

Contents

Maths	3
English - Comprehension	10
Verbal Reasoning	12
GL Techniques	12
Vocabulary Test	17
Non-Verbal Reasoning	28

Maths

Multiplying numbers by 10, 100 and 100

- 1) $7.54 \times 10 = 75.4$
- 2) $254 \div 1000 = 0.254$
- 3) $0.012 \times 100 = 1.2$
- 4) $2 \div 100 = 0.02$
- 5) $7824 \div 1000 = 7.824$
- 6) $61 \div 100 = 0.61$
- 7) $25.6 \div 100 = 0.256$
- 8) $123 \div 10 = 12.3$
- 9) $0.0145 \times 100 = 1.45$

(9 marks)

BIDMAS – Order of operations

- 1) $(12 \times 5 + 3^2) + 3 = 72$
- 2) $(9 \times 3 + 5^2) + 2 = 54$
- 3) $(84 - 6^2) + (10 - 2) = 6$
- 4) $(35 - 5) \div 6 + 2^2 = 9$

(4 marks)

Round each number to the nearest 10 and 100

Club	Average attendance	Rounded to 1 000	Rounded to 10 000
Manchester United	73 452	73,000	70,000
Arsenal	60 079	60,000	60,000
Newcastle United	50 517	51,000	50,000
Manchester City	46 974	47,000	50,000
Liverpool	44 748	45,000	40,000 (4 marks)
Chelsea	41 462	41,000	40,000

(12 marks)

Column Multiplication

$$\begin{array}{r} 1281 \\ \times 89 \\ \hline 114,009 \end{array}$$

$$\begin{array}{r} 1843 \\ \times 86 \\ \hline 158,498 \end{array}$$

$$\begin{array}{r} 1334 \\ \times 81 \\ \hline 108,054 \end{array}$$

$$\begin{array}{r} 1694 \\ \times 18 \\ \hline 30,492 \end{array}$$

Mean, mode, median and range**(4 marks)**

1) 3, 8, 2, 3

Mean 4 Median 3 Mode 3 Range 6

2) 7, 9, 7, 9

Mean 8 Median 8 Mode 7 & 9 Range 2

3) 6, 7, 3, 3, 6, 5

Mean 5 Median 5.5 Mode 3 & 6 Range 4

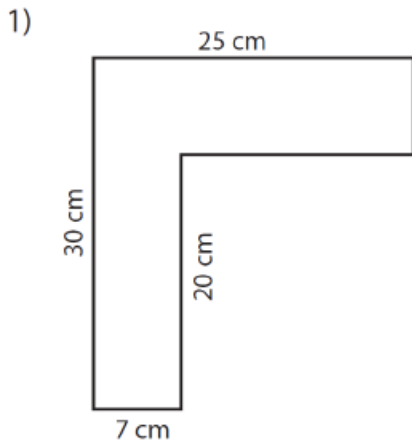
4) 8, 5, 3, 8

Mean 6 Median 6.5 Mode 8 Range 5

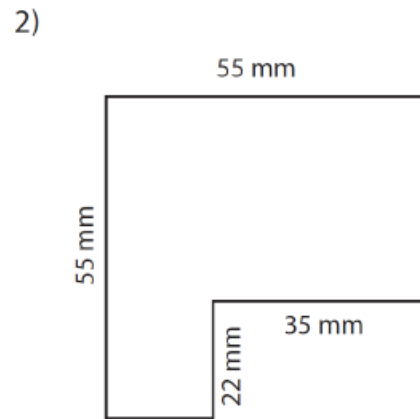
Find the elapsed time**(How much time has gone by between the start time and the end time)**

Q.No	Start Time	End Time	Elapsed Time
1)	6:40 A.M.	9:55 A.M.	3 hours 15 minutes
2)	8:55 P.M.	11:25 P.M.	2 hours 30 minutes
3)	1:40 A.M.	9:30 A.M.	7 hours 50 minutes
4)	6:30 P.M.	10:35 P.M.	4 hours 5 minutes
5)	7:35 A.M.	11:20 A.M.	3 hours 45 minutes

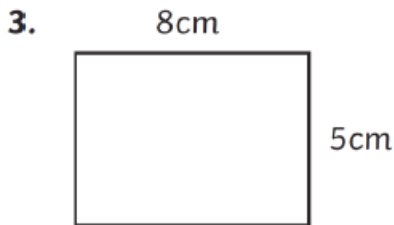
Find the missing lengths and then workout the perimeter and area



