp_12 Q: 2

The speed-time graph represents the motion of a car travelling along a straight level road.



Which statement describes the motion of the car?

A It accelerates and reaches a constant speed.

B It accelerates and then stops moving.

C It decelerates and then reaches a constant speed.

D It decelerates and then stops moving.

---

75. 0625_m18_qp_12 Q: 3

An athlete runs 300 metres up a hill at a steady speed of 3.0 m / s.

She then immediately runs the same distance down the hill at a steady speed of 6.0 m / s.

What is her average speed for the 600 metre run?

A 2.0 m / s **B** 3.0 m / s **C** 4.0 m / s **D** 4.5 m / s

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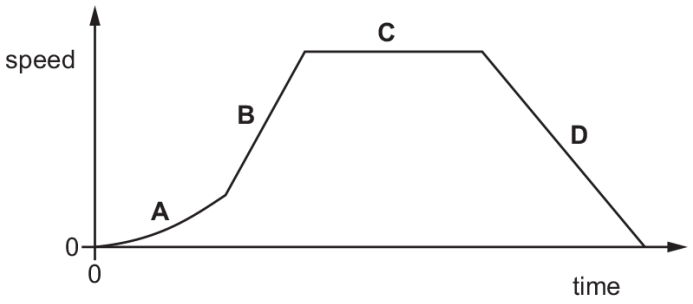
76. 0625_m18_qp_12 Q: 7

A car is travelling along a straight horizontal road. The speed-time graph is shown.

In which labelled part of the journey is the resultant force on the car zero?

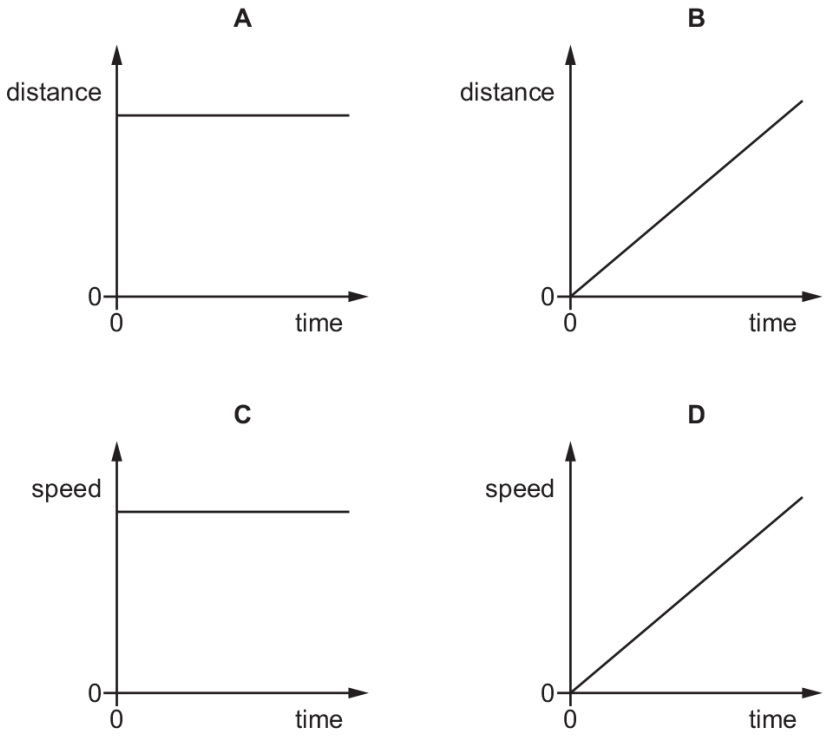


---

77. 0625_s18_qp_11 Q: 2

A car is moving along a straight, level road, with a constant acceleration.

Which graph shows the motion of the car?



---

78. 0625_s18_qp_11 Q: 3

A car takes 15 minutes to travel along a road that is 20 km long.

What is the average speed of the car?

