Verbal & Non-Verbal Reasoning – Paper 1

Beginner time limit: 30 minutes
Intermediate time limit: 25 minutes
Expert time limit: 20 minutes

Don't just *do* these questions: **learn everything you can from them**, using the solution pages which follow (**pages 12-32**). The key techniques are explained there in detail.

Remember that you will never know every word in English. The people who do best in verbal reasoning are those who can deal skilfully with *unfamiliar* words.

Rather than trying to memorise each new word and every kind of picture pattern, focus on improving **how you think logically about the questions**.

No single 11 Plus Lifeline paper will contain every possible kind of reasoning question. However, once you have completed a number of these papers, you will be very well prepared for most of the question styles which are likely to appear in any 11-plus exam.

Practise **skipping and circling**: if a question seems likely to take time, skip it, circle the question number, and come back to it when you have done the rest.

Cross out the word which does not belong with the other three. The other three words may not have exactly the same meaning as each other.

Example:

Q. hasten rush ~~delay~~ hurry

1. show obscure indicate reveal

2. undermine make construct build

3. intelligent acute quick obtuse

4. rashly unwisely hastily cautiously

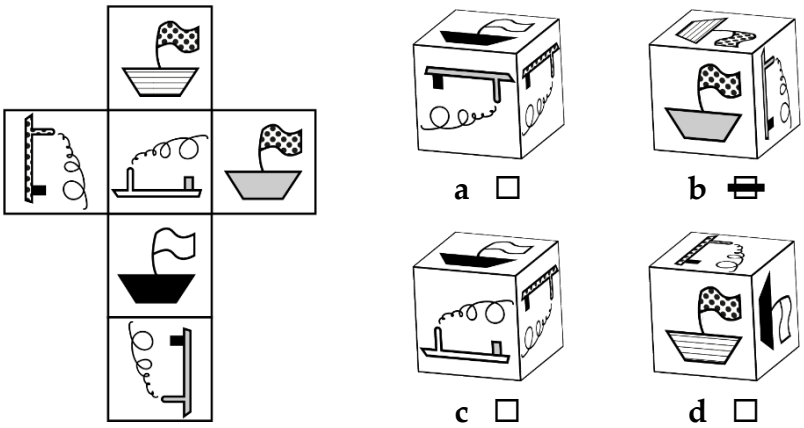
5. obstacle impediment obstruction structure

Underline the two words (one from each group) which are most similar in meaning.

Example:		
Q.	(twin, pair, triplet)	(group, birth, couple)
6.	(raw, seldom, rare)	(burnt, unusual, frequently)
7.	(tear, drop, erase)	(truncate, hold, rip)
8.	(rib, spine, hip)	(joking, barb, back)
9.	(try, test, prove)	(evidence, wit, forensics)
10.	(tent, circus, show)	(contact, lens, spectacle)

Which of the four cubes can be made from the net?

Example:



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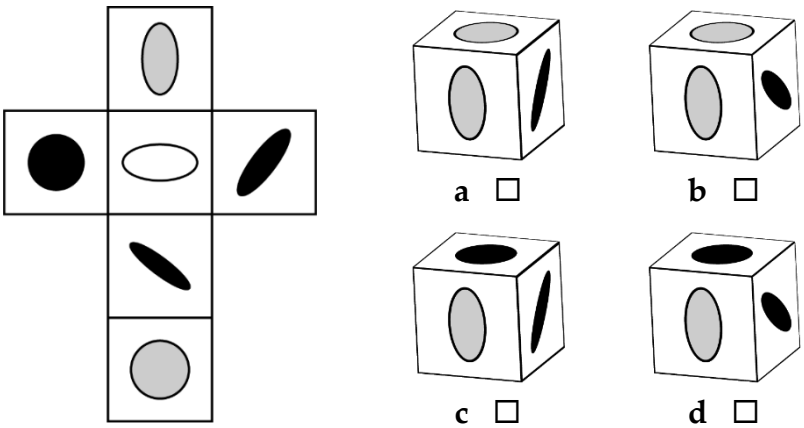

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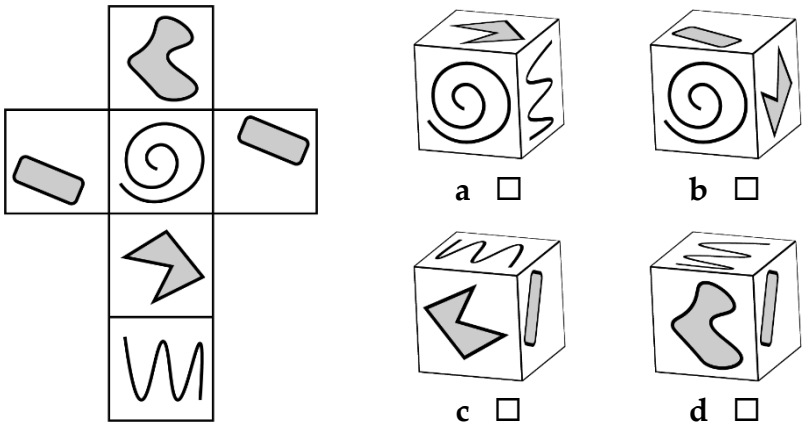

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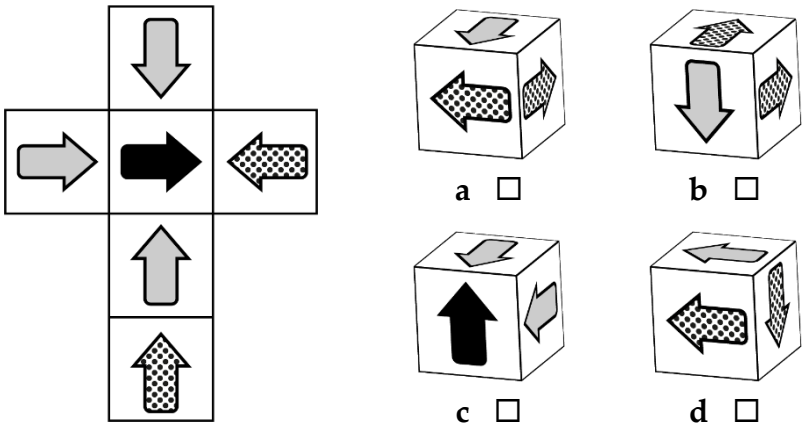


Take one letter from somewhere in the first word and add it somewhere in the second word, to make two new words.

Example:			
Q.	float	pal	*flat* *opal*

14. pitch lathes _____ _____

15. warp slay _____ _____

16. snack bet _____ _____

17. slate bats _____ _____

18. tact wit _____ _____

If you delete one word, the rest can be rearranged to form a sentence which reads naturally and makes good sense.

Cross out the word which should be deleted.

Example:
Q. feel ~~hit~~ I angry

19. school walked slowly rucksack I to

20. in aeroplane whale an flying exciting is

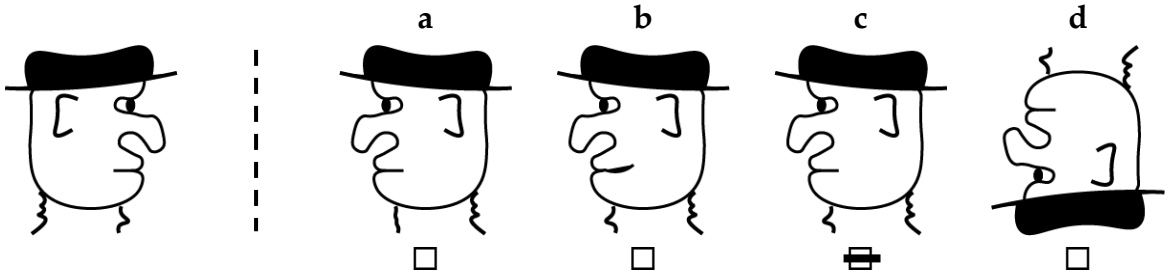
21. fruit core apple remove carefully the an of

22. made is desk my of rub wood

23. hall usually schools set entrance grammar tests

Choose the figure on the right which is a reflection in the dotted line of the figure on the left.