Q1) Perimeter = 110cm

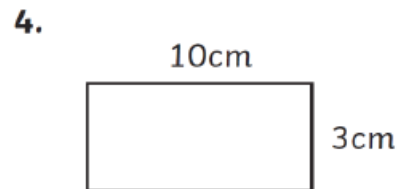


Q2) Perimeter = 220cm



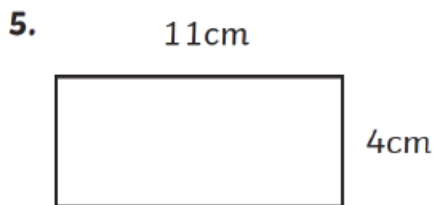
Q3) Perimeter = 26cm

Q3) Area = 40cm sq



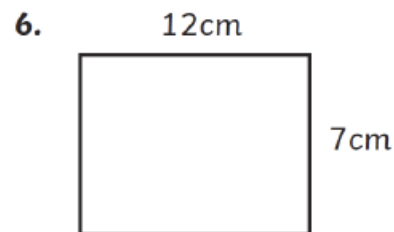
Q4) Perimeter = 26cm

Q4) Area = 30cm sq



Q5) Perimeter = 30cm

Q5) Area = 44cm sq



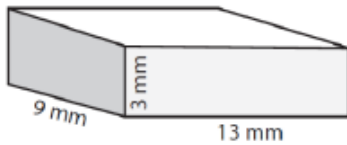
Q6) Perimeter = 38cm

Q6) Area = 84cm sq

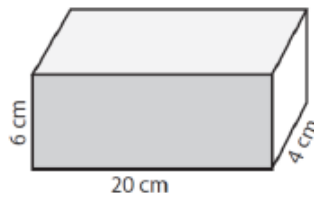
(10)

Find the volume of each of the cuboids below

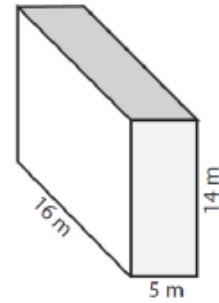
1)



2)



3)



Q1) Volume = 351cm cubed

Q2) Volume = 480cm cubed

Q3) Volume = 1120cm cubed

(3)

Now work out the surface area of the above shapes.

1) Surface area of shape 1 = 366cm sq

2) Surface area of shape 2 = 448cm sq

3) Surface area of shape 3 = 748cm sq

(3)

Adding Fractions

Remember to simplify!

One mark is for a correct answer and an extra mark if simplified correctly!

1) $\frac{6}{10} + \frac{2}{4} =$ 22/20 = 11/10 = 1 and 1/10

***Use the dash to write your fraction. E.g. 2/5**

2) $\frac{5}{10} + \frac{1}{4} =$ **15/20 = 3/4**

3) $\frac{1}{3} + \frac{2}{5} =$ **11/15**

(5)

Subtracting Fractions

$$4) \quad \frac{1}{2} - \frac{1}{3} = \quad 1/6$$

$$5) \quad \frac{3}{4} - \frac{6}{10} = \quad 3/20$$

$$6) \quad \frac{9}{10} - \frac{3}{5} = \quad 3/10$$

Fractions of numbers

$$1) \text{ Find } \frac{4}{8} \text{ of } 224 = \quad 112$$

$$2) \text{ Find } \frac{3}{4} \text{ of } 36 = \quad 27$$

$$3) \text{ Find } \frac{1}{5} \text{ of } 20 = \quad 4$$

$$4) \text{ Find } \frac{2}{3} \text{ of } 48 = \quad 32$$

$$5) \text{ Find } \frac{6}{10} \text{ of } 300 = \quad 180$$

Percentages of numbers

- 1) Find 10% of 240 = 24
- 2) Find 35% of 70 = 24.5
- 3) Find 20% of 150 = 30
- 4) Find 85% of 400 = 340
- 5) Find 6% of 20 = 1.2
- 6) Find 27% of 35 = 9.45

Find the highest common factor of the following;

1. 48 and 36 = 12
2. 56 and 42 = 14
3. 35 and 50 = 5

Find the lowest common multiple of the following;

1. 8 and 3 = 24
2. 6 and 5 = 30

English - Comprehension

PAGES 55-59 — ASSESSMENT TEST 6

1. D

In the passage it says that Aunt Florence "died her long hair".

2. A

In the passage it says that Aunt Florence gave Ruby the key on the "day before yesterday", which means 'two days ago'.

3. C

Aunt Florence whispered when she told Ruby about the key, so she was talking quietly.