A 0.75 km/h **B** 5.0 km/h **C** 80 km/h **D** 300 km/h

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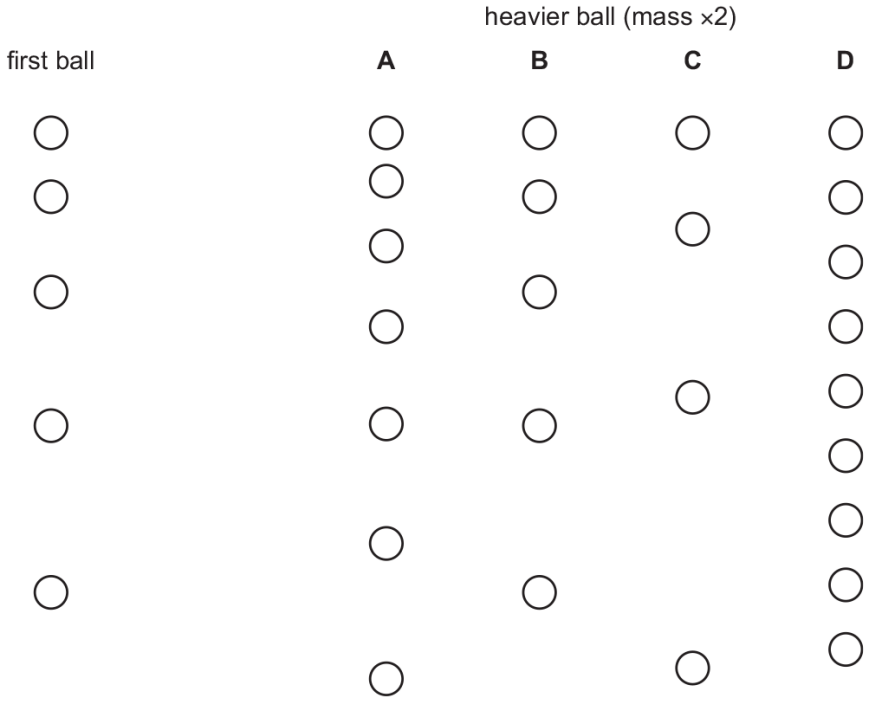
79. 0625_s18_qp_12 Q: 2

A ball is dropped in an evacuated tube. A series of photographs is taken at equal time intervals from the time of release. Another ball of the same size but twice the mass is also dropped in the same evacuated tube and photographed.

Which diagram shows the motion of the heavier ball?



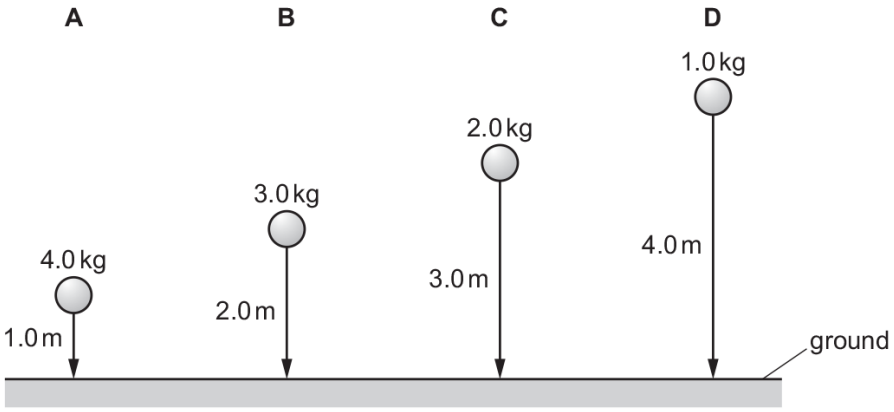
---

80. 0625_s18_qp_13 Q: 2

Four balls with different masses are dropped from the heights shown.

Air resistance may be ignored.

Which ball has the greatest average speed?



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81. 0625_s18_qp_13 Q: 3

A car takes 15 minutes to travel along a road that is 20 km long.

What is the average speed of the car?

