WJEC CBAC

Entry Level

736/01

MATHEMATICS FINAL EXAMINATION

A.M. TUESDAY, 11 March 2008

$1\frac{1}{4}$ hours

ADDITIONAL MATERIALS

In addition to this examination paper, you will need:

- a calculator;
- a ruler.

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions in the spaces provided in this booklet.

All working must be shown.

For Examiner's use only	
Pages	Total mark per double page
2, 3	
4, 5	
6, 7	
8, 9	
10, 11	
12, 13	
14, 15	
16, 17	
18, 19	
20	
TOTAL	

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

1.

12   9

17

25   16

6

19

13   10

(a) Write down **all** the **odd** numbers in the above set of numbers.

Answer: ....

(b) Find the **difference** between the **largest** and the **smallest** of the **odd** numbers in the set.

....

....

Answer: ....

[2]

2. Write down the number 5063 **in words**.

Answer: ....

[1]

3. The attendance figure quoted for a recent match at the Millenium Stadium in Cardiff was 63 497.
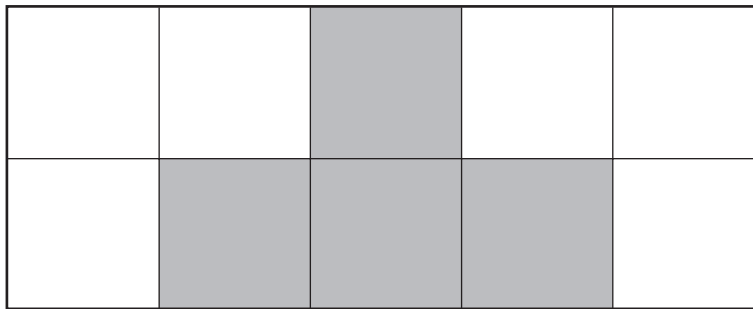
(a) Write this number to the **nearest 1000**.

Answer: ....

(b) Write this number to the **nearest 100**.

Answer: ....

[2]

4. What fraction of the following figure has been shaded?

Answer: ....

[1]

Turn over.

5.

$$17 \qquad 8 \qquad 45 \qquad 31 \qquad 23 \qquad 51$$

Only using numbers from the **above list**, write down

(a) two numbers which **add up** to **40**,

Answer: .... and ....

(b) a number which is a **multiple** of 5.

Answer: ....

[2]

6. A bag contains 24 balls.

A **quarter** $\left(\frac{1}{4}\right)$ of the balls are removed from the bag.

How many balls are **left** in the bag?

....

....

Answer: ....

[2]

7. Dinner plates cost £15 each.
How many dinner plates can be bought for £80?

....

....

Answer: ....

[2]

8. Write down the next two numbers in **each** of the following sequences.

(a) 1,   3,   5,   7,   9, ...

(b) 1,   2,   4,   7,   11,   16, ...

[2]

9. Write $\frac{1}{4}$ as a decimal.

Answer: ....

Write 20% as a decimal.

Answer: ....

Write $\frac{1}{4}$, 20% and 0·23 in order of size, starting with the **smallest** one.

Answer: **(smallest)** ...., ..., ..., **(largest)**

[3]

Turn over.

10. Complete the following bill.

3 Bird Feeders at £1.70 **each**   £

0·5 kg of Bird Seed at £6.24 **per kg**   £
_____

Total: £
_____

[3]

11. This is a number machine:

NUMBER IN → ⬡ + 2 → ⬡ × 3 → NUMBER OUT
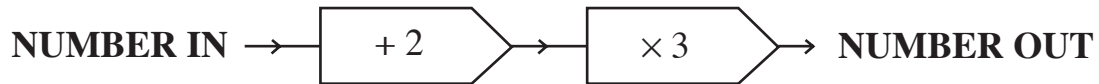
Example: When the **NUMBER IN** is 4, the **NUMBER OUT** is 18.

Now answer the following questions:

(a) When the **NUMBER IN** is 1, what is the **NUMBER OUT**?

....

Answer: ....

(b) When the **NUMBER IN** is 0, what is the **NUMBER OUT**?

....

Answer: ....

(c) When the **NUMBER OUT** is 0, what is the **NUMBER IN**?

....
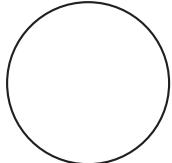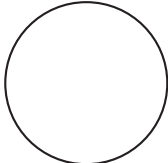
Answer: ....

