



**City & Guilds**  
**Pitman**  
**Qualifications**

**KEY SKILLS**  
**APPLICATION OF NUMBER**  
**Level 2**

**Question Paper**  
**EXEMPLAR 2**

**WHAT YOU NEED**

- This Question Paper
- An Answer Sheet
- A ruler marked in mm and cm

**You may use a bilingual dictionary**  
**Calculators are NOT permitted**

---

**Do NOT open this Question Paper until you are told to by the supervisor**

**THERE ARE 40 QUESTIONS IN THIS TEST**  
**Total marks available: 40**

**Try to answer ALL the questions**  
**TIME ALLOWED: 1 HOUR 15 MINUTES**

---

**INSTRUCTIONS**

- Ensure that 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 Question Paper, the Answer Sheet and all notes to the supervisor

---

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

---

Questions 1 to 4 are about the sales at an ice-cream stall.

Liz runs an ice-cream stall. To check how popular each flavour is, she records the number of each flavour sold.

FLAVOUR OF ICE-CREAM	NUMBER SOLD
Strawberry	4
Mint Choc Chip	5
Raspberry	7
Chocolate	14
Banana	3
Toffee	6
Vanilla	8
Tutti Frutti	3

1 Which ice-cream flavour sold only two-thirds as many as toffee?

- A Banana
- B Strawberry
- C Mint Choc Chip
- D Tutti Frutti

2 What percentage of all the sales was the chocolate flavour?

- A 7%
- B 14%
- C 28%
- D 30%

3 Liz used 1 litre of vanilla ice-cream.

How much chocolate ice-cream did she use if all the ice-creams were the same size?

- A  $\frac{4}{22}$  litre
- B  $\frac{4}{7}$  litre
- C  $1\frac{3}{4}$  litres
- D  $2\frac{1}{2}$  litres

- 4 Additional data was recorded from a group of children who all had tutti frutti ice-cream. This made tutti frutti the unique mode for all the data.

What is the minimum number of children in the group to give this statistic?

- A 3
- B 11
- C 12
- D 17

Please go on to the next page.

Questions 5 to 8 are about a camping holiday.

Some friends are planning a camping holiday in May.

5 The table shows information on the prices of some of the campsites available.

Campsite Information		
Site	Price per night	Discounts
Happy Camper	£10 per tent	50% off third night
Rovers' Rest	£4 per tent plus £2 per person	-
Vibram Farm	£15 per tent	25% off all nights in May
Wood Nook	£2 per tent plus £4 per person	-

There are 4 people in the group and they are taking 2 tents for 3 nights in May.

They calculate that Rovers' Rest is the cheapest for them and Vibram Farm would be the most expensive.

How much would they save by going to Rovers' Rest rather than Vibram Farm?

- A £6.50
- B £8.50
- C £19.50
- D £25.50

- 6 There is a brilliant surfing beach 25 kilometres from Rovers' Rest but no one can remember its name.

One of the friends has a map with a scale of 2cm to 5km and he measures the distance from Rovers' Rest on the map to 4 local beaches.

Which one is the surfing beach?

- A Blackrock Sands 2cm
- B Gull Cove 5cm
- C St Peter's Bay 7cm
- D Whitesands 10cm

- 7 Their car uses 1 litre of petrol to travel 14.8 kilometres. The campsite is 88 kilometres away from their home town. They estimate how much fuel they will need for the trip there and back.

Which of these 4 attempts gives the closest estimate of the fuel required?

- A  $90 \div 15 = 6$  litres
- B  $90 \div 10 = 9$  litres
- C  $180 \div 15 = 12$  litres
- D  $180 \div 10 = 18$  litres