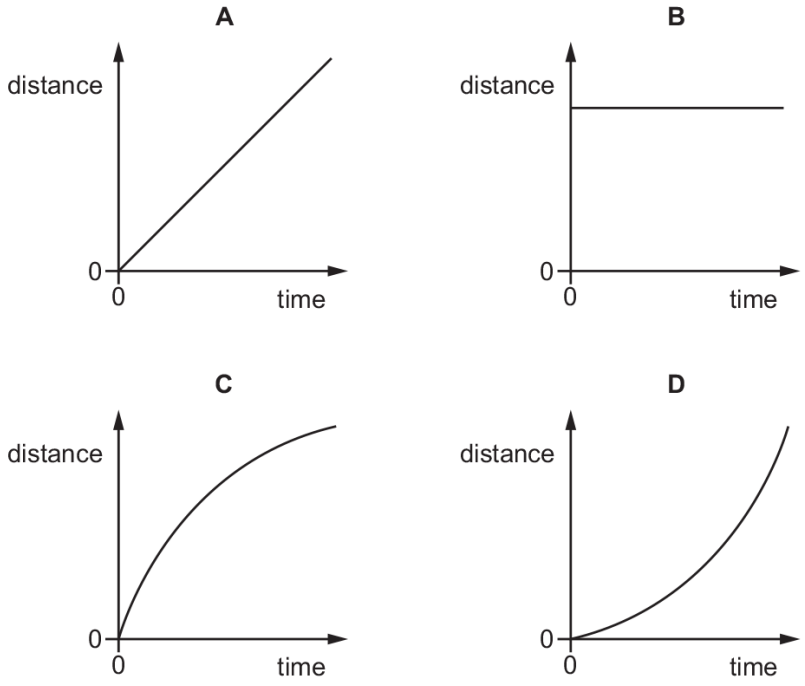
A 0.75 km/h **B** 5.0 km/h **C** 80 km/h **D** 300 km/h

---

82. 0625_w18_qp_11 Q: 2

The diagrams are distance-time graphs for four bodies.

Which body is moving with an increasing speed?



---

83. 0625_w18_qp_11 Q: 3

A runner runs 300 m at an average speed of 3.0 m/s. She then runs another 300 m at an average speed of 6.0 m/s.

What is her average speed for the total distance of 600 m?

A 2.0 m/s **B** 4.0 m/s **C** 4.5 m/s **D** 8.0 m/s

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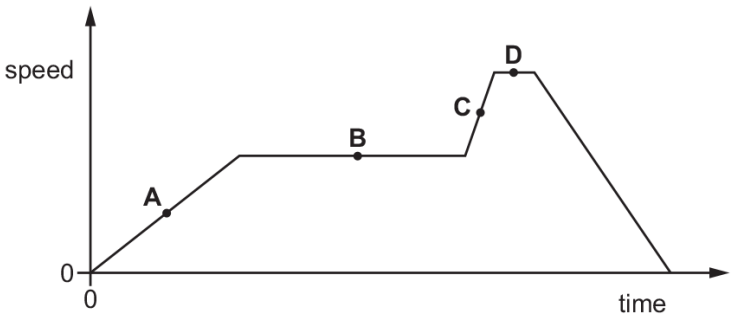
84. 0625_w18_qp_12 Q: 2

The graph shows how the speed of an object varies with time.

At which point on the graph is the greatest distance travelled per second?



---

85. 0625_w18_qp_12 Q: 3

An athlete runs at a speed of 8 m/s for 10 s, and then at a speed of 6 m/s for 12 s.

Which calculation gives the average speed of the athlete in m/s?

A $\frac{8+6}{2}$

B $\frac{(8\times10)+(6\times12)}{22}$

C $\frac{(8\div10)+(6\div12)}{22}$

D $\frac{(10\div8)+(12\div6)}{22}$

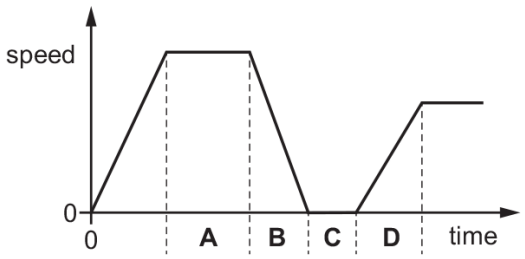
---

86. 0625_w18_qp_13 Q: 2

A girl goes for a ride on her bicycle.

The diagram shows how her speed changes with time for part of her journey.

In which labelled section is she moving with constant speed?



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87. 0625_w18_qp_13 Q: 3

A boy runs 400 m at an average speed of 4.0 m/s.

He runs the first 200 m in 40 s.

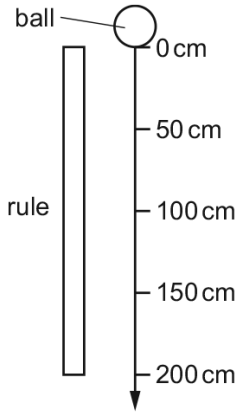
How long does he take to run the second 200 m?

