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QUALIFICATIONS,
CURRICULUM &
ASSESSMENT AUTHORITY
FOR WALES



City & Guilds
Pitman
Qualifications

Key skills application of number

Adult numeracy

Level 1

Monday 15 March 2004

Test Paper

YOU NEED

- This test paper
- An answer sheet
- A ruler marked in mm and cm

You may NOT use a calculator

You may use a bilingual dictionary

You may write on this paper if it helps you to work things out

Do NOT open this paper until you are told to do so by the supervisor

THERE ARE 40 QUESTIONS IN THIS TEST

Total marks available: 40

Try to answer ALL the questions

YOU HAVE 1 HOUR 15 MINUTES TO FINISH THE TEST

INSTRUCTIONS

- Make sure your personal details are entered correctly on the answer sheet
 - Read each question carefully
 - Follow the instructions on how to complete the answer sheet
 - At the end of the test, hand the test paper, your answer sheet and all notes to the supervisor
-

REMEMBER: YOU HAVE 1 HOUR 15 MINUTES TO FINISH THE TEST

First published in 2004.

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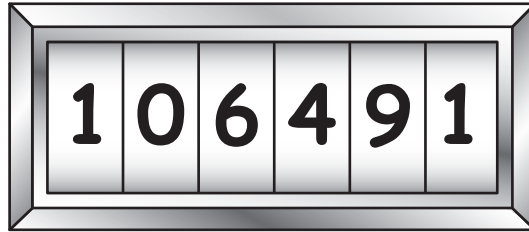
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Ref: AoN/L1/2.1/P4

Questions 1 to 4 are about a mechanic servicing cars.

1 The mechanic reads a car's mileage.

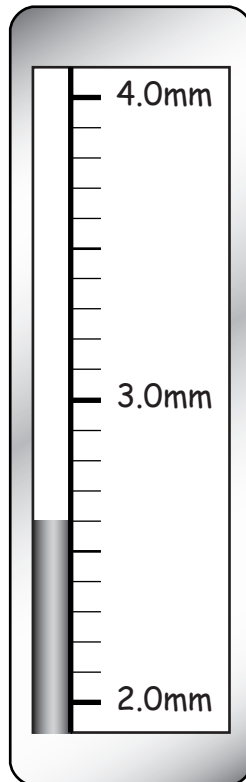


What is the reading on the mileometer to the nearest 100 miles?

- A 106 000
- B 106 400
- C 106 490
- D 106 500

- 2 The mechanic uses a tyre tread gauge to measure the depth of tread on a tyre.

The diagram shows the reading on the gauge.



What is the depth of tread shown on the tyre tread gauge?

- A 2.3mm
- B 2.4mm
- C 2.6mm
- D 3.4mm

- 3** A customer's car needs a major service at 48 000 miles.
A car has done 33 650 miles.
How many miles can it travel before the major service is needed?
- A 14 350
 - B 14 450
 - C 15 350
 - D 15 650
- 4** The mechanic mixes antifreeze to water in the ratio 1 : 3
He uses 2.4 litres of antifreeze.
How much water does he add?
- A 0.6 litres
 - B 0.8 litres
 - C 5.4 litres
 - D 7.2 litres

Questions 5 to 7 are about cable television.

5 A cable television company has 89 062 subscribers.

In words this is

- A eight million, nine thousand and sixty-two
- B eighty-nine thousand and sixty-two
- C eight thousand, nine hundred and sixty-two
- D eighty-nine hundred and sixty-two

6 Viewers can pay extra to receive the Sports Channel.

75% of viewers **do not** pay extra for the Sports Channel.

What fraction of viewers **do** pay extra for the Sports Channel?