4. E

Aunt Florence went through the door when she was Ruby's age.

5. D

In the passage it says that the door is in "the attic of Grandpa's old house", so it is not in Aunt Florence's home.

6. C

Aunt Florence says to Ruby that the door will only reveal itself "if the person holding the key believes that the magical door exists".

7. E

Ruby was surprised because a "wonky, wooden door slowly appeared in the wall".

8. D

'invented' is closest in meaning to "imaginary". Both words mean 'made up'.

9. C

'show' is closest in meaning to "reveal". Both words mean 'display something so it can be seen'.

10. A

'ordinary' is closest in meaning to "unimpressive". Both words mean 'normal'.

11. C

"quietly" is an adverb because it describes the verb "said".

12. B

This is an example of alliteration. Alliteration is when a sound is repeated at the beginning of words in a phrase — the 'd' sound is repeated here.

Verbal Reasoning

GL Techniques

Type 2:

In each of the following there is the **SAME** connection between the word outside the brackets and **ONE** word inside each pair of brackets. **Underline** these words, one word from each pair of brackets. For Example:

trunk stem
 water fire
clock thermometer T2/1

Type 4:

A word on the left-hand side will join with a word on the right-hand side to form a completely new and proper word. The word on the left-hand side always begins this new word. **Underline** the two words, one from each group. For Example:

sit / will / man : now / age / ton

indeed
 thinnest
instead T4/1

Type 5:

Here you must find the **FOUR**-letter word which is hidden **BETWEEN** the words in each of the following sentences. Write this word in the brackets. Here is an example:

Girls are made of all things nice . (fall)

vest
 dust
them T5/1

Type 6:

In each of the following questions you must change one letter in the top word to make a new sensible word. By changing a different letter in this new word it is possible to make the bottom word which is given. Write out the sensible word on the line provided. Here is an example:



Here there were two letters that needed changing in the first word to make the second word (R to F, and D to M). If the R remains unchanged while the D changes to an M we make the sensible word *ROAM*. The R changes to F on the second stage to make the word given, *FOAM*. Now answer the following questions:

- | | | |
|-----|-------------|-------------|
| | W E A N | C C A S E |
| 9) | LEAN | |
| 10) | CAME | T6/1 |

Type 7:

There are two groups of words in each question below. Choose **TWO** words, one from each group which are **OPPOSITE** in meaning to each other. Here is an example:

- | | | | |
|-----|-------------------------|----------------|--------------------------------|
| | big / <i>rich</i> / man | : | <i>poor</i> / bank / beautiful |
| 11) | rough | calm | |
| 12) | give | receive | |
| 13) | expensive | cheap | T7/1 |

Type 8:

Write in brackets the word needed to complete the third pair of words. This pair follows the same pattern as the first two pairs of words. For Example:

stone tone / slate late / cream (*ream*)

hares ⁽¹⁴⁾

male ⁽¹⁵⁾

pass ⁽¹⁶⁾

let ⁽¹⁷⁾

T8/1

Type 9:

The following are a type of crossword. Complete each puzzle by fitting the five words on the right-hand side of the grid horizontally and vertically into the correct positions. One word has been included already. Here is an example:

			SAM
			MEN
A	P	E	TEN
			APE
			SAT

becomes

S	A	M
A	P	E
T	E	N

BAD ⁽¹⁸⁾

EGO

GET ⁽¹⁹⁾

ATE ⁽¹⁹⁾

NOW

TEE

T9/1

Type 10:

There is a connection between the 2 words on the outside of the brackets and TWO of the words inside the brackets. Underline the two words. For Example:

DOG HAMSTER (cat, doll, pet, rabbit, black)

20) princess woman

21) silver lead

22) jumper shirt T10/1

Type 11:

23) A

24) B

25) B

26) E

27) A

28) E

29) D

30) C

31) C

Type 12:

Each of the following pairs of brackets has ONE word which does not belong to the rest. Underline this 'odd one out'.

32) person

33) ball

34) cup T12/1

Type 13:

Underline the word which would come in the MIDDLE if the following were put in order of size, sequence or position. Here is an example:

(youth adult child toddler baby)

35) dog

36) orange

37) hour **T13/1**

Type 14:

Underline the ONE word inside the brackets which CANNOT be made using the letters of the word outside the brackets.

38) meant

39) track **T14/2**

Type 15:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

The following questions are all concerned with the alphabet.