A 60 s **B** 66.7 s **C** 80 s **D** 140 s

---

88. 0625_m17_qp_12 Q: 2

In a laboratory, a ball is dropped in a vacuum and falls 200 cm.



Which statement describes the acceleration of the ball?

A It is greater at 10 cm than at 200 cm.

B It is greatest at 200 cm.

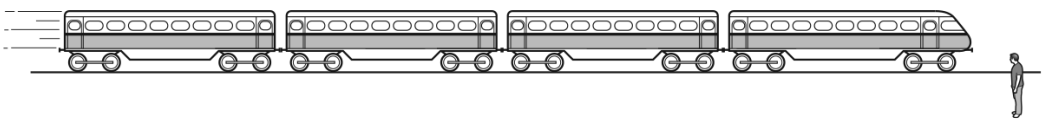
C It is smaller at 50 cm than at 100 cm.

D It is the same value at 50 cm as at 150 cm.

---

89. 0625_m17_qp_12 Q: 3

A man stands by a railway track.



A train travelling at 40 m/s takes 2.0 s to pass the man.

What is the length of the train?

A 20 m **B** 38 m **C** 40 m **D** 80 m

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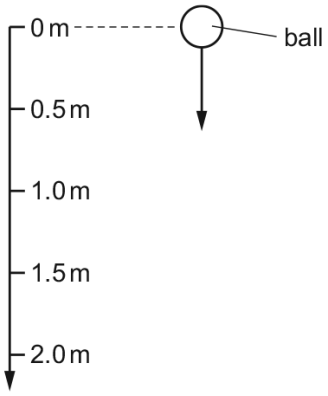
90. 0625_s17_qp_11 Q: 2

On Earth, a ball is dropped and falls 2.0 m in a vacuum.

The acceleration of the ball at 1.0 m is 10 m/s^2.



What is the acceleration of the ball at 0.5 m?

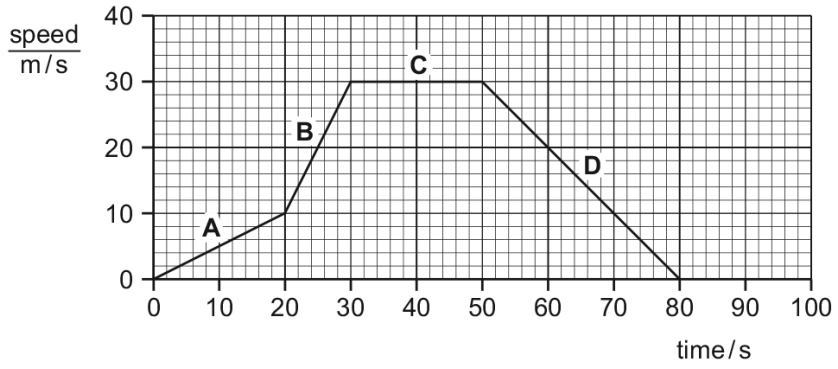
A 5.0 m/s^2 **B** 10 m/s^2 **C** 15 m/s^2 **D** 20 m/s^2

---

91. 0625_s17_qp_11 Q: 3

The speed-time graph represents a motorcycle journey.

In which part of the graph is the acceleration equal to zero?



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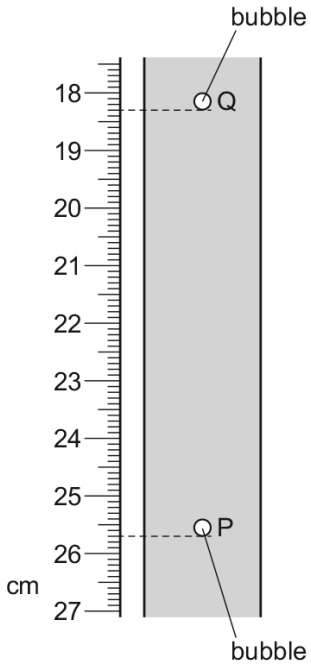
92. 0625_s17_qp_12 Q: 2

A student determines the average speed of a bubble rising through a liquid at constant speed.

When the student starts the stopwatch the bubble is at position P.

After 2.0 s the bubble is at position Q.