Example:



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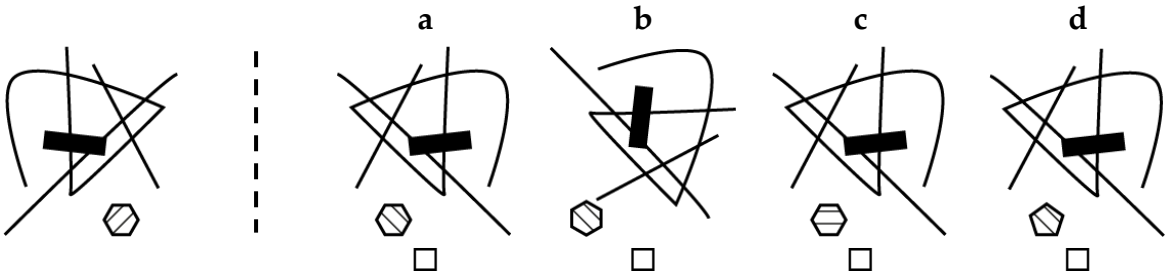

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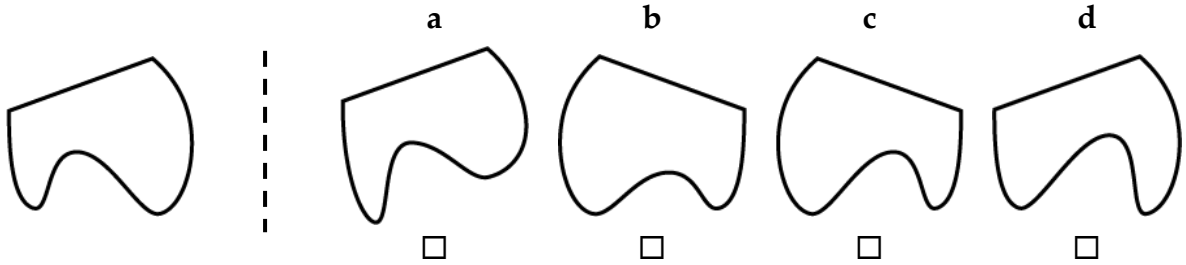

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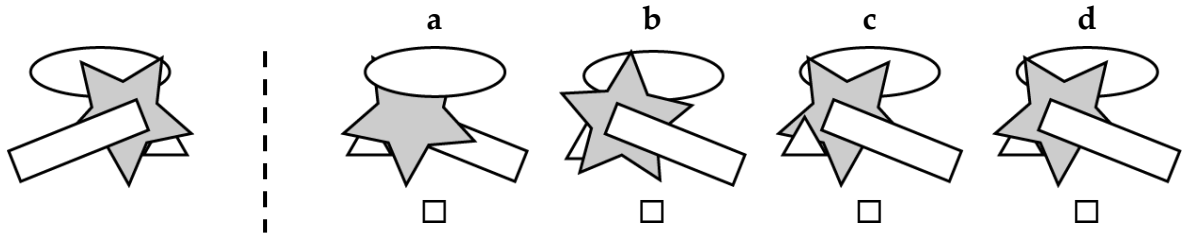

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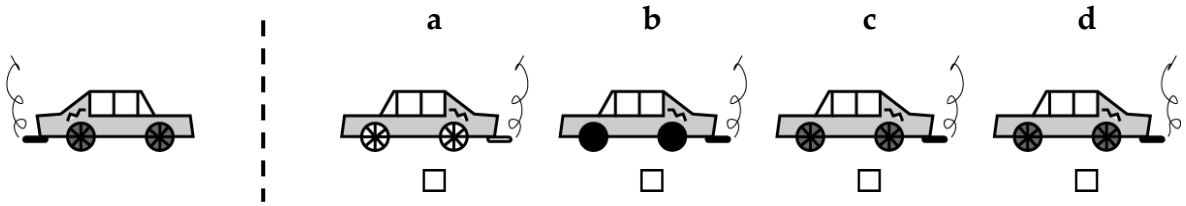


Here are five words:

ANIMOSITY PLURALITY MALIGNITY IMMENSITY POROSITY

If you wrote these five words backwards, then arranged them in alphabetical order, which of them would come:

28. last? _____

29. first? _____

30. fourth? _____

Fill in the gaps so that the word on the right has the opposite (or almost the opposite) meaning to the word on the left.

Example:

Q. rest — *activity*

31. unrepentant — c__ __t__ __ __e

32. climb — __es__ __nt

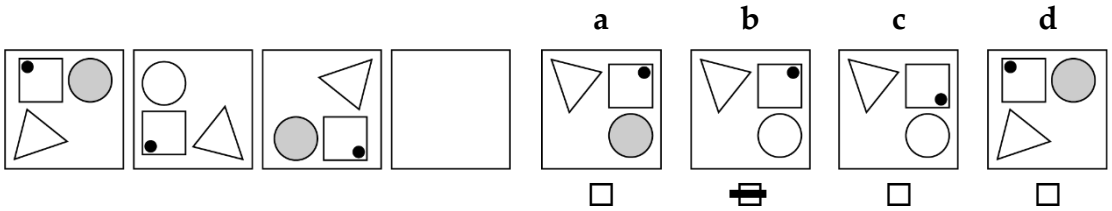
33. welcoming — h__ __ __ __le

34. frigidly — __ __rm__ __

35. mobile — st__ __ __c

Choose the figure on the right which goes best in the empty square on the left.

Example:



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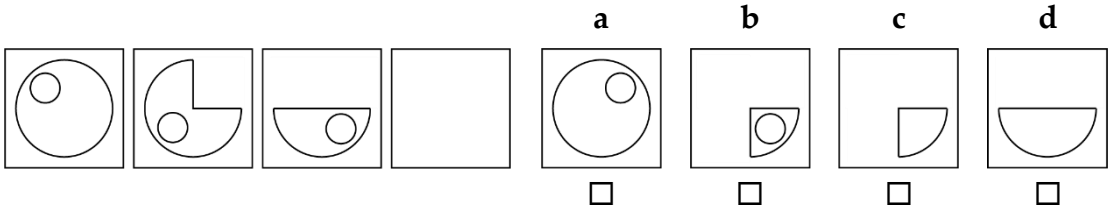

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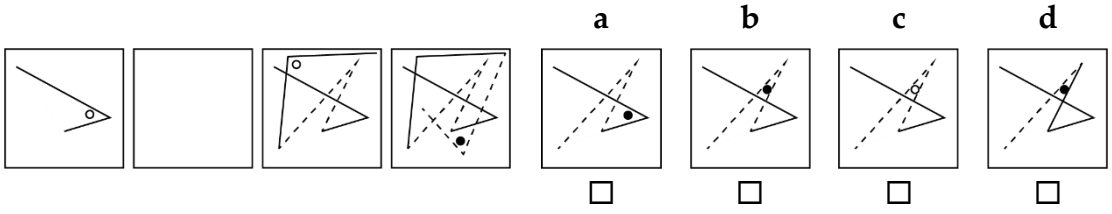

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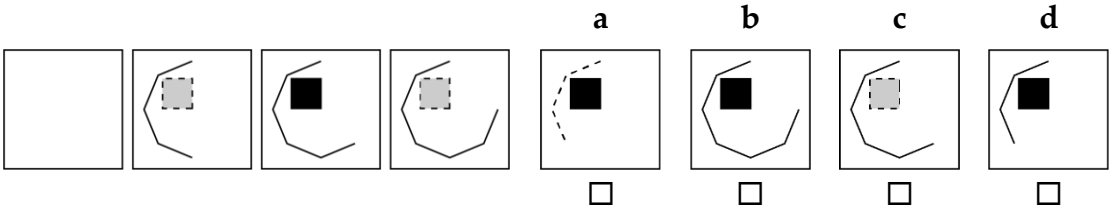

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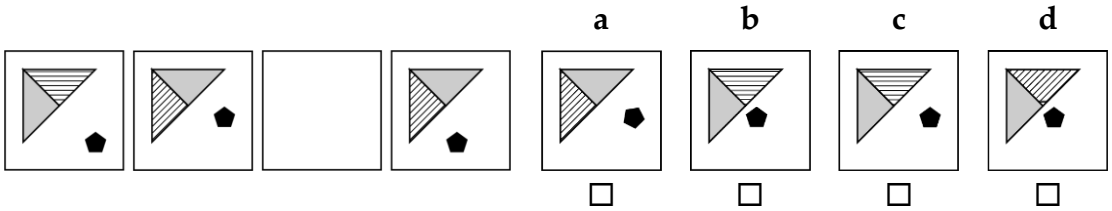


Based only on the two statements below, underline the one option which is definitely correct.