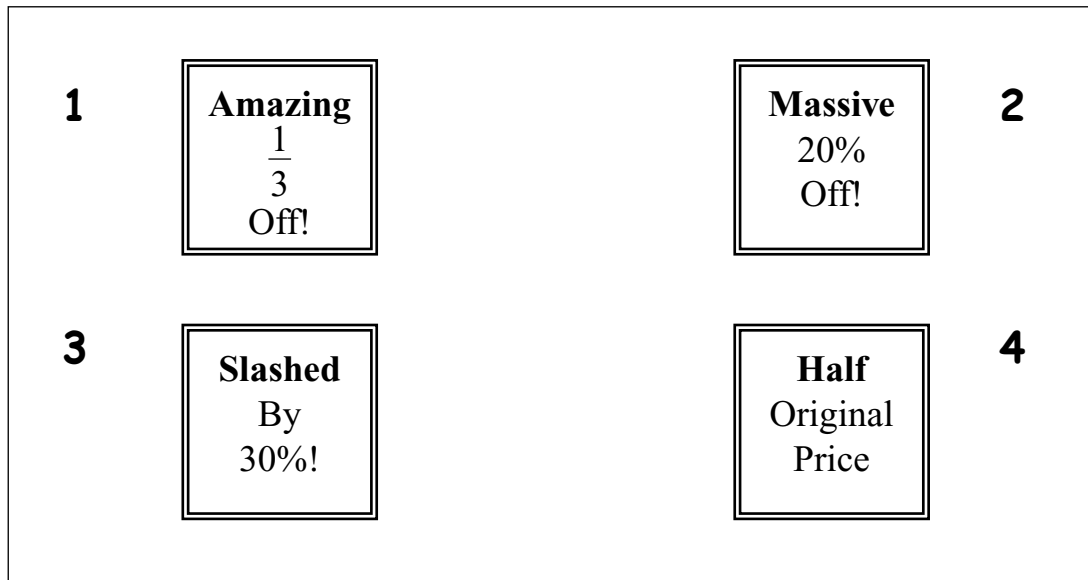
- 8 One of the items on their list of supplies is 6 yoghurts. The supermarket has several special offers.

Which would work out cheapest?

- A Original price 26p: buy one, get a second half-price
- B Original price 26p: buy two, get the third free
- C Original price 27p: one third off
- D Original price 28p: 25% off

Questions 9 and 10 are about sale labels in a clothes shop.