What is the speed of the bubble between P and Q?

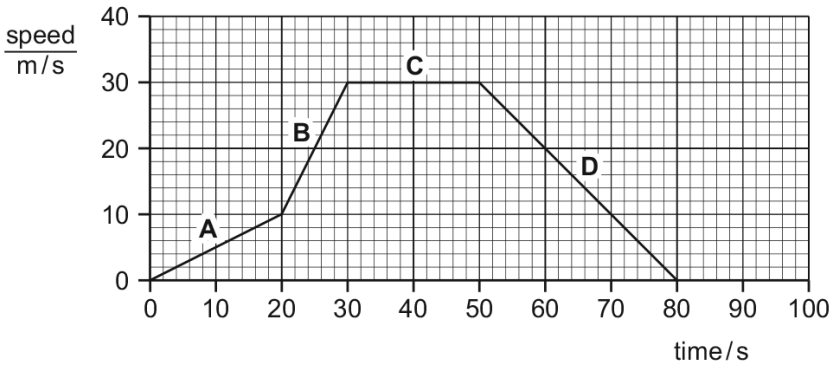
A 3.2 cm/s **B** 3.7 cm/s **C** 6.4 cm/s **D** 7.4 cm/s

---

93. 0625_s17_qp_13 Q: 3

The speed-time graph represents a motorcycle journey.

In which part of the graph is the acceleration equal to zero?



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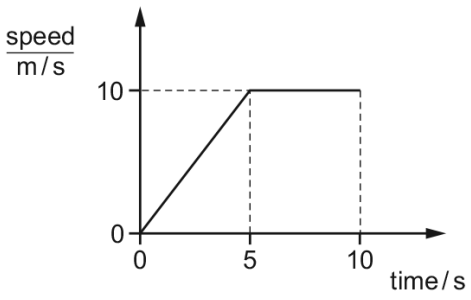
94. 0625_w17_qp_11 Q: 2

The graph shows how the speed of a car varies over a period of 10 s.



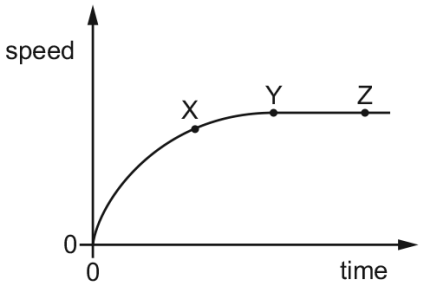
How far does the car travel during the 10 s?

A 10 m **B** 50 m **C** 75 m **D** 100 m

---

95. 0625_w17_qp_11 Q: 3

The diagram shows how the speed of a falling object changes with time.



Which row describes the motion of the object between X and Y, and between Y and Z?

	between X and Y	between Y and Z
A	accelerating	at rest
B	accelerating	constant speed
C	decelerating	at rest
D	decelerating	constant speed

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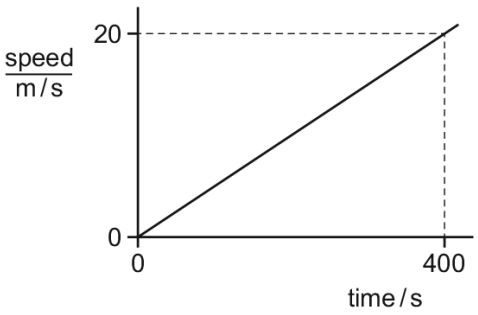
96. 0625_w17_qp_12 Q: 2

The graph represents the motion of a vehicle.



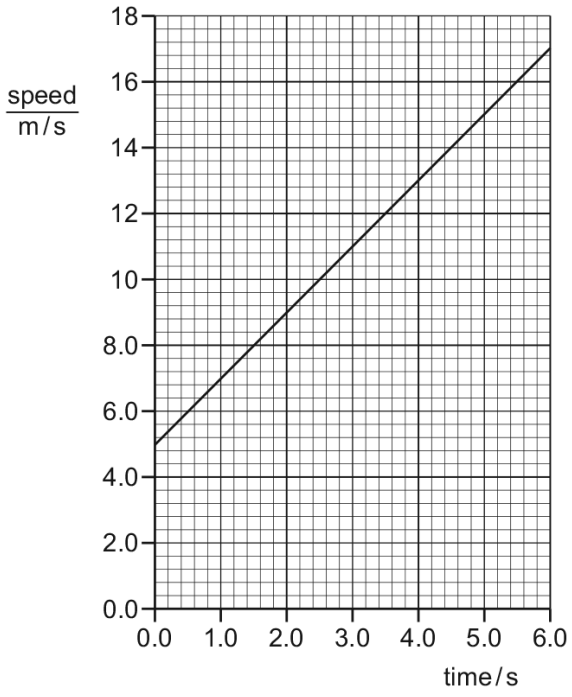
What is the distance travelled by the vehicle in 400 s?