Example:

Q. **Statement 1:** Ethel eats crisps.
Statement 2: Crisps are a food made of potatoes.

Ethel eats most kinds of food made of potatoes.
Ethel eats at least one kind of food made of potatoes.
Ethel likes potato crisps.
Ethel probably eats oven chips.

40. **Statement 1:** Paper is made from wood.
Statement 2: Dry wood products are easy to burn.

Paper is a dry wood product.
Easily burnt products tend to be made from wood.
Paper is usually easy to burn.
Dry paper is easy to burn.

Each one of the five number codes matches one of the words listed below. Write the correct number code next to each word.

Each single-digit number always represents the same letter.

7624 3761 1692 5674 4738

41. WART _____

42. PRAY _____

43. ARMY _____

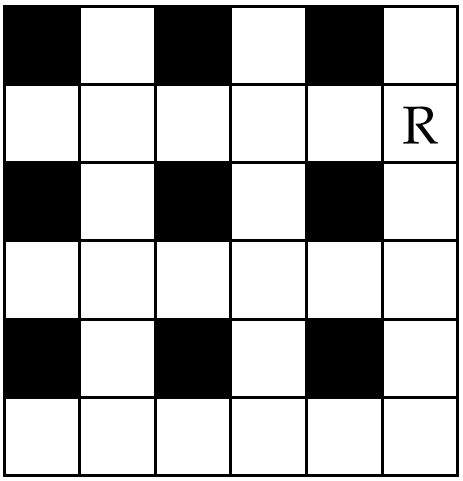
44. TRIM _____

45. YAWN _____

Use all the given words to complete the crossword. Words run from left to right or from top to bottom.

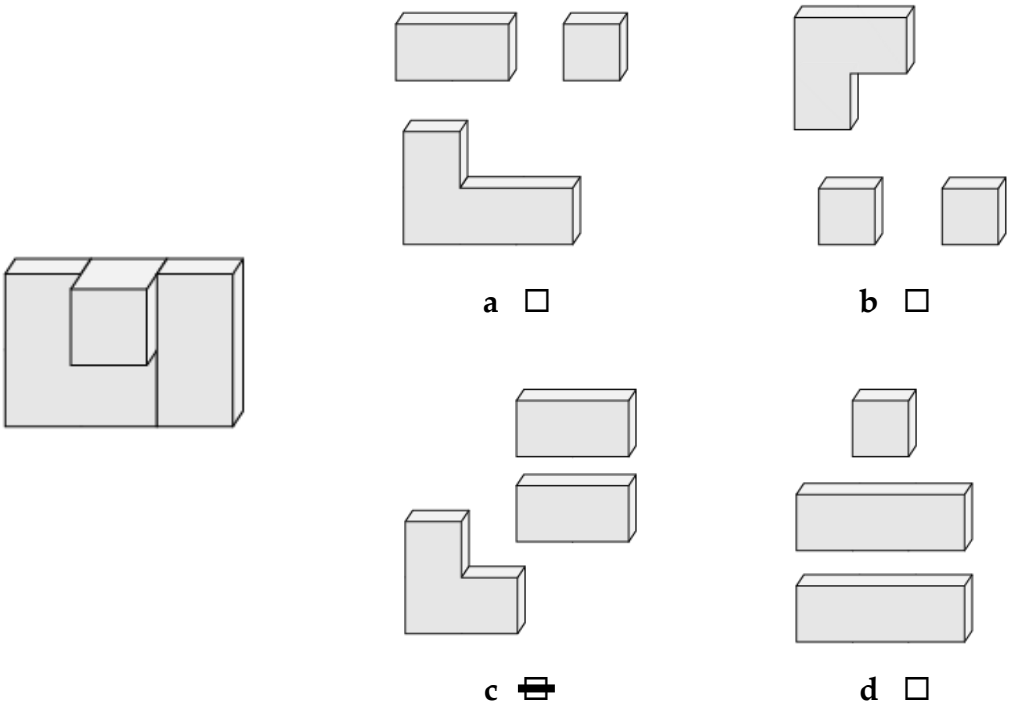
46.

PRESET
ASPECT
CLAIMS
SPACER
APPLES
ACTIVE



Which set of 3D blocks can be put together to form the figure on the left?

Example:



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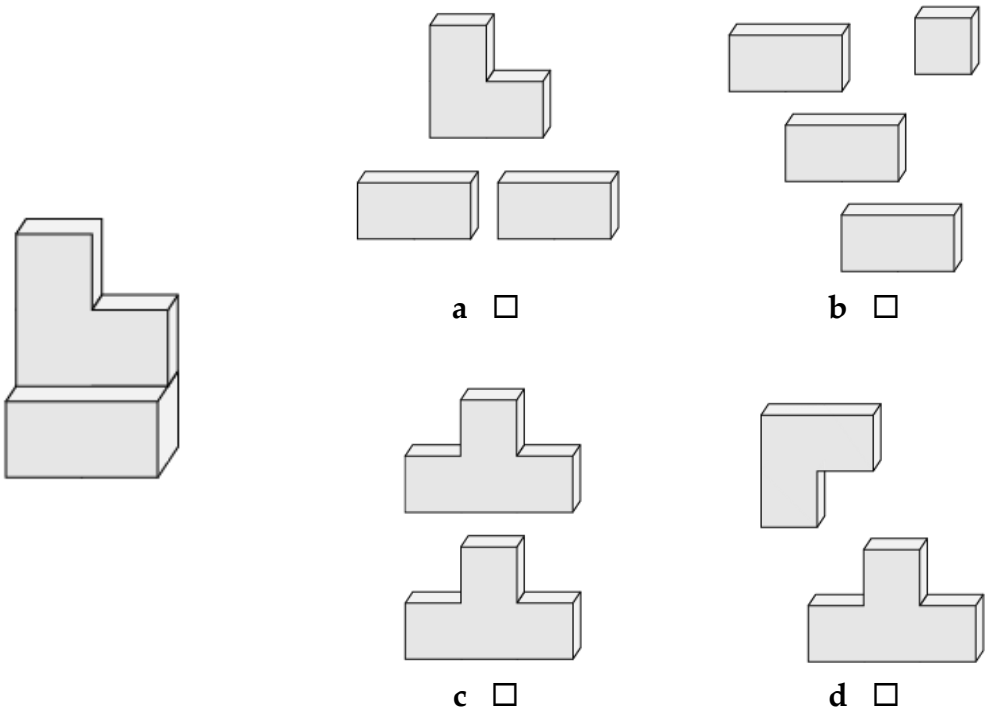

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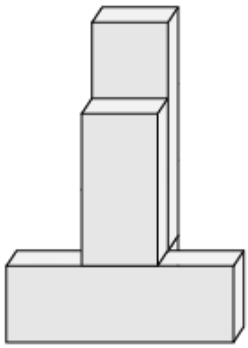
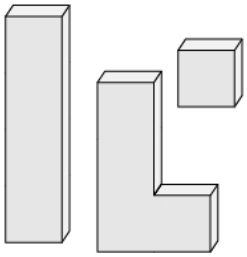
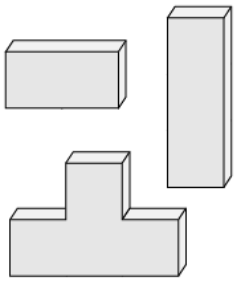
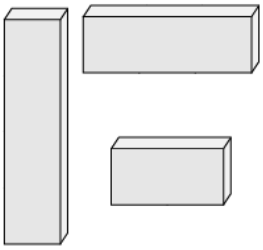




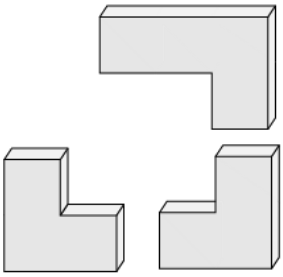
a ☐



b ☐

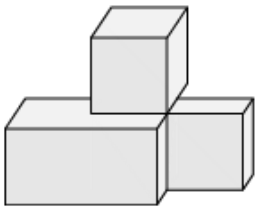


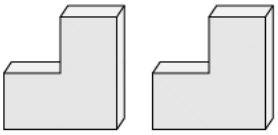
c ☐



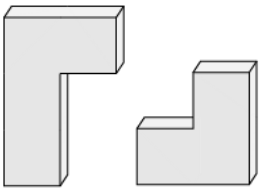
d ☐

49.