- A $\frac{1}{4}$
- B $\frac{1}{3}$
- C $\frac{1}{2}$
- D $\frac{3}{4}$

7 A television channel broadcasts a total of 15 hours of programmes a day.

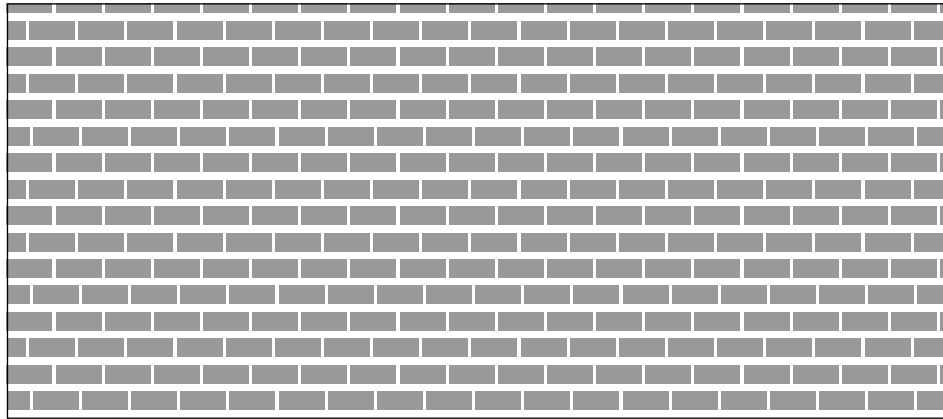
It broadcasts 3 hours of children's programmes a day.

What percentage of the programmes are children's programmes?

- A 3%
- B 5%
- C 15%
- D 20%

Questions 8 to 10 are about a bricklayer.

The bricklayer is building a wall.



Scale = 1cm to 2m

8 The scale drawing shows the wall.

How long is the wall?

- A 6.25m
- B 12.50m
- C 14.50m
- D 25.00m

9 The bricklayer mixes mortar using 4 parts sand to 1 part cement.

The mix has 12 parts sand.

How many parts of cement are in the mix?

- A 3
- B 4
- C 5
- D 8

10 The bricklayer needs 14 650 bricks for another job.
What is 14 650 to the nearest 1 000?

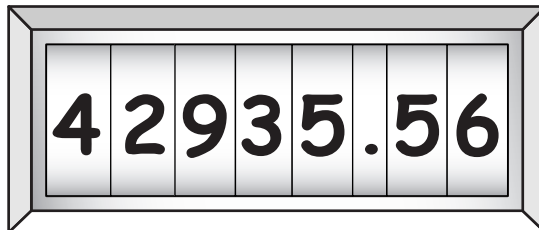
- A 14 000
- B 14 600
- C 14 700
- D 15 000

Questions 11 to 14 are about electricity bills.

11 A householder pays £384.00 for electricity in a year.
She pays in 12 equal monthly instalments.
How much does she pay each month?

- A £29.60
- B £32.00
- C £38.40
- D £42.00

12 The householder reads her electricity meter.



What is the reading to the nearest whole number?

- A 42 930
- B 42 935
- C 42 936
- D 42 940

13 She pays £9.56 each month for the electricity supply plus £0.07 for every unit of electricity used.

In one month she uses 392 units.

Which is the correct way of calculating the bill for the month?

A $9.56 \times (392 + 0.07)$

B $(9.56 \times 0.07) + 3.92$

C $9.56 + (392 \times 0.07)$

D $9.56 + (392 \div 0.07)$

14 A neighbour pays £402.00 for electricity in a year.

She can save 20% by changing supplier.

How much can she save in a year by changing supplier?

A £8.04

B £20.10

C £40.20

D £80.40

Questions 15 to 17 are about travelling by train.

15 This is part of a train timetable for the West Country.

Penzance	0741	0807	0842	0940
Redruth	0807	0827	0906	1009
Truro	0820	0839	0918	1021
St Austell	0836	0908	0938	1039
Bodmin Parkway	0856	0930	0955	1058
Liskeard	0909	0935	1009	1111
Plymouth	0944	1014	1032	1138

A man travels from St Austell.

He needs to get to Plymouth before half past ten.