Kay has been given 4 labels to put on the sale rails at the clothes shop where she works.



9 Which label should she put on the trousers that are down from £24 to £16?

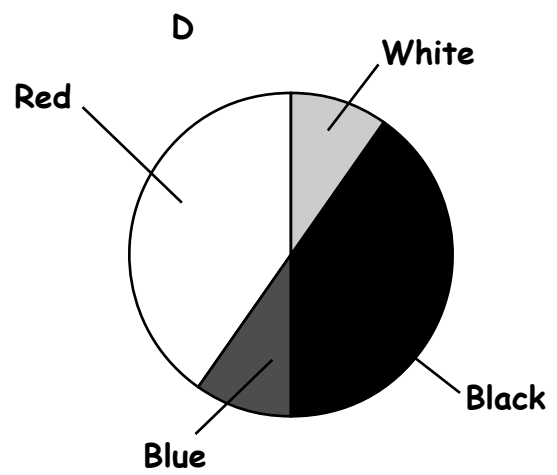
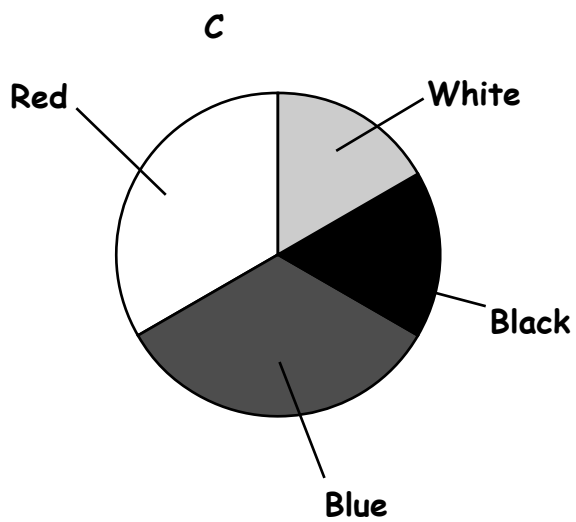
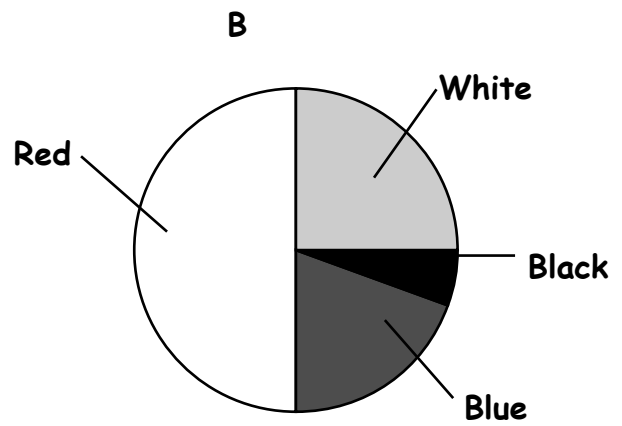
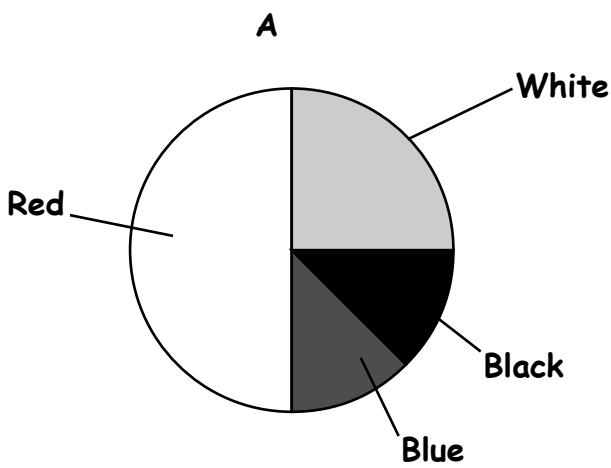
- A Label 1
- B Label 2
- C Label 3
- D Label 4