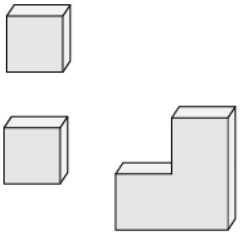




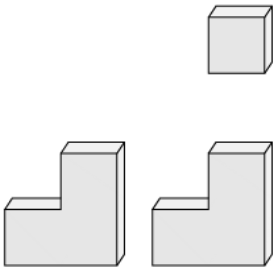
a ☐



b ☐

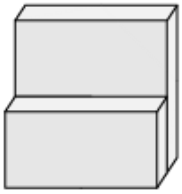


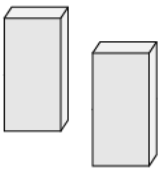
c ☐



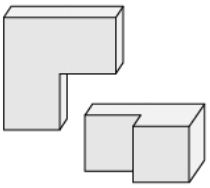
d ☐

50.





a ☐



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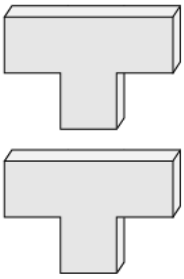
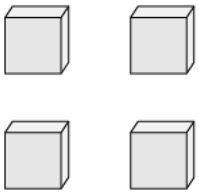


c ☐



d ☐

TOTAL MARKS: 50

Solutions

You will find a dictionary useful as you review your answers.

Cross out the word which does not belong with the other three. The other three words may not have exactly the same meaning as each other.

1. show ~~obscure~~ indicate reveal

The other three words relate to showing or exposing a thing, not to concealing it.

Look out for words such as "obscure", which might be a verb (as it seems to be here: "I obscure my face") or an adjective ("his meaning was obscure").

When you come across a word like this, don't decide too quickly what part of speech you want it to be! Keep all options open while you consider the question as a whole.

2. ~~undermine~~ make construct build

3. intelligent acute quick ~~obtuse~~

4. rashly unwisely hastily ~~cautiously~~

5. obstacle impediment obstruction ~~structure~~

You will be able to solve some of these without knowing all of the words. For example, consider Question 5:

If you notice that "obstacle" and "obstruction" are negative (they relate to preventing things), while "structure" is positive (it is a thing, or the process of creating something), it must be clear that "structure" is the word which does not belong – even if you do not know the word "impediment".

Underline the two words (one from each group) which are most similar in meaning.

6. (raw, seldom, <u>rare</u>) (burnt, <u>unusual</u>, frequently)

There's a simple and effective process for questions like this:

- Try **the first word on the left** with **the first word on the right** ("raw", "burnt"), then **the second word on the right** ("raw", "unusual"), then **the third word on the right** ("raw", "frequently"). Always look out for words that can mean more than one thing. For example, "raw" might mean "uncooked" or "inexperienced".

- If the first word on the left does not go with any of the words on the right, **cross it out lightly** ("~~raw~~") *in pencil* – so that you are able to change your mind!
- Repeat this process with **the second word on the left**, **then the third**.
- If you find **a really strong match**, such as between "rare" and "unusual", **mark this as your answer** and move on to the next question.
- If you find a match that is **possible, but which doesn't wholly convince you**, mark it lightly – and keep working through the options in case you find something better.

7.	(tear, drop, erase)	(truncate, hold, rip)

Be on high alert for words such as "tear" which can be nouns or verbs.

What's more, "tear" as a noun can have two very different meanings: you might have a tear in your shirt, or running down your cheek!

Consider all the options, and don't reject any of them too soon.

8.	(rib, spine, hip)	(joking, barb, back)

"Rib" can mean "joke with" or "make fun of", but it doesn't mean "jok**ing**".

A "spine" is likely to be in your back, but it might also grow on a thorn bush.

9.	(try, test, prove)	(evidence, wit, forensics)

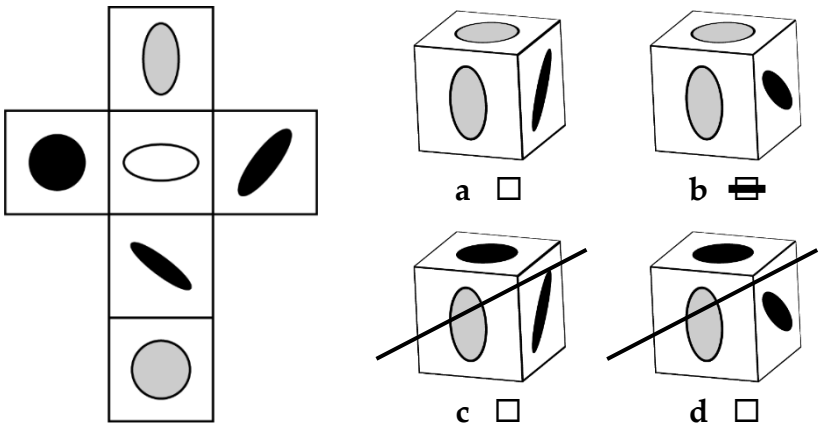
This is tricky, because you might not know that "to evidence" can be a verb ("Can you evidence your argument?").

What's more, "prove" can mean either "demonstrate" (i.e. "evidence") or – occasionally – "test", which is another option in the first set of brackets.

10.	(tent, circus, show)	(contact, lens, spectacle)

Which of the four cubes can be made from the net?

11.



- When the grey oval folds towards the black circle, the circle will be next to the *side* – not the tip – of the grey oval. This rules out **c** and **d**.
- Because the black lozenge is *next to* the grey oval in **a** and **b**, and not *opposite* it across the cube, we must be looking at the black lozenge that is in the right-hand box of the net – not the one in the third box down.
- The grey circle folds to be on top of the grey oval.
- You need to imagine the black lozenge folding towards the grey oval, and think about whether it points towards the top or the bottom of the oval.

NO! PLEASE STOP!

… I can almost hear you scream!

OK, that kind of reasoning may be difficult to follow. 3D reasoning problems are tricky. Some people have a knack for them, and some people don't.

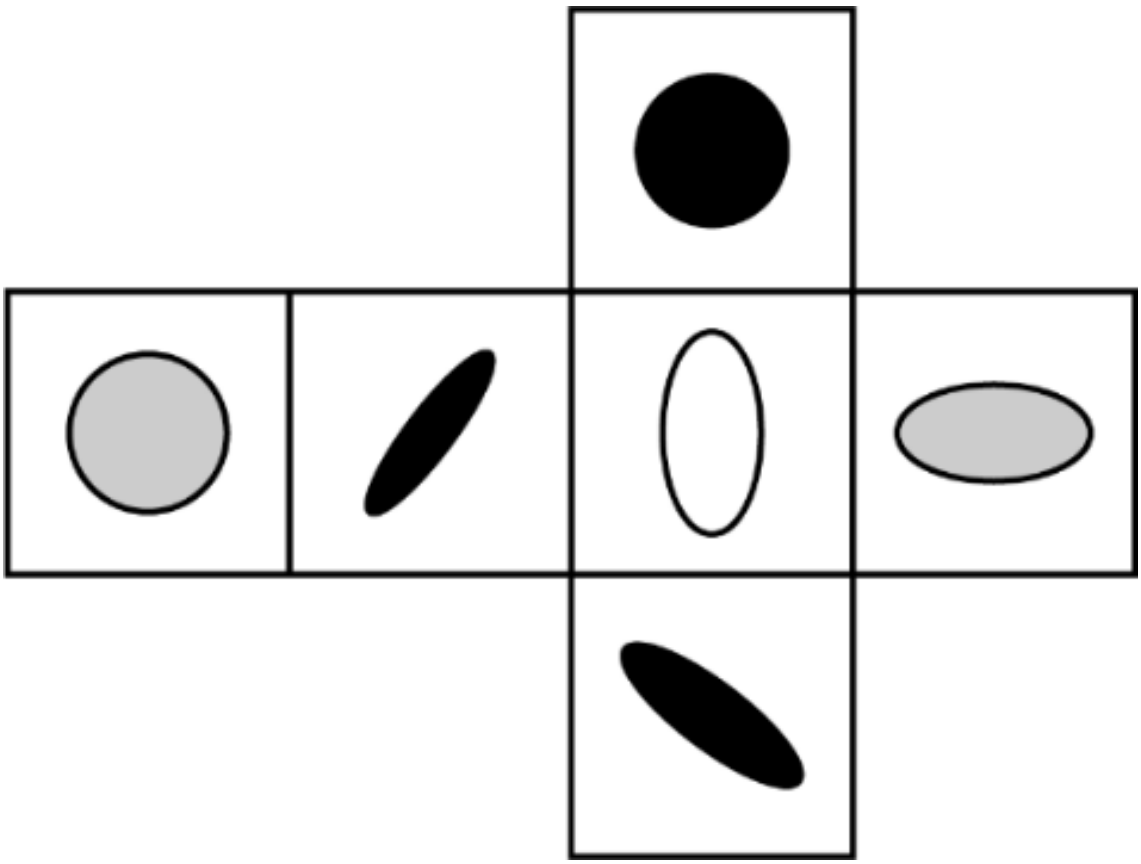
The reasoning I've outlined above is the kind of thought process you will be able to follow by the time you do this exam.