Which is the latest possible train he can catch from St Austell?

- A 0807
- B 0908
- C 0938
- D 1014

16 The train ticket costs £8.31

With a railcard, there is a discount of $\frac{1}{3}$ off ticket prices.

How much is the discount?

- A £2.10
- B £2.49
- C £2.77
- D £2.87

17 The man arrives at Plymouth station at a quarter to six to travel home to St Austell.

His train for St Austell leaves Plymouth at 1828

How long does he wait at the station for the train?

- A 13 minutes
- B 33 minutes
- C 43 minutes
- D 2 hours 43 minutes

Questions 18 and 19 are about a free newspaper.

18 Forty-eight thousand, two hundred and fifty households receive the free newspaper every week.

In figures this number is

- A 40825
- B 48250
- C 480250
- D 482050

19 These are the prices for advertising in the newspaper.

Cost of small adverts
Standard column length £9.75

Special offer
Advertise on our website for only
£1.50: any advert!

A company places 3 small adverts in the newspaper and 2 on the website.

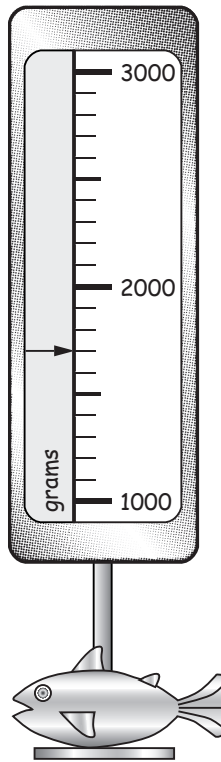
How much does this cost the company?

- A £29.25
- B £30.75
- C £32.25
- D £33.75

Questions 20 to 22 are about a fishing competition.

20 An angler weighs a fish on a spring balance.

The diagram shows the reading on the spring balance.



What is the reading on the spring balance?

- A 700g
- B 1600g
- C 1700g
- D 2300g

21 His friend catches 8 fish during the competition.

The table shows the recorded weights of the fish.

Recorded weights of fish in grams							
1 200	1 800	1 200	1 100	1 200	1 200	1 100	1 600

What is the average (mean) recorded weight of the fish?

- A 1 040g
- B 1 200g
- C 1 300g
- D 1 800g

Please go on to the next page

22 The results of the fishing competition are shown in the table below.

Team	Weight of catch in kg
Team A	6.9
Team B	8.3
Team C	7.4
Team D	5.8
Team E	6.1
Team F	5.2
Team G	7.2

Four charts are drawn to show the results of the competition.