10 Which label should she put on the coats that are down from £50 to £35?

- A Label 1
- B Label 2
- C Label 3
- D Label 4

11 Which pie chart shows the results in this table?

Colour of car	Number of cars
Red	60
Blue	15
White	30
Black	15



Questions 12 to 15 are about the balance sheet for a small business.

A business has a bank balance of £300 in January. The balance sheet for the first 8 months of the year is shown below, but some of the amounts are missing.

<b>Balance Sheet</b>								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Sales (£)	256	321	317	352			528	684
Expenses (£)	421	403	416		375	362	372	
Profit or Loss (£)	-165	-82		-49	3	35		331
Bank Balance (£)	135	53	-46	-95		-57		430

**Profit or Loss = Sales – Expenses**

12 What were the sales in June?

- A £327
- B £378
- C £397
- D £401

13 What were the expenses in April?

- A £353
- B £378
- C £397
- D £401

14 What was the profit or loss in March?

- A -£99
- B -£92
- C £99
- D £156

15 What was the bank balance in July?

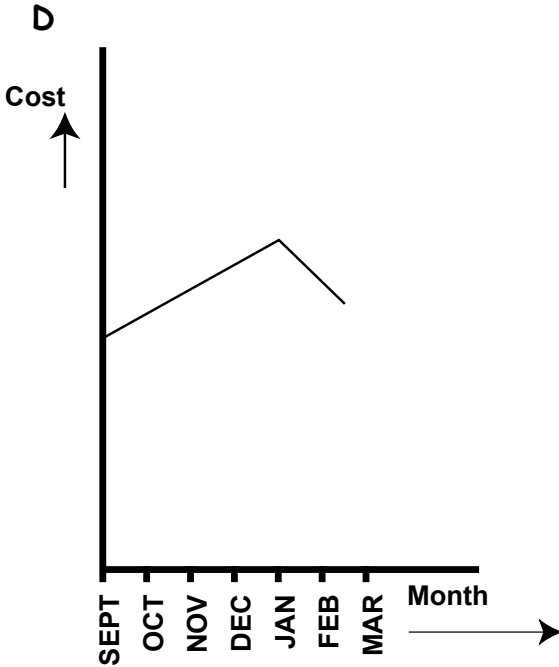
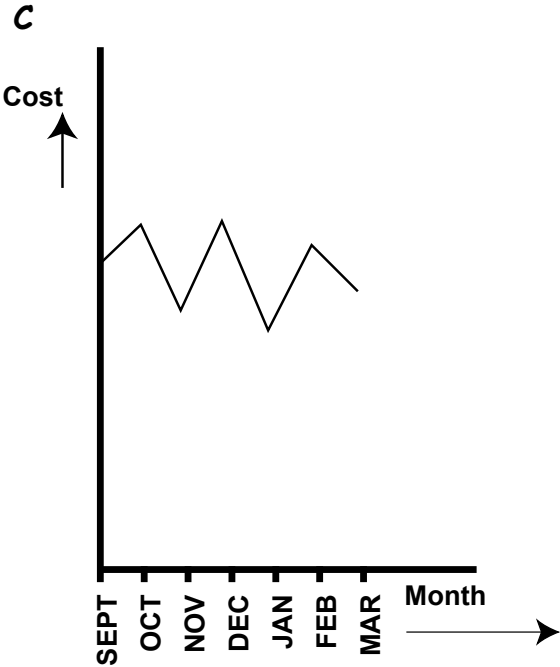
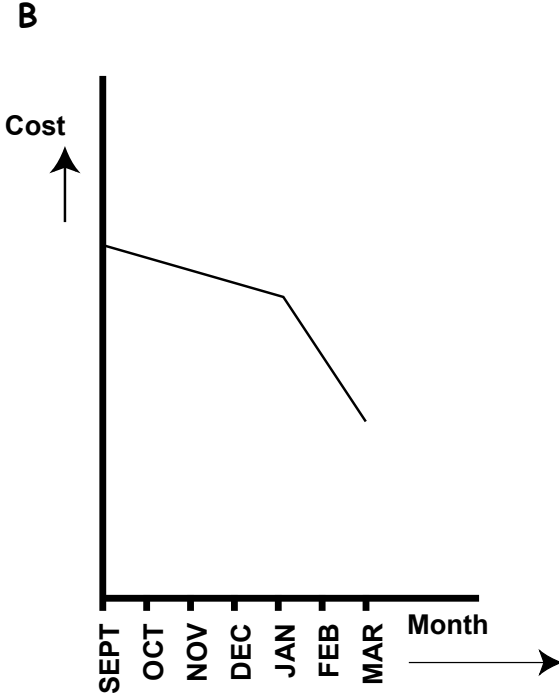
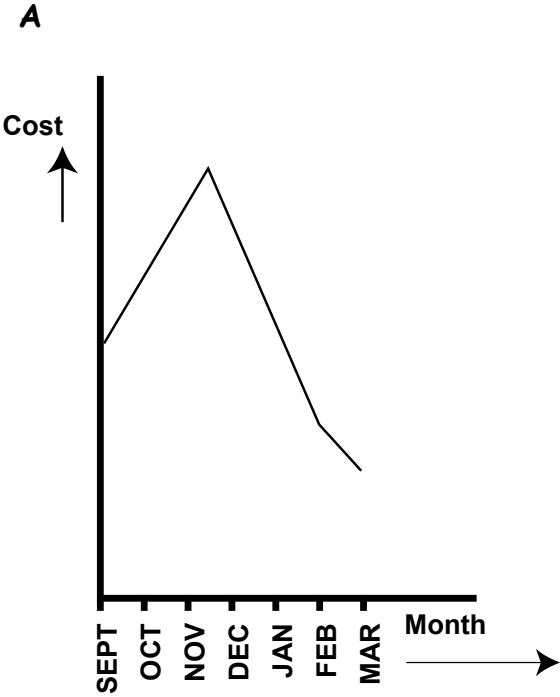
- A -£99
- B -£92
- C £99
- D £156



16 An article in the local newspaper about the prices of new cars includes the following statement:

"Car prices rose steadily until January and then started to fall."