However, in order to learn this way of thinking – and to develop your own way of thinking about these problems, which may be a little different – there's no substitute for **working in 3D**.

I say this because there's a simple way to develop your 3D cube-folding skills: ***fold cubes!***

- After you've had a go at the question, **cut out the giant net on this page** and fold it into a cube.
- Look at the question again. Pick two faces/boxes on the unfolded, flat net, and try to work out where they will be in relation to each other on the folded cube.
- Then look at the cube that you've made and see whether you were right. If not, try to work out what you did wrong.
- Repeat the exercise with a different pair of faces.

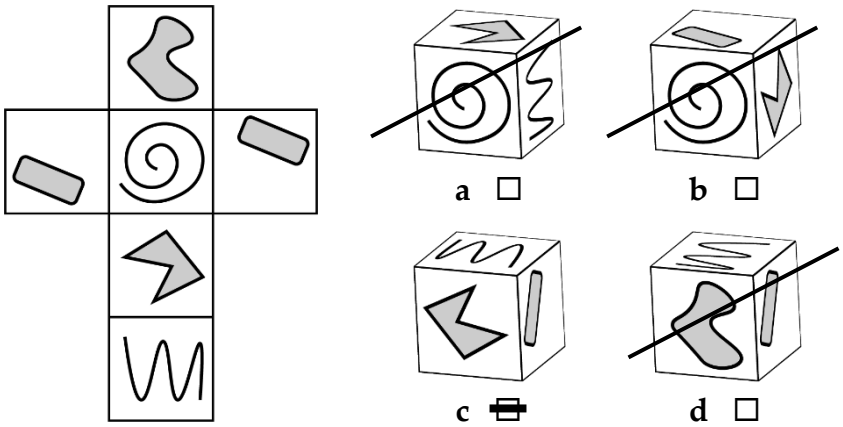
PRINT THIS PAGE AGAIN BEFORE CUTTING OUT THE PICTURE!



When you fold this net, you will learn some important lessons. For example:

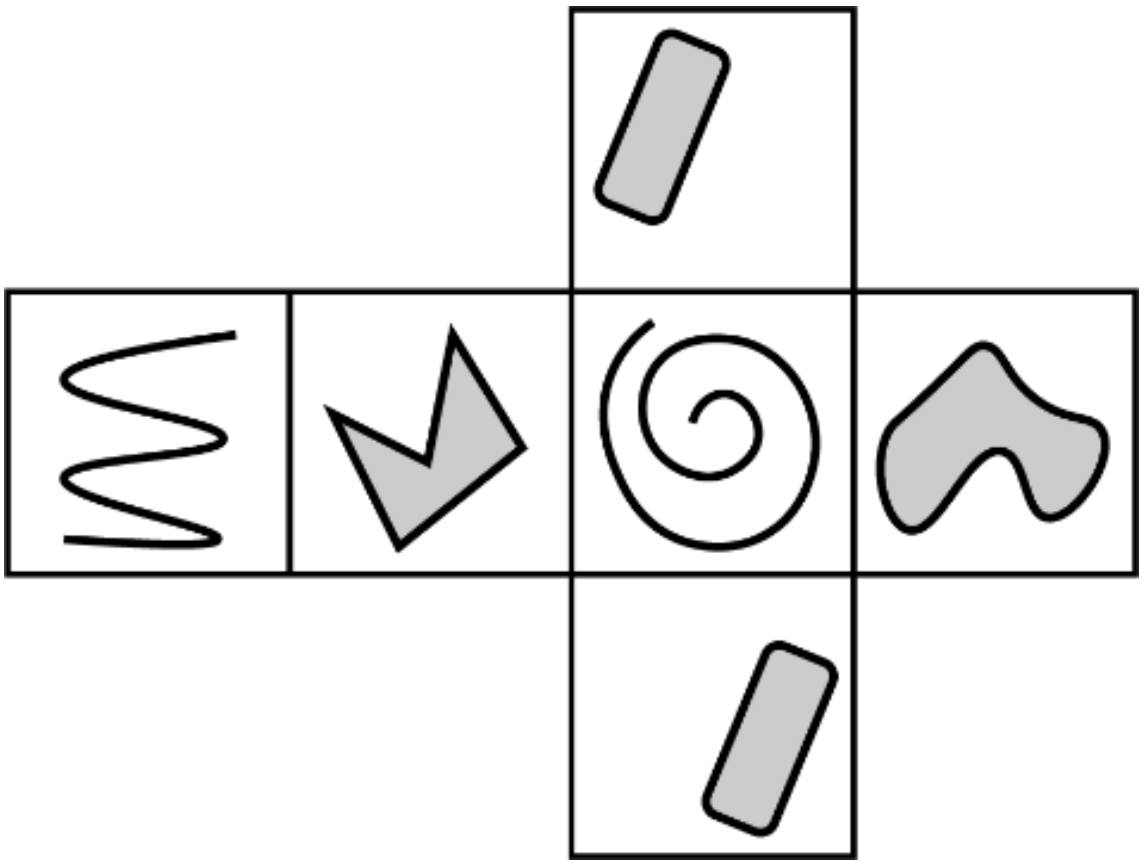
- (Referring to a net which is the correct way up, as in the question, but not as in the one printed sideways on this page) **The bottom box folds to be on top of the top box.**
- When there is **another box between two figures**, these figures cannot be next to each other on the folded cube.

12.



- We can rule out **a**, because the spiral and the squiggle cannot be next to each other on the cube.
- We can rule out **b** because the wrong shape is above the spiral.
- We can rule out **d**, because when we fold the squiggle to the top of the cube, it is the wrong way round in relation to the grey "L".

Notice how you can solve this question **without finding the right cube** – you just have to eliminate the impossible ones!