[3]

12. Write down the missing numbers in the shapes below.

(a)   △   –   7   =   4

(b)   ◯   ×   ◯   =   16

[2]

13. *(a)* George lives 5 miles **further** from school than Aled does.
George lives 7 miles from school.
How far from the school does Aled live?

Answer: ....

(b) Jean is 12 years old today and she is **twice** as old as her sister Kate.
How old will Kate be in 5 years time?

Answer: ....

[2]

14. Ajay recorded his height as being 1·98 but forgot to show the units used.
Write down whether the units should be millimetres (mm) **or** centimetres (cm)
or metres (m).

Answer: ....

[1]

Turn over.

15. Mark **all** the **lines of symmetry** in **each** of the following diagrams.
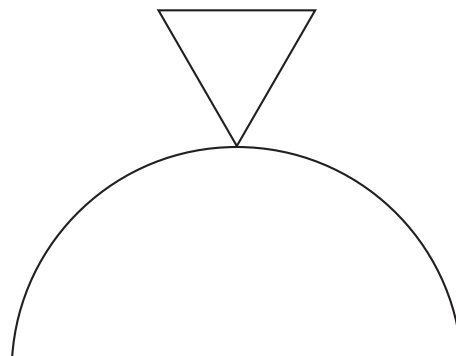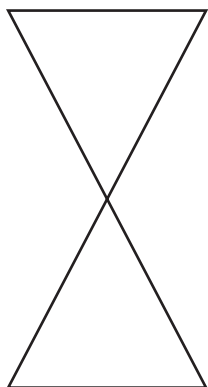
[2]

16. Change the following 24 hour times into a.m. or p.m. times.

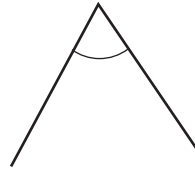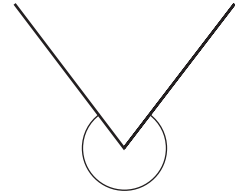*(a)* 13 25 hours

(b) 07 42 hours

Answer:　(a)　..

(b)　..

[2]

17.
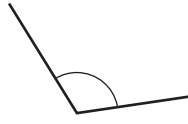
A   B   C   D
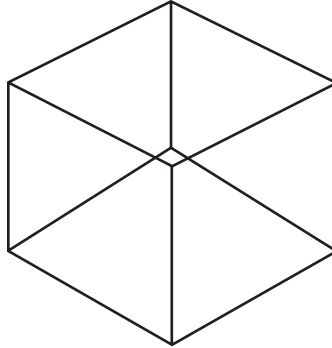
Complete each of the following statements.

An **acute** angle is shown in diagram ....

A **right-angle** is shown in diagram ....

An **obtuse** angle is shown in diagram ....

[3]

Turn over.

18. The diagram shows a solid block in the shape of a **cube**.

(a) How many **corners** does a cube have?

Answer: ....

(b) How many **edges** does a cube have?

Answer: ....

(c) How many **faces** does a cube have?

Answer: ....

(d) What **shape** is a **face** of a cube?

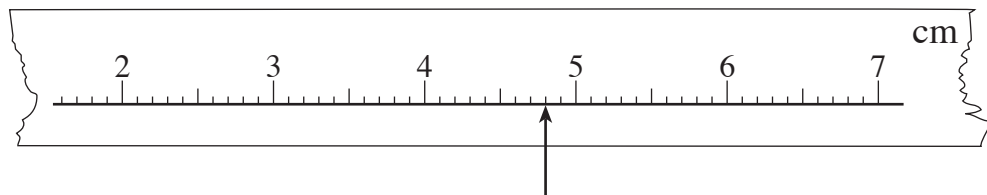Answer: ....

[4]