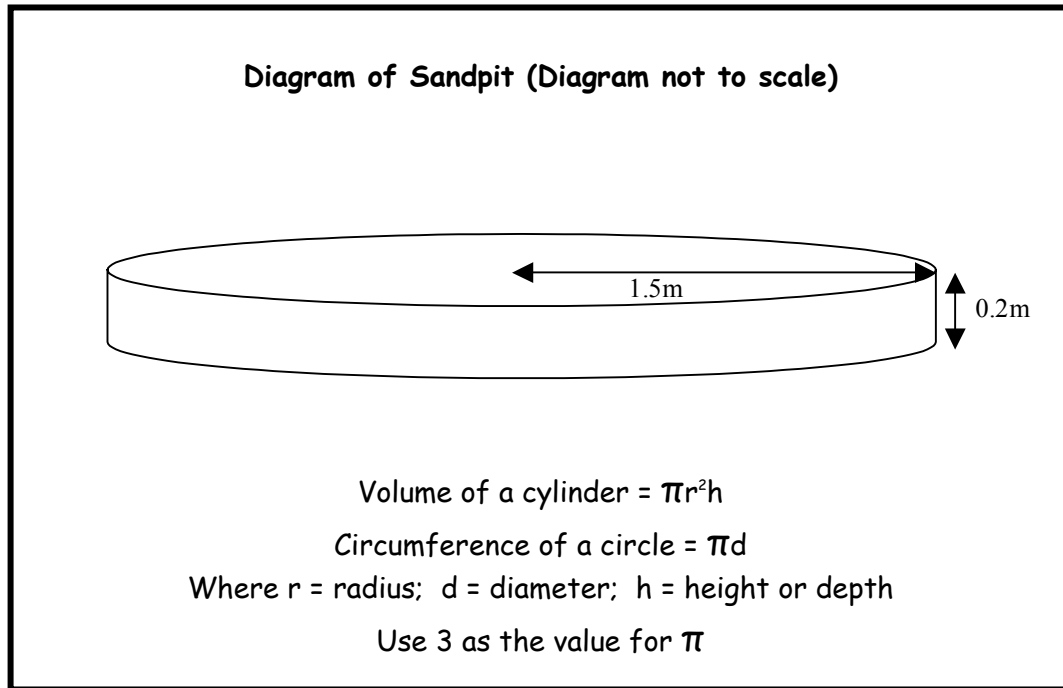
Which is the correct graph to match the statement?



Questions 17 and 18 are about the construction of a sandpit for a children's nursery.

Two of the parents are making a round sandpit for the children.

It has a radius of 1.5 metres and a depth of 0.2 metres.



17 What is the volume of sand needed to fill the sandpit?

- A  $0.18\text{m}^3$
- B  $1.35\text{m}^3$
- C  $1.80\text{m}^3$
- D  $6.75\text{m}^3$

18 Coloured warning tape will be put all the way round the top edge of the sandpit.

How much tape will be needed?

- A 4.5m
- B 6m
- C 6.75m
- D 9m

**Questions 19 and 20 are about a trip to Greece.**

George and Pat are going on holiday to Greece.

19 Pat exchanged £200 for 104 000 drachmas.

George exchanged £350 at the same exchange rate.

How many drachmas did George get?

- A 18 200
- B 59 428
- C 182 000
- D 673 076

20 Pat has a choice of 4 suitcases and wants to take the one that will hold the most.

Which case has the biggest volume?

- A 60cm × 45cm × 25cm
- B 60cm × 50cm × 20cm
- C 70cm × 50cm × 15cm
- D 80cm × 45cm × 15cm

Questions 21 and 22 are about the results of a typing test.

Four typists who are applying for a job are being assessed. Each has to type 10 items and the numbers of mistakes are counted.

Results of Assessment										
Number of mistakes on each item of typing										
Item	1	2	3	4	5	6	7	8	9	10
Alena	2	6	5	2	5	1	6	3	6	5
James	3	1	7	5	1	5	7	2	6	0
Mark	3	7	2	3	9	3	3	2	9	5
Stella	6	6	1	8	3	2	4	6	5	3

21 The number of mistakes for James' tenth item was incorrectly recorded as zero. His mean score is 4.

What was the correct result for his tenth assessment?