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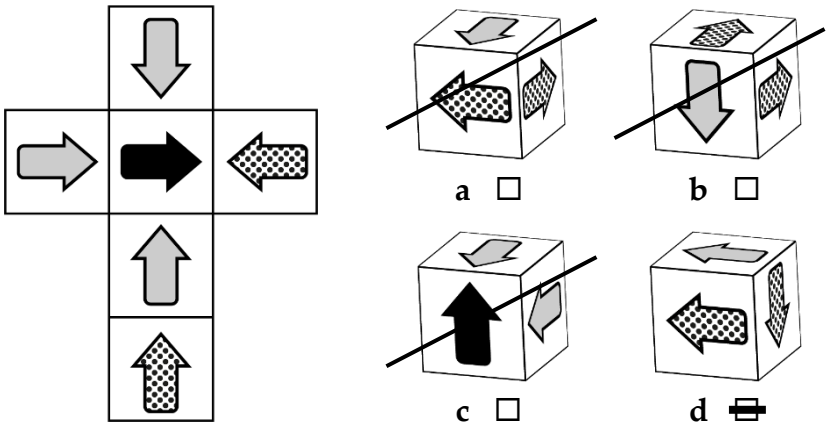
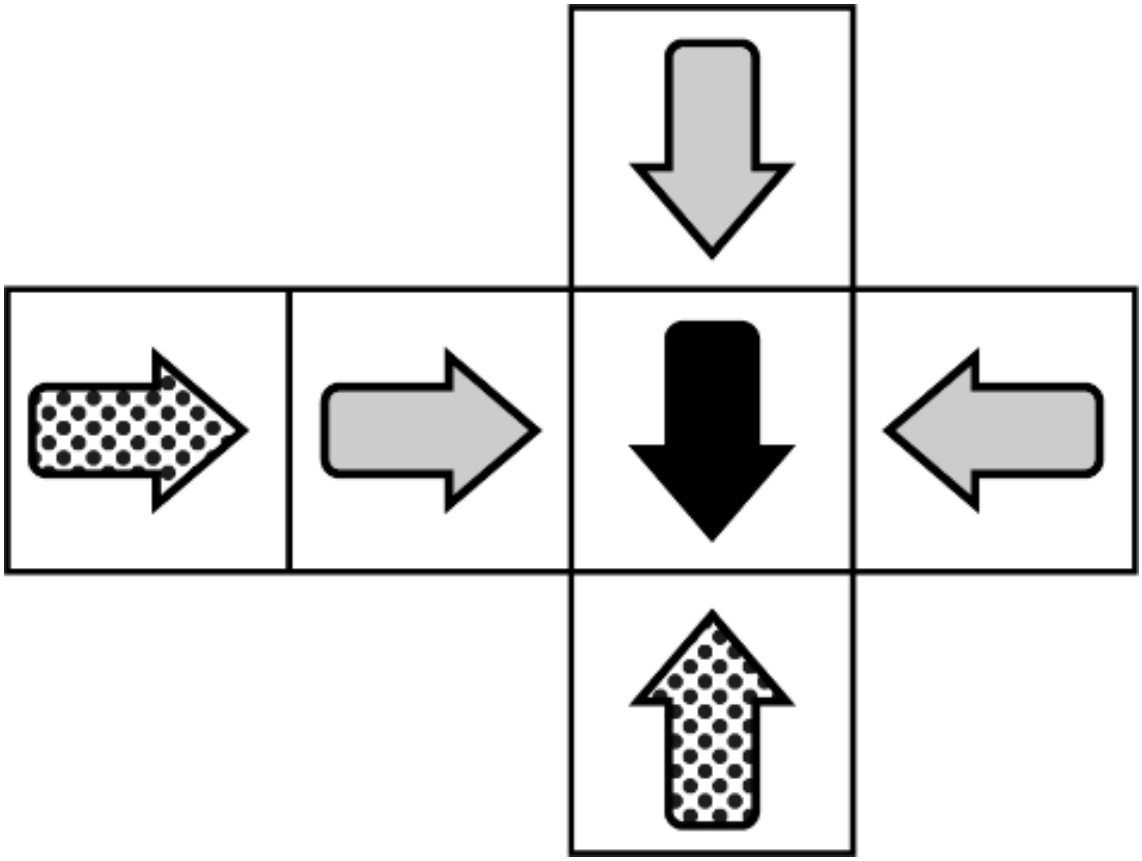


- You can rule out **c**, because the black arrow is pointing towards the wrong thing.
- You can rule out **a**, because none of the grey arrows should point towards a dotted one.
- You can rule out **b**, because the two dotted arrows would not point in the same direction after folding. This is the tricky part!



Take one letter from somewhere in the first word and add it somewhere in the second word, to make two new words.

14.	pitch	lathes	*pith*	*latches*
15.	warp	slay	*war*	*splay*
16.	snack	bet	*sack*	*bent*
17.	slate	bats	*slat*	*beats* or *bates*

"Bates" with this spelling is a very unusual word, and might not be on the mark scheme for an actual 11-plus test – but it is (strictly speaking) correct.

18.	tact	wit	*act*	*twit*

"Tac" would not be correct. The correct spelling is "tack".

There are no half-marks in these questions: either both of your answer words are correct, or your answer is wrong.

The *process* is simple, even if the words themselves might sometimes be difficult:

- Try removing one letter at a time from the first word, until a real word is left.
- Try putting this letter in one place at a time in the second word (including at the beginning!).
- If the letter doesn't work anywhere, go back to the first word, and see whether you could remove a different letter.

If you can't find anything that works, it may be that there is an unfamiliar word involved. In that case, make your best guess!

Don't waste time here. Remember: **skip and circle**.

If you delete one word, the rest can be rearranged to form a sentence which reads naturally and makes good sense.

Cross out the word which should be deleted.

19. school walked slowly ~~rucksack~~ I to

"I walked slowly to school." ("Slowly" could go elsewhere in the sentence.)

You need to start by throwing the words up in the air … in your mind! … and seeing what different combinations they land in.

Notice word groups which seem to come together naturally ("I walked" and "to school", for example). However, don't become too fixated on them, in case some of your combinations are wrong. See Question 23, for example, which uses common word combinations to trick you.

There will often be several correct word orders – especially when an adverb is present. I won't usually list all of them! All that matters is that you eliminate the **irrelevant** word.

20. in aeroplane ~~whale~~ an flying exciting is

"Flying in an aeroplane is exciting."

Notice "an": this has to be followed by **a word beginning with a vowel**.

Clues like this can be an enormous help.

21. ~~fruit~~ core apple remove carefully the an of

"Carefully remove the core of an apple."

Once again, the word "an" is an important clue.

22. made is desk my of ~~rub~~ wood

"My desk is made of wood."

It's just about conceivable that a thing called "rub wood" might exist in a specialist context, but you have to cross out a word, and "rub" is the most expendable one here!

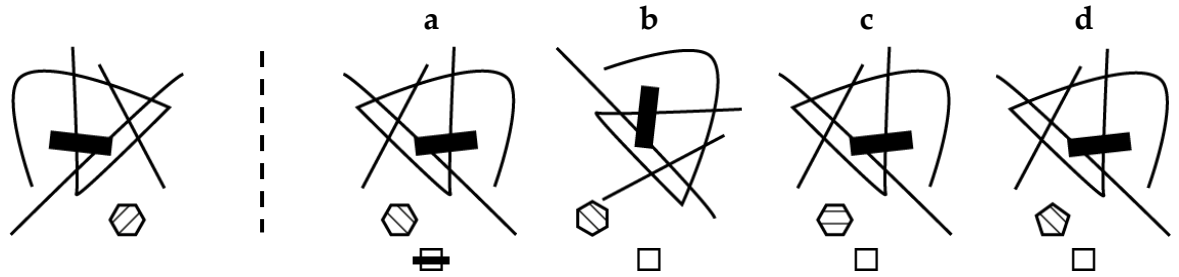
23. ~~hall~~ usually schools set entrance grammar tests

"Grammar schools usually set entrance tests."

The extra word will sometimes seem closely related to other words in the list (a "school hall" might be a place to sit "entrance tests"), but don't become fixated on this.

Choose the figure on the right which is a reflection in the dotted line of the figure on the left.

24.

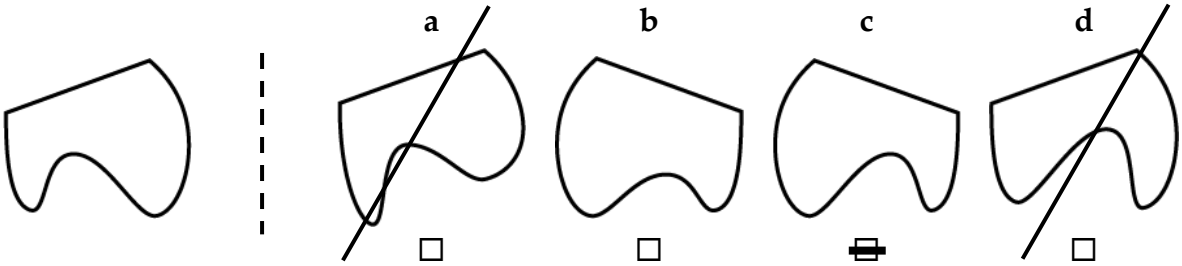


I can't easily show you my crossing-out/elimination for this question, because any added line would look like part of a figure!

- First of all, you can get rid of anything that is obviously wrong without needing much analysis: **b**, in this case.
- Then, pick on a detail and eliminate the options that get it wrong. For example, **c** can go because the shading of the hexagon goes in the wrong direction.
- Did you notice that the tiny 'hexagon' in **d** is in fact a **pentagon**?! Examiners sometimes play sneaky tricks like this!