19. These diagrams show sections of scales used on different rulers or tape measures to measure lengths. On each diagram the arrow is pointing at the length to be recorded for each diagram. **Include the units** used in each case.
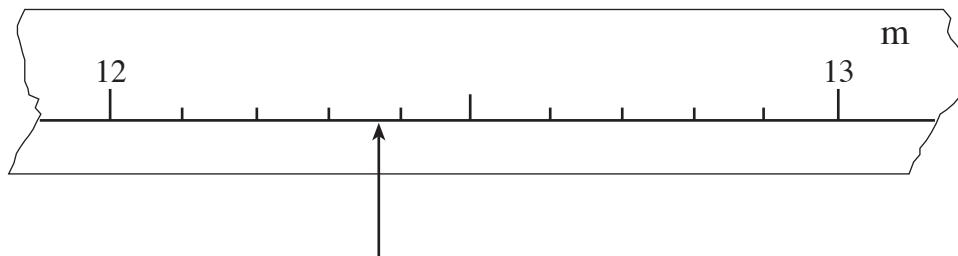
(a)
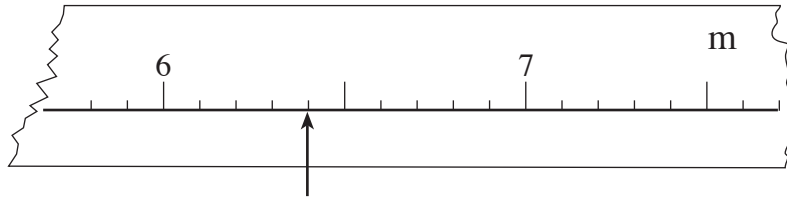
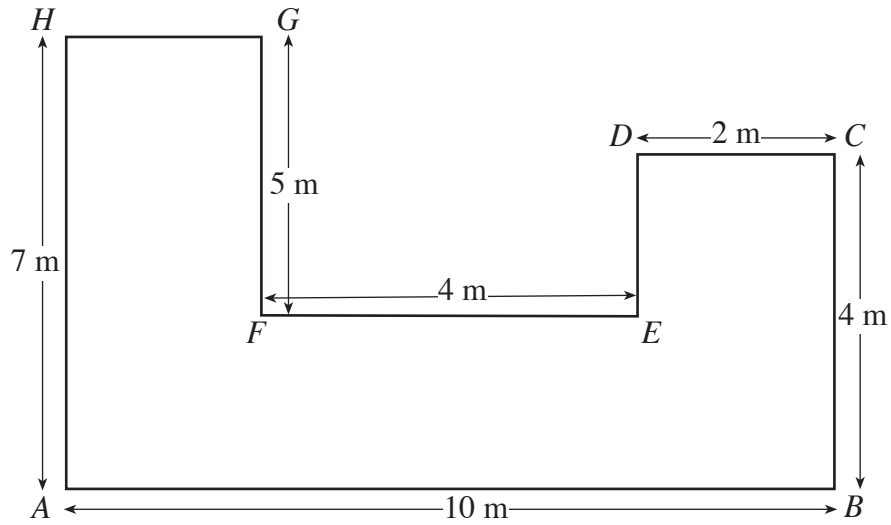Answer: ....

(b)

Answer: ....

(c)

Answer: ....

[3]

Turn over.

20.

All angles in the above shape are right-angles.

(a) Find the **lengths** of

(i) *HG*,

Answer: ....

(ii) *DE*.

Answer: ....

(b) Find the **perimeter** of the shape.

....

....

Answer: ....

[3]

21. Ryan's height has been measured every year on his birthday from the age of 11. The measurements have been recorded on a chart.
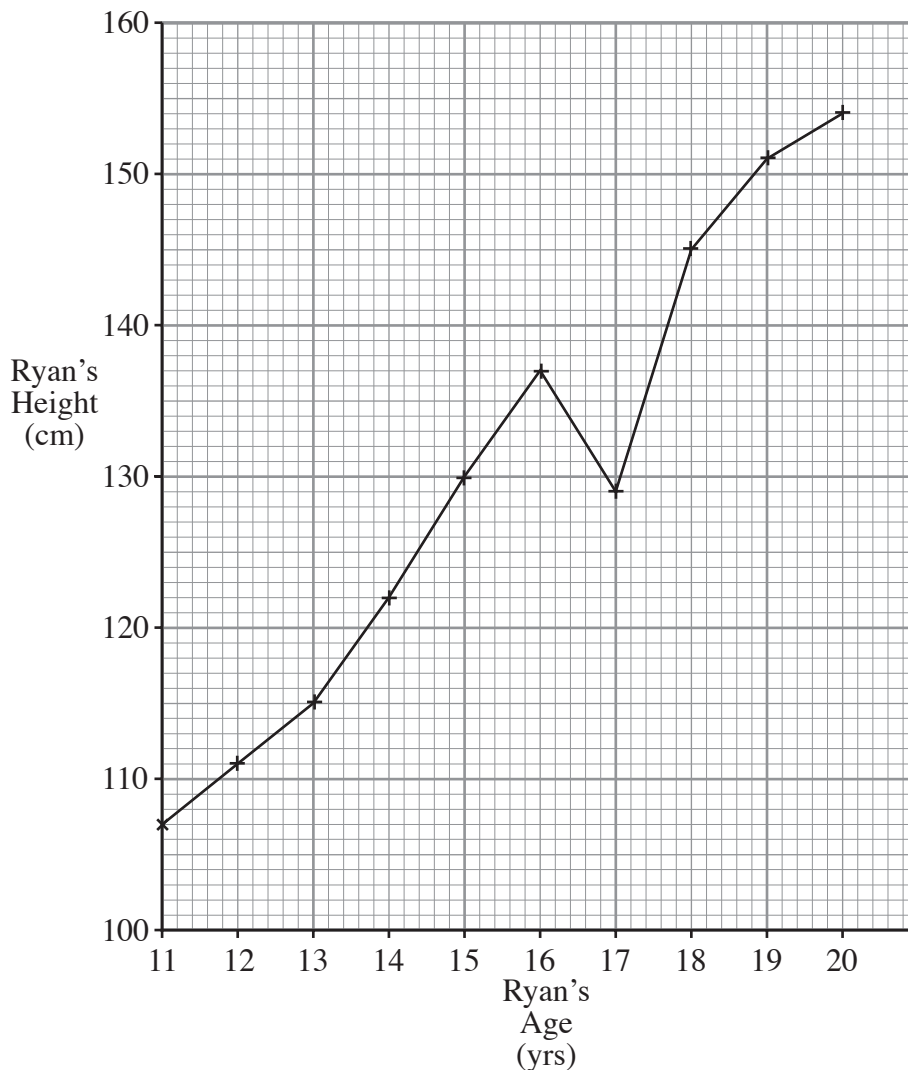
(a) Write down Ryan's height on his 13th birthday.