- A 2
- B 3
- C 4
- D 5

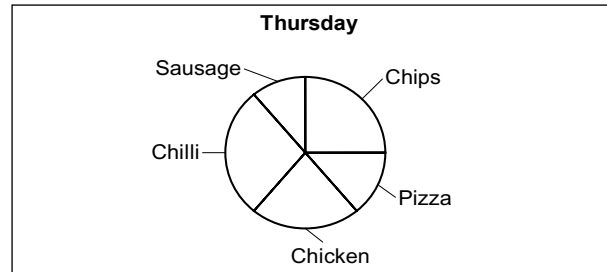
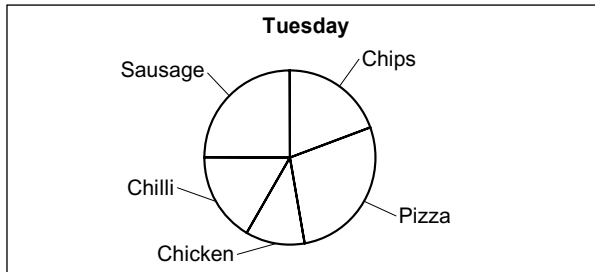
22 The assessor wants to know which applicant is the most inconsistent.

Which measure would be the most appropriate to use?

- A mode
- B median
- C range
- D maximum value

Questions 23 and 24 are about 2 pie charts drawn from the results of a survey.

The survey was carried out as part of a catering course, to find out what 40 people ate in the canteen on 2 days of one week.



23 Which 2 items were more popular on Tuesday than on Thursday?

- A Chicken and Chips
- B Pizza and Chilli
- C Pizza and Sausage
- D Chicken and Chilli

24 The sector that represents Chips on Thursday is  $90^\circ$ .

How many people does this represent?

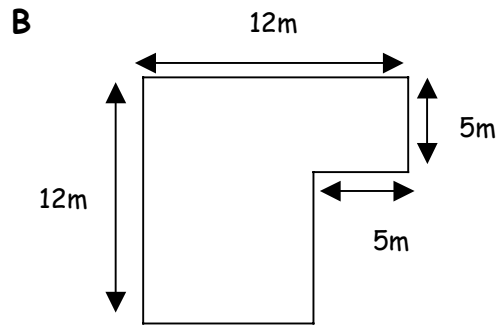
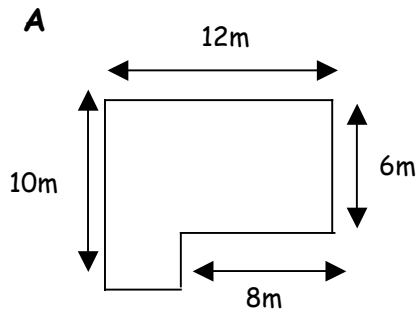
- A 90
- B 40
- C 36
- D 10

25 Chris buys 4 CDs at £13.99 each. He gives the cashier £60.

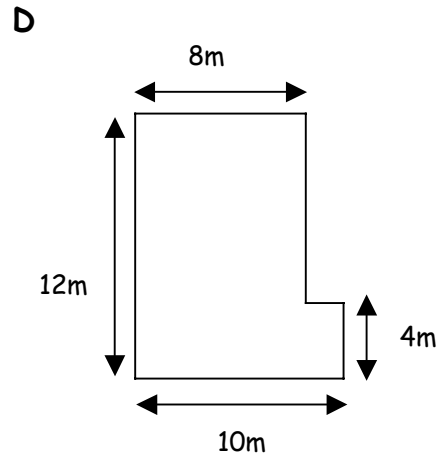
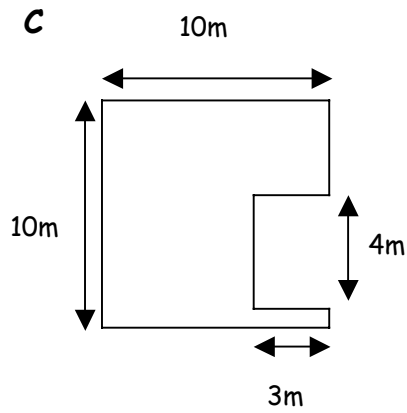
Which method would give Chris the closest estimate to let him check his change?

- A  $60 - 13 \times 4$
- B  $60 - 4 - 13$
- C  $60 - 4 + 14$
- D  $60 - 4 \times 14$

- 26 A carpet company has some floor plans.  
Which floor plan represents an area of  $109\text{m}^2$  ?



Diagrams not to scale



**Questions 27 and 28 are about a recipe for making biscuits.**

Jake is making 55 biscuits for the playgroup Christmas party.