Chart a

Fishing Competition Results

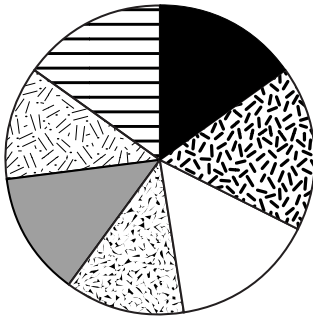


Chart b

Fishing Competition Results

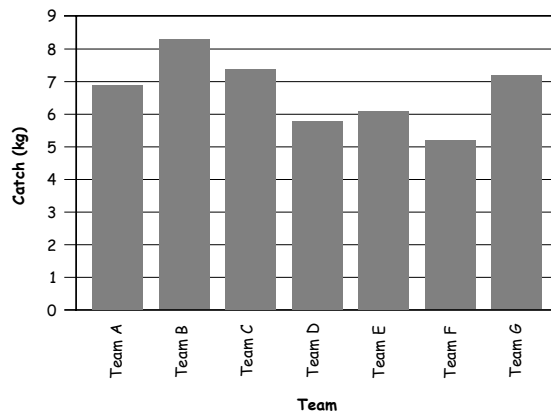


Chart c

Fishing Competition Results

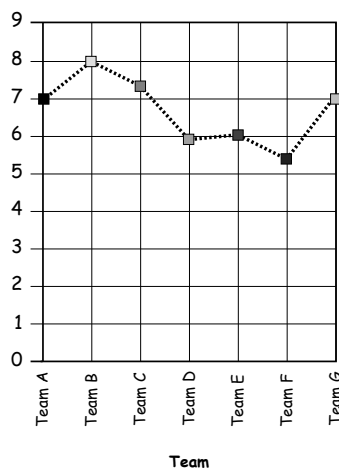
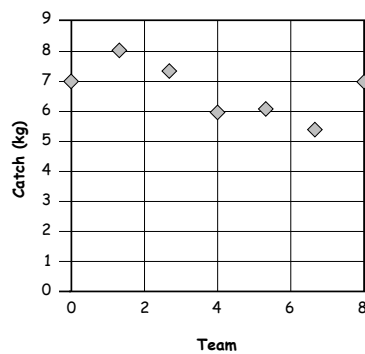


Chart d

Fishing Competition Results



Which presents the results correctly?

- A chart a
- B chart b
- C chart c
- D chart d

Questions 23 and 24 are about a bank account.

23 A woman has £279.00 in her bank account.

She pays £259.50 into her bank account.

She writes cheques from her bank account for £21.50 and £88.20.

Which is the most accurate way of estimating how much is left in her account to spend?

- A $270 + 250 - 20 - 80$
- B $280 - 260 + 25 + 90$
- C $280 + 260 - 20 - 90$
- D $300 + 300 - 30 - 100$

24 This table shows the amount borrowers have to pay each month to pay back their loans.

Loan Repayment Table

Amount of loan	Monthly Repayments			
	Over 12 months	Over 24 months	Over 36 months	Over 48 months
£10 000	£947.25	£513.60	£363.35	£290.29
£5 000	£475.86	£259.18	£184.15	£147.78
£3 000	£289.78	£160.08	£115.32	£93.83

The woman borrows £5 000 from the bank.

She pays it back over 24 months.

How much does she pay each month?

- A £160.08
- B £184.15
- C £259.18
- D £475.86

Questions 25 and 26 are about a lottery win.

25 145 000 people buy tickets in a lottery.

One-tenth of tickets win a prize.

Another way of writing one-tenth is

- A 0.1%
- B 1%
- C 10%
- D 100%

26 A group of 7 friends win a total lottery prize of £2 583

They get an equal share of £369 each.

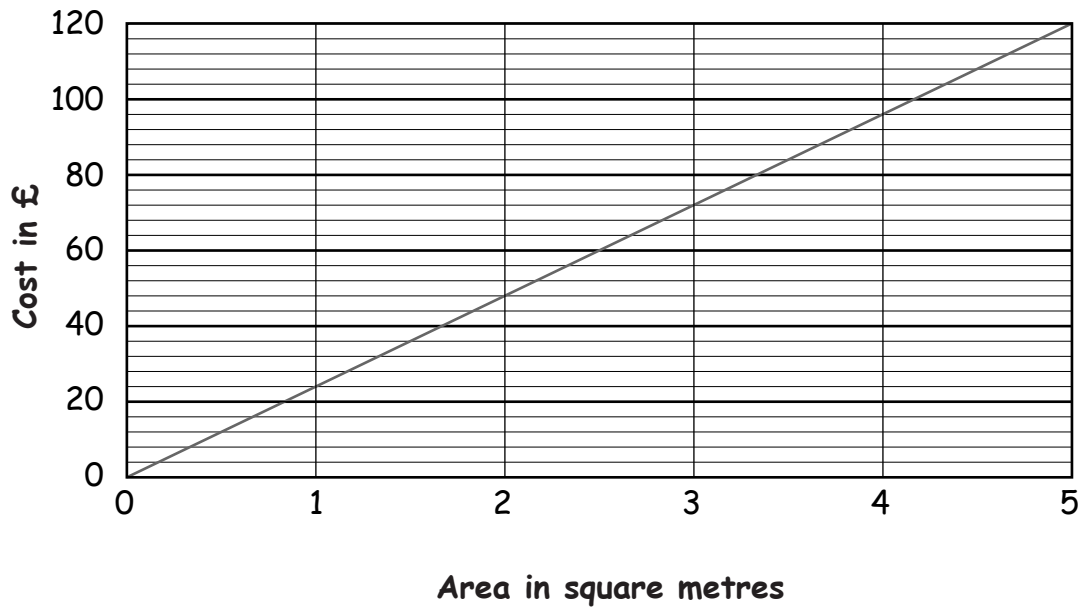
Which calculation can they use to check that this is correct?