Answer: .... cm.

(b) Write down Ryan's age when he became 125 cm tall.

Answer: .... years old.

(c) One of the measurements was wrongly recorded.
Draw a circle around the wrongly recorded point on the chart **and** estimate what you think Ryan's height should be at that age.

Answer: Ryan's height should be .... cm.

[4]

Turn over.

22. A youth club committee of **three (3)** has to be chosen from the following lists.

<u>Boys</u>   <u>Girls</u>
Adrian (A)   Dawn (D)
Bob (B)   Enid (E)
Craig (C)

The committee must include **at least 1 boy** and **at least 1 girl**.

Here is one possible way to form the committee:

ABD

Now list **all** the possible ways of forming the committee.

....

....

....

[2]

23. State whether these things

will happen,
could happen,
or   **will not** happen.

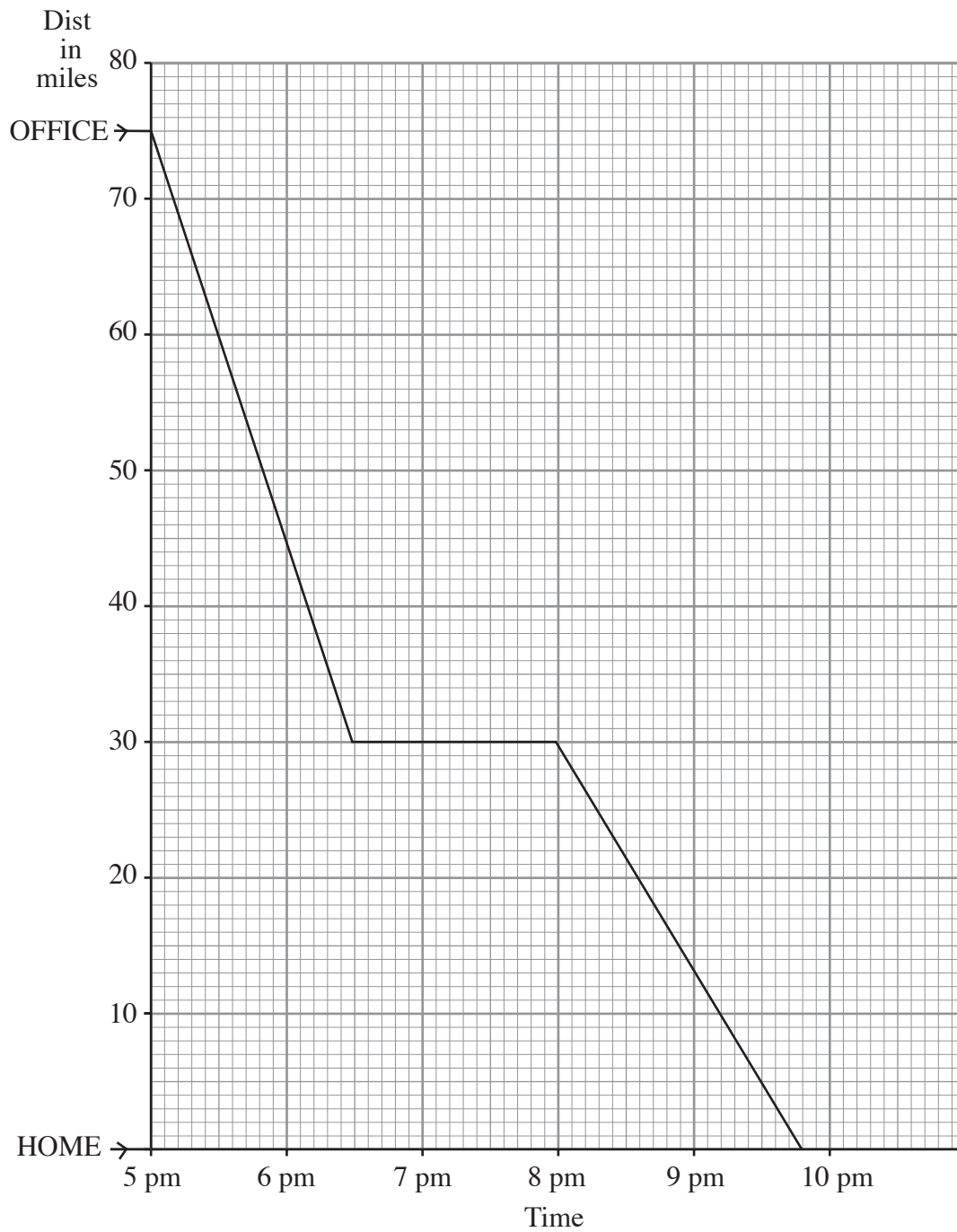*(a)* It will rain somewhere in the world tomorrow.