He has a recipe for 20 biscuits, which requires:

150g margarine  
150g sugar  
1 egg  
300g self-raising flour  
50g ground almonds

27 How much flour will he need to make exactly 55 biscuits?

- A 413g
- B 825g
- C 900g
- D 1 650g

28 What is the ratio of ground almonds to sugar to self-raising flour in the recipe?

- A 3 : 6 : 1
- B 6 : 1 : 3
- C 1 : 3 : 6
- D 1 : 6 : 3

29 Sam has to carry out a survey to find out the proportion of students who travel to college by bus.

Which group of people would it be most useful to interview?

- A people at the town's bus station
- B people at the nearest bus stop
- C people entering the college
- D people in the college's staff car park

- 30 In a competition to win a holiday you have to decide which of the following amounts of foreign money is worth the most:

10 800 Danish kroner  
9 285 French francs  
2 610 000 Italian lire  
2 000 Swiss francs

The local newspaper gives the current exchange rates as:

£1 = 12 Danish kroner  
£1 = 10 French francs  
£1 = 3 000 Italian lire  
£1 = 2.5 Swiss francs

Which of the amounts in the competition is worth the most in £s sterling?

- A Danish kroner  
B French francs  
C Italian lire  
D Swiss francs
- 31 Betty plans to hire a minibus for a 4-day scout camp. She estimates that she will do a total of 125 miles. The hire company charges £30 per day plus 15p per mile.  
How much will the minibus cost for the trip?

A £121.87  
B £138.75  
C £180.00  
D £245.00

- 32 A pop concert has an audience of 8 496 people. Two thirds of the people at the concert pay a £15 entrance fee while the remainder pay a reduced rate of £7.  
What is the income from the concert to the nearest thousand pounds?

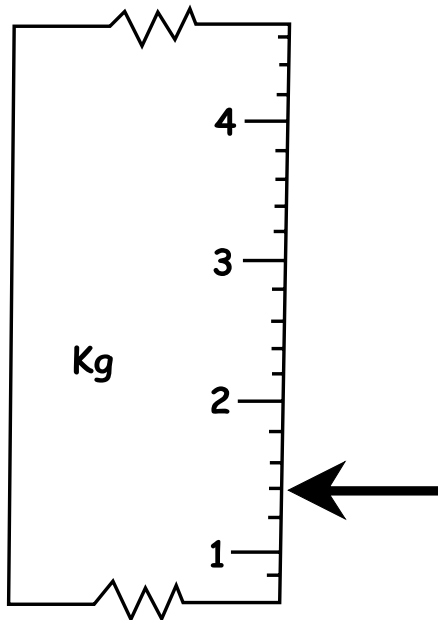
A £80 000  
B £82 000  
C £104 800  
D £105 000



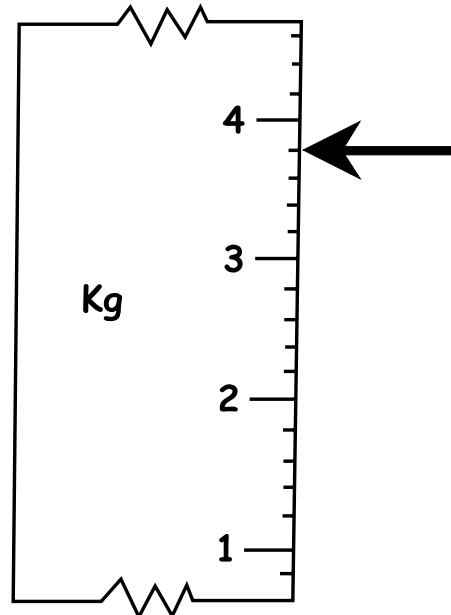
- 33 Caroline wants to know the weight of a chicken so that she can work out how long to cook it.

First she puts a dish on the scales and records the weight of the dish.

Then she weighs the dish with the chicken in it.



DISH ONLY



DISH AND CHICKEN

How heavy is the chicken?

- A 2.2kg
- B 2.3kg
- C 2.4kg
- D 2.7kg

34 Bimla carried out a survey to find out the most popular pet.

Which way of showing the results would most likely be the easiest to understand?