- A 369×7
- B $2\,583 \times 7$
- C $369 \div 7$
- D $2\,583 \times 369$

Questions 27 to 29 are about a builder replacing windows.

27 The builder reads the graph to find the cost of a pane of glass.

Graph to show cost of glass

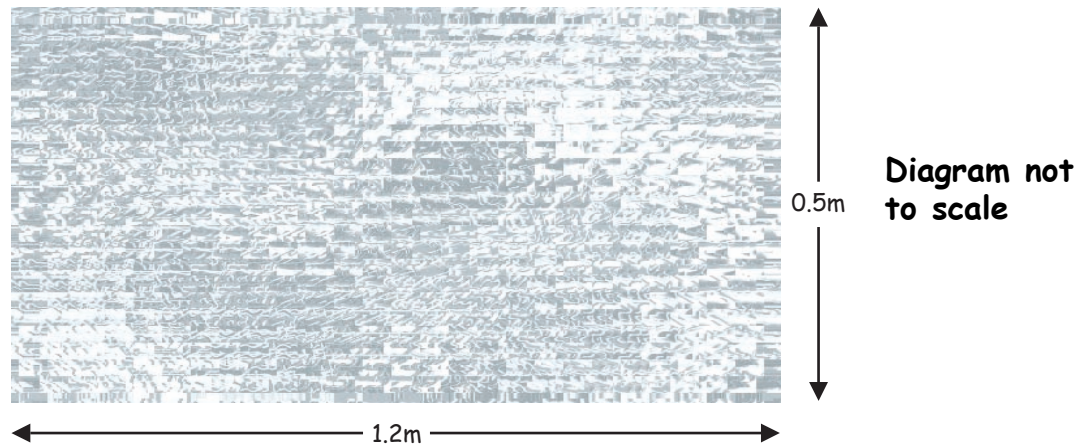


How much does a 2 square metre pane of glass cost?

- A £42
- B £44
- C £45
- D £48

28 The diagram shows a different pane of glass.

Diagram of a pane of glass

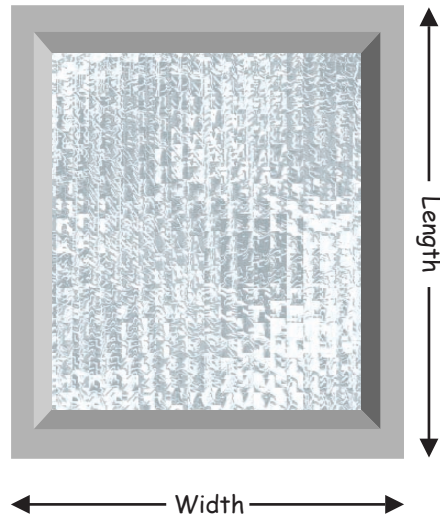


What is the area of this pane of glass?

- A 0.6m^2
- B 1.7m^2
- C 3.4m^2
- D 6.0m^2

29 The scale diagram shows a window.

Scale diagram of a window



Scale = 4 centimetres : 1 metre

What is the actual length of the window?

- A 0.6m
- B 1.5m
- C 2.4m
- D 6.0m

Questions 30 and 31 are about a nursery.

30 The manager keeps a tally chart of how many children attend the day nursery.

Day	Morning Session	Afternoon Session
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

There is space for 24 children in each session.