Answer: ....

(b) It will rain in Manchester next Saturday.

Answer: ....

[2]

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Turn over.

24. Gwyn works in an office some distance away from his home.

The graph represents Gwyn's journey by car from his office to his home. On his journey he stopped for a meal at a roadside cafe.

Use the graph to find

(a) how far the office is from Gwyn's home,

Answer: ....

(b) for how long did Gwyn stop at the roadside cafe,

Answer: ....

(c) at what time Gwyn arrived home.

Answer: ....
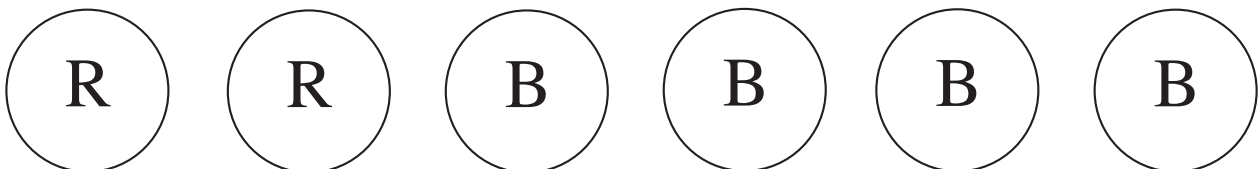
[3]

Turn over.

25. Two (2) bags each contain **six (6)** balls of various colours.

Bag A contains 3 red balls, 2 blue balls & 1 white ball:

R   R   R   B   B   W
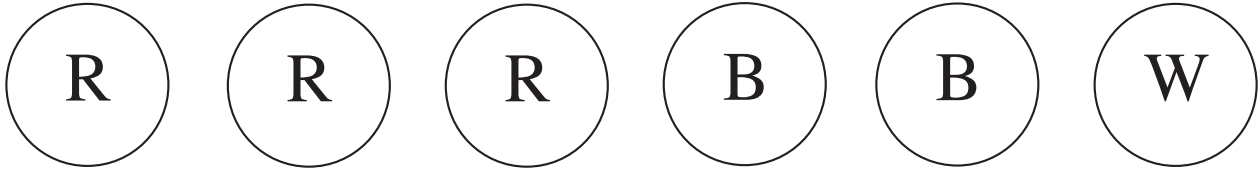
Bag B contains 2 red balls & 4 blue balls:

R   R   B   B   B   B

Each bag is well mixed.

Without looking you then pick **one (1)** ball from each bag.

(a) From which bag are you **most likely** to pick a **red ball**?

Answer: Bag ....