A 20 m **B** 400 m **C** 4000 m **D** 8000 m

---

97. 0625_w17_qp_12 Q: 3

The speed-time graph represents the motion of an object.



What is the average speed of the object?

A 2.0 m/s **B** 6.0 m/s **C** 8.5 m/s **D** 11 m/s

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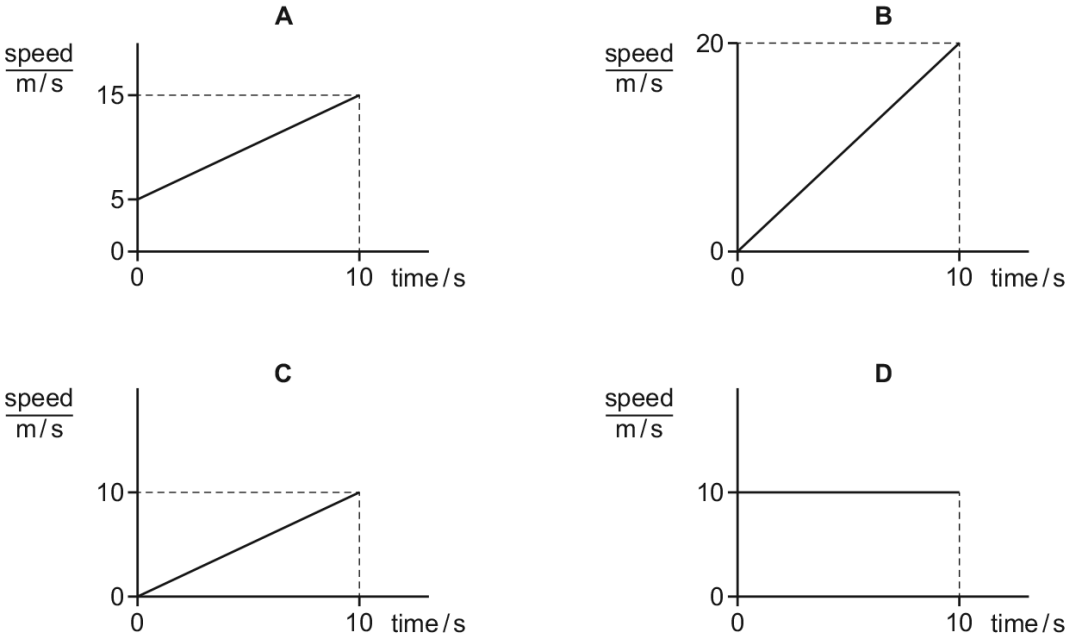
98. 0625_w17_qp_13 Q: 2

A car accelerates from rest and travels a distance of 100 m in 10 seconds.

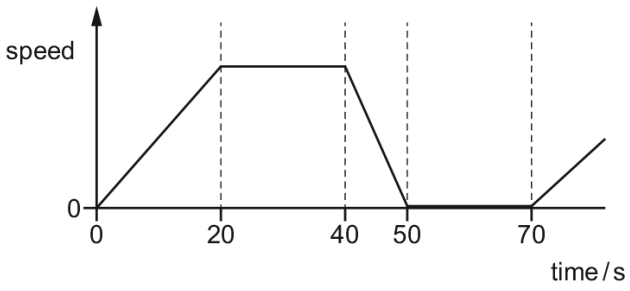
Which speed-time graph represents the motion of this car?



---

99. 0625_w17_qp_13 Q: 3

The diagram is the speed-time graph for a bicycle journey.



When is the bicycle moving at a constant speed?