How many **more** children can she accept on a Tuesday morning session?

- A 0
- B 6
- C 7
- D 18

31 She also records how many sessions each child attends each term.

The table shows the number of sessions 10 children attend.

Number of Sessions

9	13	13	7	11	10	11	10	13	16
---	----	----	---	----	----	----	----	----	----

What is the range of attendance for the 10 children in the table?

- A 7 sessions
- B 9 sessions
- C 13 sessions
- D 16 sessions

Questions 32 to 34 are about a trip to Barcelona.

32 This is part of an advert for trips to Barcelona.

	2 Nights	Extra Night
Price Per Person	£199	£29

How much does it cost for 2 people to stay 3 nights?

- A £228
- B £398
- C £427
- D £456

33 These are the temperatures in Barcelona over the last 8 days.

Barcelona temperatures in °C

12	15	17	18	18	17	16	15
----	----	----	----	----	----	----	----

What is the average (mean) temperature?

- A 12°C
- B 15°C
- C 16°C
- D 18°C

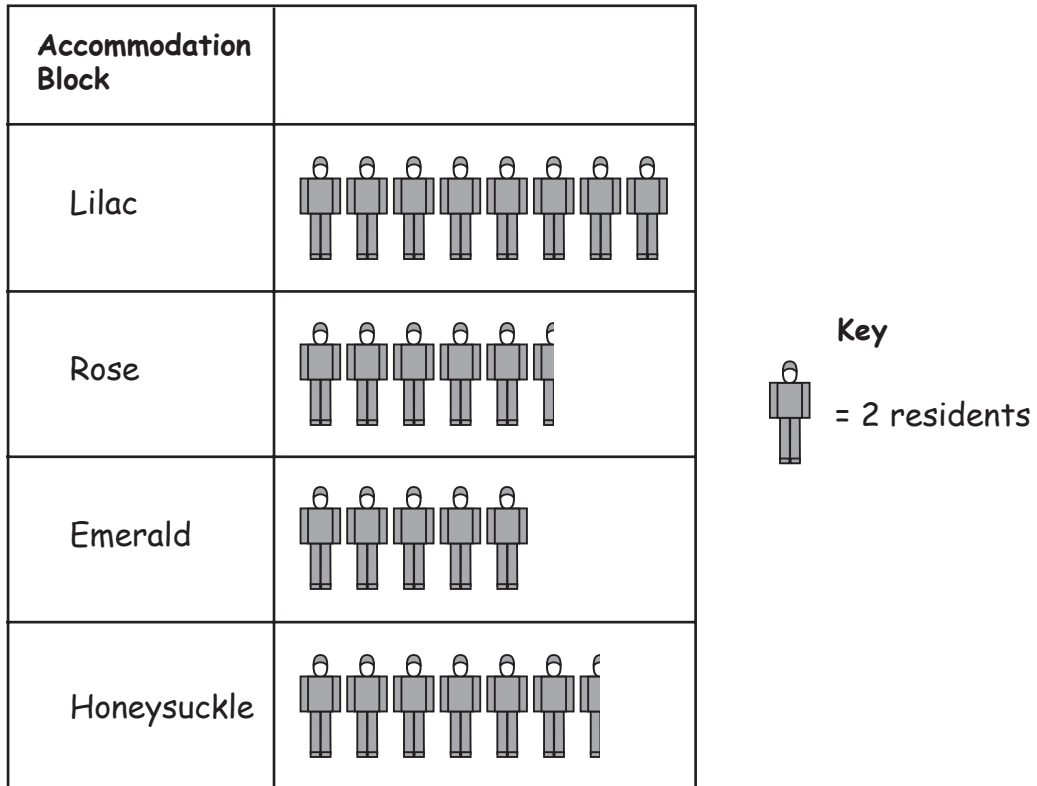
34 A traveller weighs her luggage.