(b) From which bag is it **impossible** to pick a **white ball**?
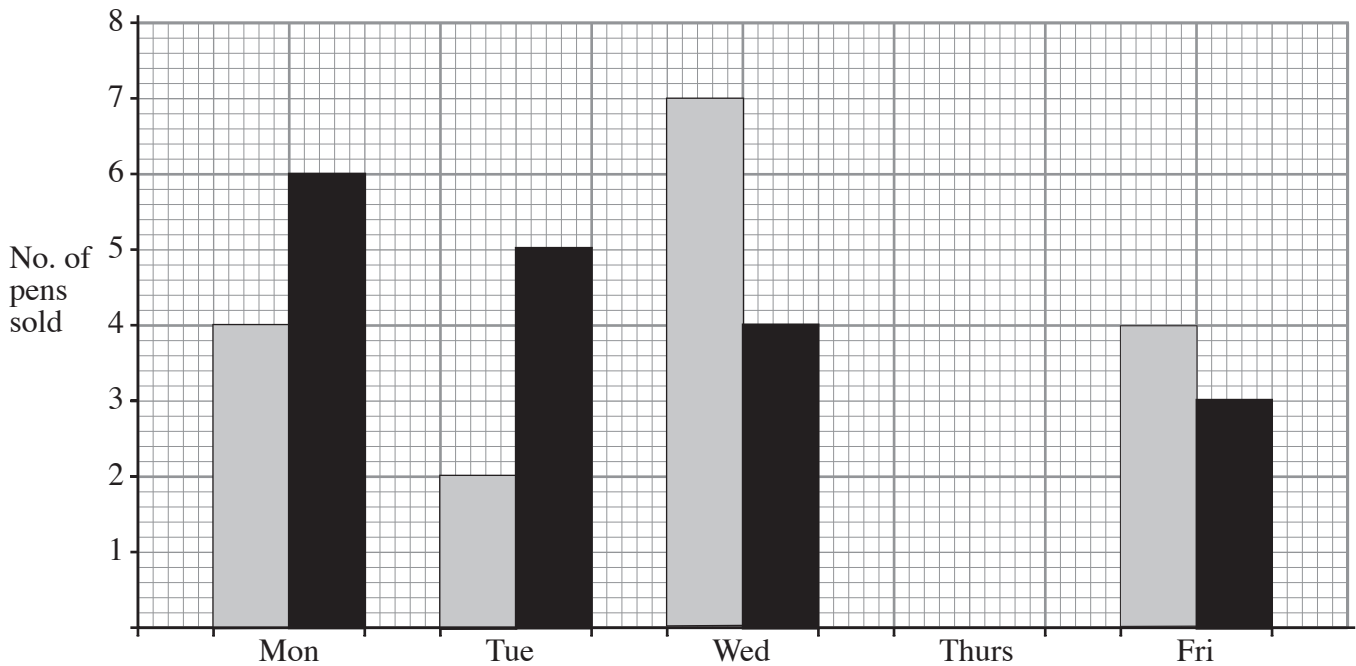
Answer: Bag ....

[2]

26. A small village shop sells two types of pens - "Longwrite" and "Cleardraw".

A survey is carried out to determine which is the most popular of the two pens.

The results were presented in the form of a block graph with the detail for Thursday left out.

Key: ☐ = **one (1)** "Longwrite" pen,

                 ■ = **one (1)** "Cleardraw" pen.

(a) On Thursday 5 "Longwrite" pens and 1 "Cleardraw" pen were sold. Complete the block graph.

(b) From the graph decide on how many days were **more** "Cleardraw" pens sold than "Longwrite" pens.
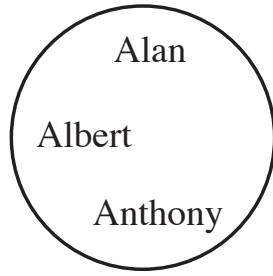
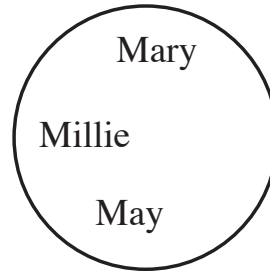Answer: ....

(c) Write down how many "Longwrite" pens were sold in the 5 days of the survey.

Answer: ....

[3]

Turn over.

27.

Alan

Albert

Anthony

SET A

Mary

Millie

May

SET B

(a) Explain why the name Michael could be placed in **SET A**.

....

....

(b) Explain why the name Martin could be placed in **SET B**.

....

....

[2]