A between 0 and 20 s

B between 20 s and 40 s

C between 40 s and 50 s

D between 50 s and 70 s

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Appendix A

Answers

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S.N.	Paper	Q. No.	Answer
1	0625_m22_qp_12	1	B
2	0625_m21_qp_12	1	B
3	0625_s21_qp_11	1	C
4	0625_s21_qp_12	1	A
5	0625_s21_qp_13	1	C
6	0625_w21_qp_11	1	B
7	0625_w21_qp_12	1	B
8	0625_w21_qp_13	1	C
9	0625_m20_qp_12	1	A
10	0625_p20_qp_10	2	C
11	0625_s20_qp_11	1	B
12	0625_s20_qp_12	1	A
13	0625_s20_qp_13	1	B
14	0625_w20_qp_11	1	C
15	0625_w20_qp_12	1	C
16	0625_w20_qp_13	1	C
17	0625_m19_qp_12	1	B
18	0625_m19_qp_12	5	B
19	0625_s19_qp_11	1	A
20	0625_s19_qp_13	1	C
21	0625_s19_qp_13	5	B
22	0625_w19_qp_13	1	B
23	0625_s18_qp_13	1	A
24	0625_w18_qp_13	1	C
25	0625_m17_qp_12	1	B
26	0625_s17_qp_11	1	A
27	0625_s17_qp_12	1	C
28	0625_s17_qp_12	5	B
29	0625_s17_qp_13	1	C
30	0625_s17_qp_13	2	C
31	0625_w17_qp_11	1	A
32	0625_w17_qp_12	1	B
33	0625_w17_qp_13	1	A
34	0625_p16_qp_10	2	C
35	0625_s16_qp_13	1	A
36	0625_w16_qp_11	1	C
37	0625_w16_qp_12	1	A
38	0625_m22_qp_12	2	A
39	0625_m22_qp_12	3	D
40	0625_m21_qp_12	2	C
41	0625_m21_qp_12	3	C
42	0625_s21_qp_11	2	A
43	0625_s21_qp_11	3	A
44	0625_s21_qp_12	2	C
45	0625_s21_qp_12	3	A
46	0625_s21_qp_13	3	B
47	0625_w21_qp_11	2	D
48	0625_w21_qp_12	2	D
49	0625_w21_qp_13	2	A

S.N.	Paper	Q. No.	Answer
50	0625_m20_qp_12	2	B
51	0625_m20_qp_12	3	A
52	0625_p20_qp_10	3	B
53	0625_s20_qp_11	2	C
54	0625_s20_qp_11	3	A
55	0625_s20_qp_12	2	A
56	0625_s20_qp_13	2	B
57	0625_s20_qp_13	3	A
58	0625_w20_qp_11	2	A
59	0625_w20_qp_11	3	B
60	0625_w20_qp_12	2	C
61	0625_w20_qp_12	3	C
62	0625_w20_qp_13	2	B
63	0625_w20_qp_13	3	B
64	0625_m19_qp_12	2	C
65	0625_m19_qp_12	3	C
66	0625_s19_qp_11	2	A
67	0625_s19_qp_12	2	C
68	0625_s19_qp_12	3	D
69	0625_s19_qp_13	2	D
70	0625_w19_qp_11	2	C
71	0625_w19_qp_12	2	B
72	0625_w19_qp_13	2	A
73	0625_w19_qp_13	3	B
74	0625_m18_qp_12	2	A
75	0625_m18_qp_12	3	C
76	0625_m18_qp_12	7	C
77	0625_s18_qp_11	2	D
78	0625_s18_qp_11	3	C
79	0625_s18_qp_12	2	B
80	0625_s18_qp_13	2	D
81	0625_s18_qp_13	3	C
82	0625_w18_qp_11	2	D
83	0625_w18_qp_11	3	B
84	0625_w18_qp_12	2	D
85	0625_w18_qp_12	3	B
86	0625_w18_qp_13	2	A
87	0625_w18_qp_13	3	A
88	0625_m17_qp_12	2	D
89	0625_m17_qp_12	3	D
90	0625_s17_qp_11	2	B
91	0625_s17_qp_11	3	C
92	0625_s17_qp_12	2	B
93	0625_s17_qp_13	3	C
94	0625_w17_qp_11	2	C
95	0625_w17_qp_11	3	B
96	0625_w17_qp_12	2	C
97	0625_w17_qp_12	3	D
98	0625_w17_qp_13	2	B

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