40) 21st

41) it

42) E **T15/2**

Type 16:

In the questions below there are two pairs of letters that are related in some way. Write in the brackets the pair of letters that completes the second relationship in the same way. Here is an example:

A C is to B D as M O is to (NP)

43) QG

44) KW

45) OV **T16/2**

Vocabulary Test

Write the Spellings for each word. (3 marks for each word!)

1) Inaudible	
2) Insufficient	
3) Hilarious	
4) Influential	
5) Oblivion	
6) Illiterate	
7) Inefficient	
8) Cordial	
9) Invaluable	
10) Retaliate	

Write the definition for each word. (3 marks for each word!)

1) Definite	
2) Resent	
3) Indescribable	
4) Opponent	
5) Perspective	
6) Illuminate	
7) Irritable	
8) Repulsive	
9) Stimulate	
10) Impersonate	

Write a Sentence for each word. (3 marks for each word!)

1) Scribble	
2) Impersonate	
3) Erratic	
4) Retaliate	
5) Perspective	
6) Junction	
7) Hoarse	
8) Epic	
9) Insert	
10) Invaluable	
11) Resent	

Pick a missing word to fill each sentence. (3 marks for each word!)

1) Arcade

2) Resent

3) Generous

4) Dissolve

5) Demolish

6) Gulp

7) Excel

8) Manufacture

9) Ponder

(120marks)



Vocabulary 10

Learn the following words and then answer the questions.

1. **Ogre** (n.): monster, troll, giant, tyrant.
In ancient times people believed thunderstorms were ogres stomping around in the clouds.

2. **Crucial** (adj.): important, significant, critical.
My teacher told me that it is crucial to study hard for exams, even if you are talented.

3. **Complex** (adj.): intricate, difficult, involved.
The human brain is a hugely complex organism, which doctors still do not fully understand.

4. **Inefficient** (adj.): not fully useful or productive, wasteful, sloppy, faulty.
Some old houses are inefficient and lose heat in the winter.

5. **Ration** (v.): give out, divide, measure, allocate.
During WW2 the Government had to ration essentials such as food and petrol, so that all citizens had a fair share.

6. **Stimulate** (v.): excite, provoke, stir.
The teacher decorated the classroom with posters and maps to stimulate the children's interest.

7. **Instance** (n.): example, occurrence, occasion.
The teacher wasn't too cross as she could think of only one instance when I had forgotten my homework before.

8. **Excellent** (adj.): outstanding, brilliant, superb.
My team gave an excellent performance and won the cup easily.

9. **Opinion** (n.): view, belief, judgement.
The debating club gives everyone a chance to state their opinion, and hear other people's views.

10. **Impatient** (adj.): quick to be irritated, angered, unable to wait.
The food took so long to arrive at the table that the customers grew impatient and complained to the waiter.



Vocabulary 11

Learn the following words and then answer the questions.

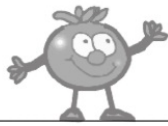
- Hesitant** (adj.): uncertain, indecisive, doubtful.
Shy people are often hesitant about speaking in front of an audience.
- Grief** (n.): sorrow, misery, unhappiness.
The psychologist explained to the class that grief is natural after the death of a family pet.
- Norm** (n.): standard, average, custom.
It's the norm in this country for children to be fond of playing computer games.
- Disappoint** (v.): dismay, sadden, dishearten.
If Katie fails her English exam she will disappoint her parents.
- Decrease** (n.): reduction, decline, drop.
There was a decrease in the number of children attending school this year resulting in smaller class sizes.
- Illiterate** (adj.): unable to read or write, uneducated, ignorant.
School attendance is obligatory in the UK, so it is surprising that some people are illiterate.
- Solid** (adj.): Hard, dense, firm.
The bed frame is stable because it is made of solid wood.
- Arrival** (n.): influx, entrance, appearance.
The controller is responsible for the timely arrival of all the trains at the station.
- Disobedient** (adj.): defiant, rebellious, naughty.
Some breeds of dog are naturally disobedient and therefore more difficult to train.
- Repulsive** (adj.): disgusting, vile, revolting.
Some people find the sight of blood repulsive and even feel unwell.



Vocabulary 12

Learn the following words and then answer the questions.