- A frequency table
- B pictogram
- C scattergram
- D sectional bar chart

35 120 people are invited to the Christmas Party at work.

$\frac{1}{6}$  were not able to come because they were doing other things.

20% of those left did not want to come.

$\frac{1}{8}$  of those who said they would come had to cancel at the last minute.

How many people came to the party?

- A 70
- B 75
- C 82
- D 84

36 Ali needs an 18-inch zip to replace a broken one in a cushion. The shop only sells them in centimetres.

Which zip is the closest to the one Ali needs given that 1 inch is approximately equal to 2.5cm?

- A 7cm
- B 36cm
- C 45cm
- D 54cm

- 37 Maria is doing research into food storage temperatures for her catering course. She finds the following table in a book.

8°C	By law, perishable goods for public consumption must not be stored above this temperature.
5°C	By law, this is the highest temperature for very high risk food in a fridge.
3°C	Ideal temperature for a domestic refrigerator.
-6°C	One star rated freezer (*)
-12°C	Two star rated freezer (**)
-18°C	Three star rated deep freeze (***)

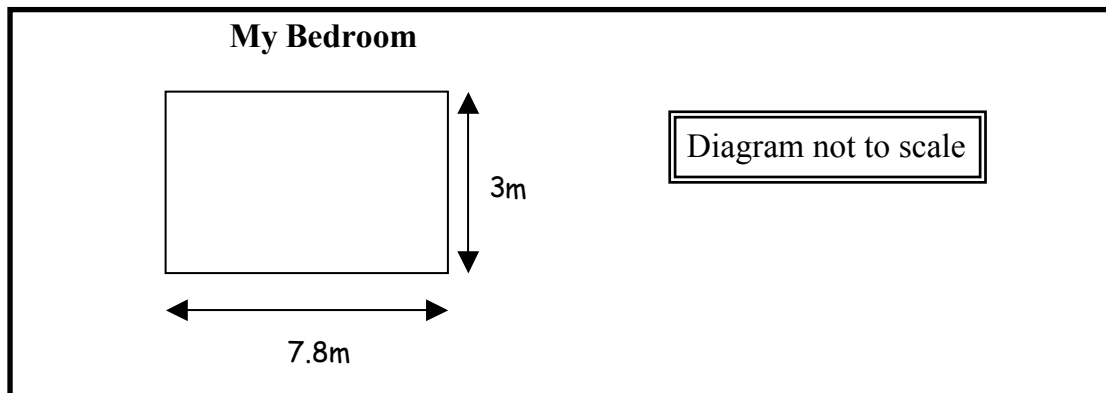
Her domestic refrigerator has a fault and is 4°C higher than the ideal temperature.

What is the difference in temperature between her domestic refrigerator and the three star rated deep freeze if the deep freeze is at the correct temperature?

- A 17°C
  - B 19°C
  - C 25°C
  - D 27°C
- 38 An architect is making a scale model of a new house from a drawing. One of the dimensions on the drawing shows that the height of the real house is 12.5 metres. What scale does the architect need to work to, if the height of the model house has to be 2.5 centimetres?

- A 1 : 5
- B 1 : 50
- C 1 : 100
- D 1 : 500

Questions 39 and 40 are about decorating a bedroom.



39 The border for the top of the walls costs £3.97 per metre.

Which estimate is most accurate for the total cost of the border?

- A  $(8 + 3) \times 4 = \text{£}44$
- B  $(8 + 3 + 8 + 3) = \text{£}22$
- C  $(8 + 3) \times 2 \times 4 = \text{£}88$
- D  $(8 \times 3) \times 4 = \text{£}96$

40 3.2 litres of paint are needed to decorate the bedroom. (1 litre = 1 000cm<sup>3</sup>).

The decorator mixes 3 paint colours together.

The amounts of paint are in the ratio:

15 parts of Honey Yellow to 12 parts of Aztec Orange to 5 parts of Ravishing Red.

How much Ravishing Red will she need?

- A 500cm<sup>3</sup>
- B 720cm<sup>3</sup>
- C 1 067cm<sup>3</sup>
- D 1 200cm<sup>3</sup>

# END OF TEST