We're left with **a**.

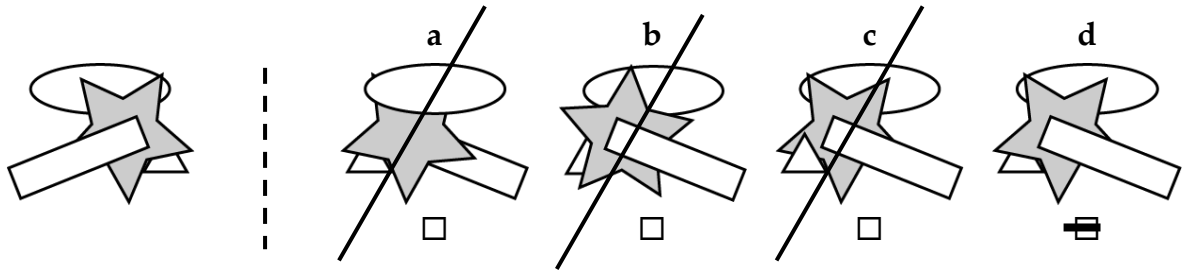
25.



This is an easier one. Again, focus on one detail at a time.

- Looking at the top edge makes it easy to eliminate **a** and **d**.
- Looking at the depth of the indentation/hole leads us to **c**.

26.

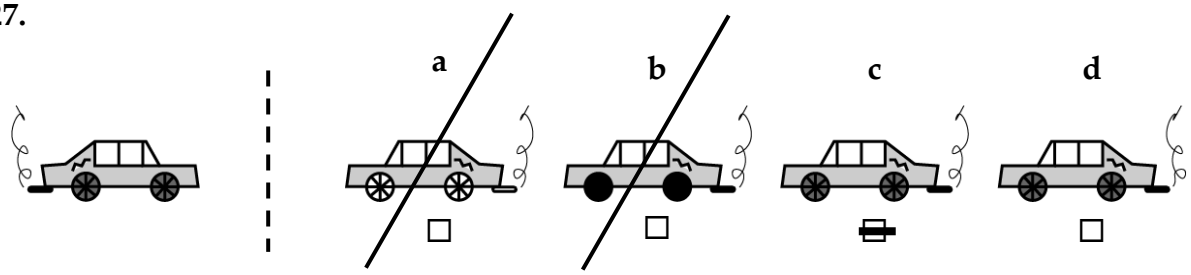


Consider one aspect at a time.

You need to think about:

- The order of stacking of the different shapes
- The rotation of the star

27.



I had fun drawing this one!

Think about:

- The wheel colours
- The direction of the exhaust

Here are five words:

ANIMOSITY PLURALITY MALIGNITY IMMENSITY POROSITY

If you wrote these five words backwards, then arranged them in alphabetical order, which of them would come:

28. last? *porosity*

29. first? *plurality*

30. fourth? *animosity*

Work out how far back in each word you need to go in order to establish differences between all of them. In this case, it is 6 letters (even counting 5 letters back, there are still two "-osity" words).

Then, write out the relevant portion next to each word, backwards:

ANIMOSITY	PLURALITY	MALIGNITY	IMMENSITY	POROSITY
(MOSITY)	(RALITY)	(IGNITY)	(ENSITY)	(ROSITY)
YTISOM	YTILAR	YTINGI	YTISNE	YTISOR

The middle row (the last 6 letters, forwards) would not be a good use of time in a test. I've only added it here for clarity, so that you can see exactly what I'm doing.

You might now cross out those letters which are at the beginning of every word:

~~YTI~~SOM	~~YTI~~LAR	~~YTI~~NGI	~~YTI~~SNE	~~YTI~~SOR

In effect, you now have "SOM", "LAR", "NGI", "SNE" and "SOR".

Number them from 1 to 5 in alphabetical order:

~~YTI~~SOM	~~YTI~~LAR	~~YTI~~NGI	~~YTI~~SNE	~~YTI~~SOR
4	1	2	3	5

This may seem complex, but in fact your whole working-out will now look like this (of which the first line is already in the question):

ANIMOSITY	PLURALITY	MALIGNITY	IMMENSITY	POROSITY
~~YTI~~SOM	~~YTI~~LAR	~~YTI~~NGI	~~YTI~~SNE	~~YTI~~SOR
4	1	2	3	5

At this point, it's easy to write your answers in the spaces provided.

I think you <u>should</u> get away with writing your answers backwards, but this might well be marked wrong in an exam – even though the question is a little unclear!

Fill in the gaps so that the word on the right has the opposite (or almost the opposite) meaning to the word on the left.

31.	unrepentant	*con**trite***

This is a kind of question in which logic can only take you so far. If you don't know the word which is given in full ("unrepentant"), you are unlikely to find the answer.

In this case, **skip and circle**, without wasting time. You don't need to get every question right in order to do well in a reasoning exam.

If you do know the given word, or are at least **able to guess its meaning**, brain-storm opposite words, while keeping your eye on the letters which you've been given.

32.	climb	*de**sce**nt*

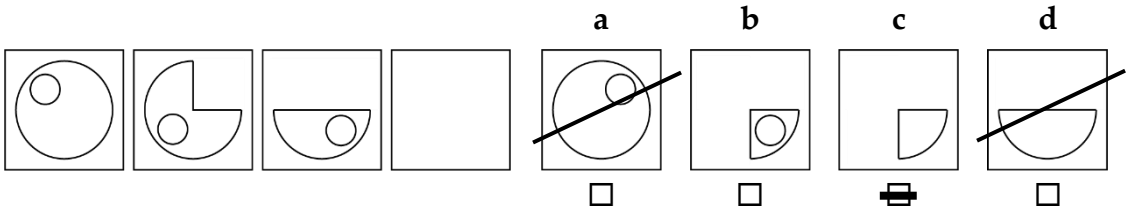
Be on the look-out for words that can have several different meanings, or (as here) that can be different parts of speech. "Climb" might be a verb, or, as in this case, a noun.

Where a gap in the answer only offers room for one letter ("___es"), you could try to escape from confusion by trying out different letters until you get an idea for the word. However, this is exactly the sort of time-consuming, uncertain method which you should save for any spare time at the end of the test: **skip and circle**.

33.	welcoming	*host**i**le*
34.	frigidly	*warmly*
35.	mobile	*stat**i**c*

Choose the figure on the right which goes best in the empty square on the left.

36.



These questions are much easier than they initially seem, once you know how to do them!

The biggest mistake you can make is to look at each picture as a whole.

Instead, you need to **separate out the things that are happening**.

- The first thing happening here is that **the circle is reduced by a quarter each time**. This means that you can ignore **a** and **d**.

Now, you might ***wrongly*** think that the second rule is "there must always be a small circle in the figure".

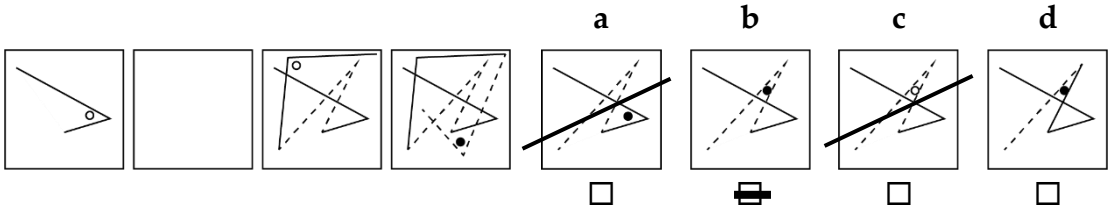
That would be wrong, because this is not a 'type of figure' question – the sort of question where the odd-one-out will be the figure without a small circle.

Instead, you must look at **how the sequence *develops***.

- The small circle moves around the figure in 90° rotations (relative to the centre) from box to box.
- Therefore, if it is to be anywhere in the last box, it MUST be in the top-right hand part of the figure.
- This means that **b cannot be correct**, because that would mean that the circle had not moved from its position in the third box – breaking the sequence of rotations.

From the two facts, that **c is the only possible answer** and that **c does not include a small circle**, we can deduce a further rule, not made clear by the boxes on the left: *the small circle is only visible when included within part of the larger circle*.

37.