- Refuse** (v.): say no, reject, show that you are not willing to do something.
I refuse to answer the question because it is rude.
- Dismissal** (n.): discharge, sacking, removal.
The worker's frequent lateness led, eventually, to his dismissal.
- Penetrate** (v.): pierce, breach, enter.
In medieval times soldiers used a battering ram to penetrate the walls of the enemy's castle.
- Grenade** (n.): a small bomb thrown by hand, explosive.
The enemy ran away as soon as the marines threw a grenade in their direction.
- Significance** (n.): meaning, importance, consequence.
The new drug has great significance for the treatment of disease, and will save many patients' lives.
- Oblivion** (n.): obscurity, a forgotten place, unconsciousness, nothingness.
Many celebrities fade into oblivion after a few years and are never heard of again.
- Misbehave** (v.): disobey, act up, be naughty.
Some children take the chance to misbehave if the teacher has to leave the room.
- Irritable** (adj.): easily annoyed, cross, bad-tempered, prickly.
My parents become irritable if there is a problem with my school report.
- Album** (n.): folder, scrapbook, record, collection.
There are apps available which let you create a digital album of your favourite pictures and videos.
- Generate** (v.): produce, create, cause.
The Electricity Board has to generate sufficient power to serve the needs of a large city.



Vocabulary 13

Learn the following words and then answer the questions.

- Influential** (adj.): powerful, important, significant.
The President of the U.S.A. is considered the most influential person in world politics.
- Nowadays** (adv.): today, currently, in our time.
Life is far more comfortable nowadays compared to the nineteenth century.
- Eject** (v.) To expel, remove, throw or to be thrown out.
I had to eject Coby from my seat when I arrived at work, as I needed the computer.
- Ointment** (n.): cream, lotion, salve.
I was given ointment to relieve my itchy scar.
- Midst** (n.): middle, amongst, centre.
My brother was in the midst of the crowd at the festival when he began to panic.
- Daring** (adj.): brave, courageous, heroic.
At the circus we saw daring acrobats somersaulting on a high beam, without safety nets.
- Illuminate** (v.): light up, brighten.
The architect designed a pattern of searchlights to illuminate the exterior of the church at night.
- Proceed** (v.): go forward, continue, advance, progress.
The teacher instructed the children to proceed with the next exercise promptly.
- Trifling** (adj.) small, insignificant, unimportant, petty.
Something as trifling as forgetting to wash your hands could make you very sick.
- Infinite** (adj.): immeasurable, countless, vast.
There are an infinite number of stars in the galaxy. Astronomers can only estimate the exact number.



Vocabulary 14

Learn the following words and then answer the questions.

- Scribble** (v.): write messily, scrawl, doodle.
The child can't write yet, but she loves to scribble with a pencil.
- Impersonate** (v.): mimic a character, imitate someone's actions, copy, mock.
The robber got into the bank by being able to impersonate a security guard.
- Hilarious** (adj.): funny, comical, entertaining.
The most hilarious part of the concert was the two comedians at the end.
- Erratic** (adj.): unpredictable, unreliable, irregular.
The flight path of the air balloon was erratic and it was unclear where it would land.
- Immature** (adj.): undeveloped, unripe, childish, silly.
My uncle is so immature, he never behaves like an adult.
- Inedible** (adj.): uneatable, disgusting, revolting.
Some people find spicy food inedible because it burns their mouth.
- Retaliate** (v.): get one's own back, take vengeance, fight back, respond.
According to the rules of chess, you can retaliate if your opponent takes one of your knights.
- Perspective** (n.): viewpoint, outlook, angle.
The head teacher insisted that, from his perspective, all school rules were to be obeyed.
- Light-hearted** (adj.): carefree, happy-go-lucky, cheerful, jovial.
Lydia is never stressed; she has an incredibly light-hearted attitude.
- Obscure** (adj.): unclear, vague, unknown, mysterious.
Martin said he was from an obscure region of Eastern Europe that no one had heard of.



Vocabulary 15

Learn the following words and then answer the questions.

1. **Opponent** (n.): enemy, rival, challenger.
The boxer began to tire after the first six rounds and his opponent took advantage and snatched a victory.

2. **Junction** (n.): link, intersection, crossroads, split between two or more roads.
The lorry driver didn't listen to the sat-nav and turned the wrong way at the junction.

3. **Effect** (n.): result, consequence, outcome, impact.
The bad weather has a negative effect on my mood.

4. **Indescribable** (adj.): beyond words, intense, dramatic, inexpressible.
The supporters of the winning team experienced indescribable joy.

5. **Hoarse** (adj.): throaty, croaky, gruff.
I was so hoarse after shouting so much at the match that I almost lost my voice.

6. **Insufficient** (adj.): deficient, inadequate, failed.
After the earthquake, food supplies were insufficient and there was a danger that the survivors might starve.