A suitable unit is

- A kilogram
- B kilometre
- C kilovolt
- D kilowatt

Questions 35 to 40 are about a residential care home.

35 The pictogram shows the number of residents in the accommodation blocks in the home.



How many residents are there altogether?

- A 25
- B 26
- C 50
- D 52

36 The home has a new lounge built.

The new lounge has a rectangular floor.

The lounge is 8 metres long, 5 metres wide and 2.5 metres high.

What is the volume of the new lounge?

- A 15.5m^3
- B 32.5m^3
- C 60m^3
- D 100m^3

37 The cook at the home provides meals for 80 people.

30% of the people have a special diet meal.

How many of the people have a special diet meal?

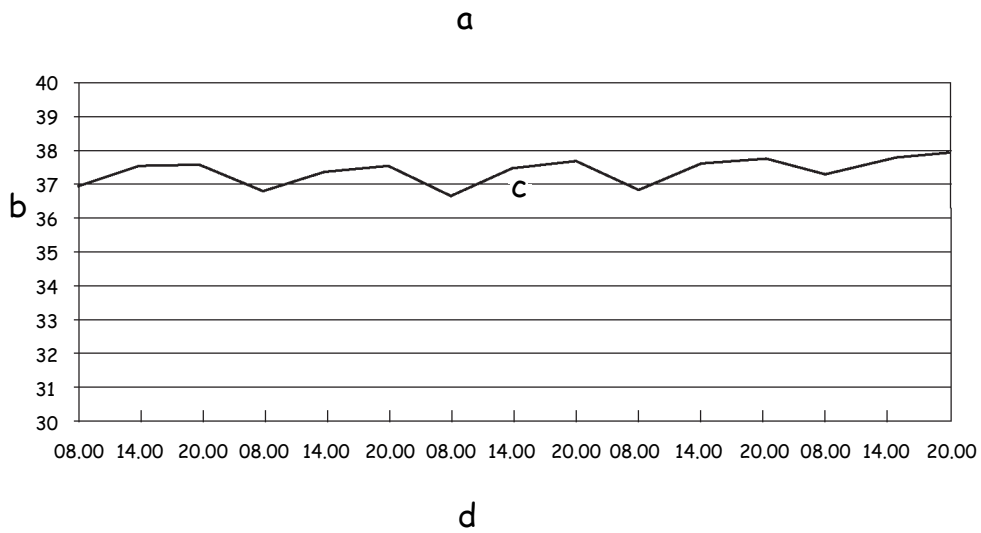
- A 24
- B 30
- C 50
- D 56

38 The cook earns £5.90 an hour.

How much does she earn for 40 hours' work?

- A £206.00
- B £203.60
- C £236.00
- D £239.00

39 One resident has her temperature checks plotted on a graph.

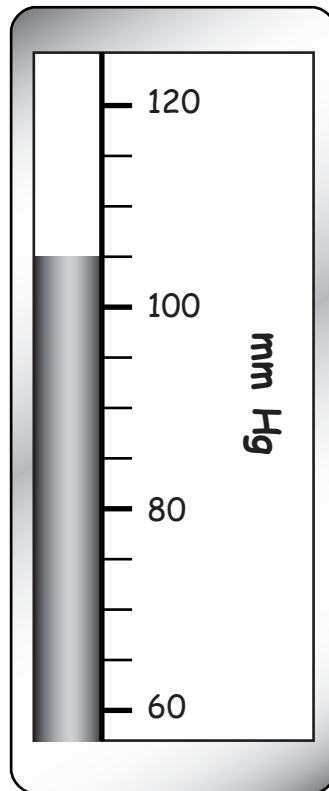


The graph is not complete.

The correct position to write the words 'Graph to show resident's temperature checks' is

- A position a
- B position b
- C position c
- D position d

40 The nurse takes the blood pressure of the resident.



What is the blood pressure reading on the gauge?

- A 102mm Hg
- B 105mm Hg
- C 110mm Hg
- D 114mm Hg

End of test