7. **Epic** (n.): heroic, legendary / long story, narrative.
Homer's 'Iliad' is considered an epic poem because of the great dialogue, brilliant battles and because it is viewed as the origin of Western Literature.

8. **Lifelong** (adj.): enduring, permanent, constant.
Remember, when you buy a pet it should be a lifelong commitment.

9. **Insert** (v.): implant, put in, place in.
She was instructed to insert the key into the lock and turn clockwise to open the door.

10. **Invaluable** (adj.): helpful, useful, vital.
On his retirement, the manager was praised for the invaluable contribution he had made to the success of the company.



Vocabulary 16

Learn the following words and then answer the questions.

1. **Arcade** (n.): gallery, walkway, passageway / indoor area containing game machines.
One of the favourite places to go to during the holiday was the huge amusement arcade.

2. **Inaudible** (adj.): quiet, faint, noiseless.
The television had to be turned down until it was nearly inaudible because Grandfather was sleeping.

3. **Resent** (v.): begrudge, dislike, hate, feel bitter towards.
I resent my brother receiving so much pocket money because he doesn't help out at home.

4. **Depress** (v.): sadden, dishearten, demoralise.
Rainy days always depress me because I have to stay inside.

5. **Dissolve** (v.): disappear, disintegrate, disperse, when a solid becomes part of a liquid.
To start making the icing, you have to dissolve sugar in water.

6. **Generous** (adj.): giving, large, substantial, kind.
The cook served a generous amount of food, so nobody went hungry.

7. **Opportunist** (n.): speculator, entrepreneur, daredevil, takes advantage of something.
Being an opportunist, the player saw his chance and quickly scored a goal.

8. **Decorate** (v.): make visually pleasing, beautify, ornament, embellish.
My parents decided to decorate the entire house in preparation for my sister's wedding.

9. **Demolish** (v.): destroy, defeat, thrash.
Sadly, it was necessary to demolish the old school when the new sports centre was built.

10. **Gulp** (v.): swallow a lot of volume, guzzle, drink quickly.
I had to gulp down my juice at breakfast as I was late for school.

Non-Verbal Reasoning

ASSESSMENT TEST 4

Section 1 — Complete the Hexagonal Grid

1. **B**
Going in a clockwise direction from the top hexagon, the heart shape increases in size.
2. **B**
The hexagons on opposite sides of the hexagonal grid are identical.
3. **A**
Going in an anticlockwise direction from the top hexagon, each circle gains an extra line. The lines are added end-to-end in an anticlockwise direction.

Section 2 — Find the Figure Like the First Two

1. **B**
All figures must be cross-hatched.
2. **A**
All figures must have three copies of the same shape, arranged one inside the other.
3. **C**
All figures must have two lines that cross each other.
4. **A**
All figures must have an arrow pointing in a clockwise direction around a shape.

Section 3 — Reflect the Figure

1. **B**
Option A is not reflected and there is only one line. Option C is a 90 degree anticlockwise rotation. Option D is a 180 degree rotation.
2. **C**
Options A and B are the wrong shape. Option D is a downwards reflection.
3. **B**
In option A, the stripe is positioned incorrectly and the shading is wrong. In option C, the stripe is positioned incorrectly. Option D is a 90 degree clockwise rotation.
4. **D**
In option A, the black quarter-circle's position has been reflected, but not the shape itself. In option B, the quarter-circle has been reflected, but its position has not been reflected. Option C is a 180 degree rotation.

Section 4 — Cubes and Nets

1. **B**
Option A is ruled out because the net doesn't have a face with a black triangle on it. Option C is ruled out because the net doesn't have a face with a 'W' on it. Option D is ruled out because the face with the grey ring and the face with the grey stripe must be on opposite sides.
2. **D**
Option A is ruled out because the face with the star and the grey face must be on opposite sides. Option B is ruled out because the net doesn't have a face with one grey circle on it. Option C is ruled out because the net doesn't have a face with a black square on it.
3. **A**
Option B is ruled out because the face with the three circles and the cross-hatched face must be on opposite sides. Option C is ruled out because the net doesn't have two identical faces. Option D is ruled out because the net doesn't have a face with a parallelogram on it.

Section 5 — 3D Rotation

1. **E**
Shape E has been rotated 90 degrees away from you, top-to-bottom.
2. **A**
Shape A has been rotated 90 degrees clockwise in the plane of the page.
3. **F**
Shape F has been rotated 90 degrees right-to-left.
4. **B**
Shape B has been rotated 90 degrees anticlockwise in the plane of the page.

(18 marks)