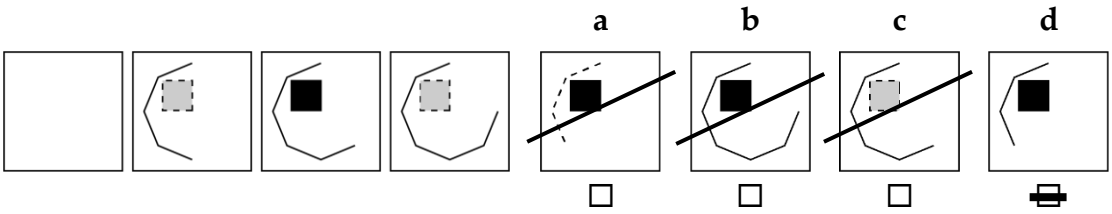


The small circle alternates between unfilled and black, ruling out **c**.

It **moves to a new place** each time, ruling out **a**.

Each time, **two new lines are added**, and these **alternate between being dotted and filled**. The empty second box must show a figure with **two new dotted lines**, as given in **b**.

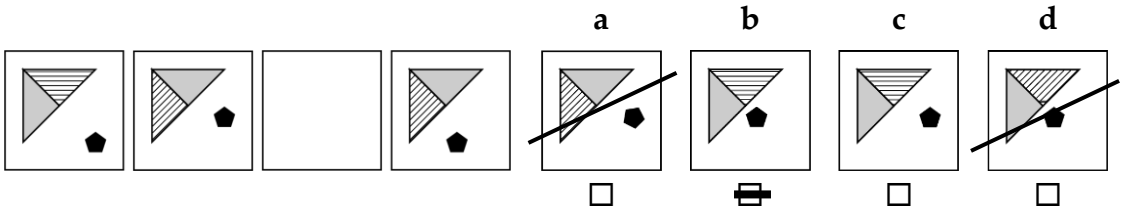
38.



The outer figure must have three sides (the number of sides increases by 1 each time), and it must be drawn with a solid (not dotted) line.

This leaves only **d**, without our needing to consider the small square – although you could also eliminate **c** on the basis that the square is the wrong colour.

39.



The large triangle reflects along its central axis each time, but the direction of shading is diagonal when the line-filled triangle is at the bottom, and horizontal when it's at the top.

The small pentagon walks round four corners of an invisible square or rectangle, in an anticlockwise direction.

Based only on the two statements below, underline the one option which is definitely correct.

40. **Statement 1:** Paper is made from wood.
Statement 2: Dry wood products are easy to burn.

~~Paper is a dry wood product.~~
~~Easily burnt products tend to be made from wood.~~
~~Paper is usually easy to burn.~~
Dry paper is easy to burn.

Where two statements lead logically to a third in this fashion, it is called a **syllogism**.

You will usually find that elimination is the most convincing technique for these questions.

You should rule out any options which are not wholly dependent on the information provided.

"Paper is a dry wood product."

You are told that paper is "made from wood", but **not** that it is dry – it might sometimes, perhaps even more often, be wet. ***Your own knowledge or experience of paper is irrelevant!***

"Easily burnt products tend to be made from wood."

This is a reversal of Statement 2, and a distortion of it. Just because (dry) wood products "are easy to burn", it does not follow logically that most burnable things are made of wood.

- As I've already mentioned, your own knowledge isn't relevant to answering the question. You just have to consider the internal logic of the statements provided. Of course, most fuel "products" have an origin as wood; although it would be hard to argue that oil or coal are "made from" it, as this phrase implies an artificial process.

"Paper is usually easy to burn."

This is the most likely wrong answer!

Because we aren't told how often paper is "dry", we cannot deduce from the evidence whether it is "usually" easy to burn.

Each one of the five number codes matches one of the words listed below. Write the correct number code next to each word. Each single-digit number always represents the same letter.

7624 3761 1692 5674 4738

41. WART *3761*

42. PRAY *5674*

43. ARMY *7624*

44. TRIM *1692*

45. YAWN *4738*

This is a pattern-spotting exercise. Once you know how to do one of these, the rest will be much easier!

There are lots of possible ways into these questions: I have no expectation that you should have solved the problem in exactly the following way. However, this is the best ***type of*** approach.

- Two words end in Y. Two codes end in 4. Therefore, 4 = Y:

7624 3761 1692 5674 4738
Y Y Y

- The last code must be YAWN, because this is the only word **beginning** with "Y":

7624 3761 1692 5674 4738
Y Y YAWN

- The digits 7, 3 and 8 can now be filled in with A, W and N in the other codes:

7624 3761 1692 5674 4738
A Y WA AY YAWN

- 3761 must be WART, and this tells us what 6 and 1 represent (R and T)

- From this point, the problem is very easy to solve.

Another starting point would be to notice that one word ends in T and another begins with T, and that this is also the pattern with the digit 1.

And of course, there are other possibilities!

To bring this kind of question down to its essentials, there are two kinds of starting logic which you should look for:

Type A: A certain letter appears a unique number of times in a certain place. For example, Q is the second letter in two words, while the other two words have different letters in this spot. 5 is the second letter in two numbers, so Q is 5.

Type B: Overall letter-count: X is the only letter to appear exactly four times across the words, and this is also the case for the digit 9 in the codes: X is 9.

Often, one logical conclusion will allow you to work out a word, and this will give you more letters, and the answer will fall out very quickly.

Sometimes, two pieces of starting logic will be needed.

Use all the given words to complete the crossword. Words run from left to right or from top to bottom.

46.

PRESET
ASPECT
CLAIMS
SPACER
APPLES
ACTIVE

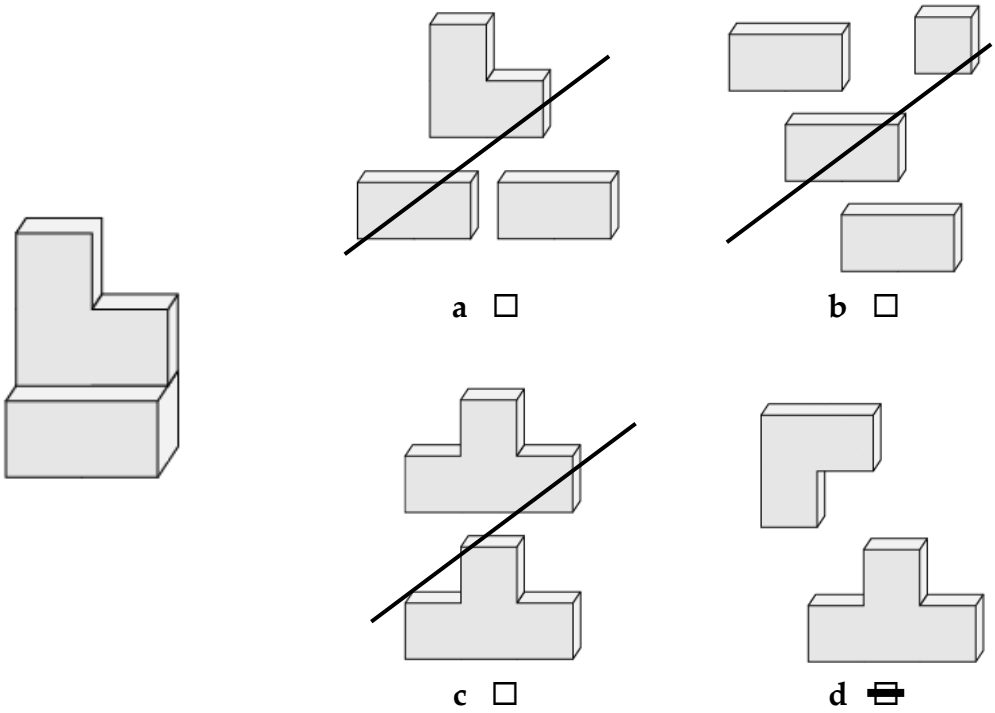
■	A	■	A	■	P
S	P	A	C	E	R
■	P	■	T	■	E
C	L	A	I	M	S
■	E	■	V	■	E
A	S	P	E	C	T

Only "SPACER" can occupy the horizontal ending in R, and only "PRESET" can take the corresponding vertical.

The rest of the words almost position themselves!

Which set of 3D blocks can be put together to form the figure on the left?

47.



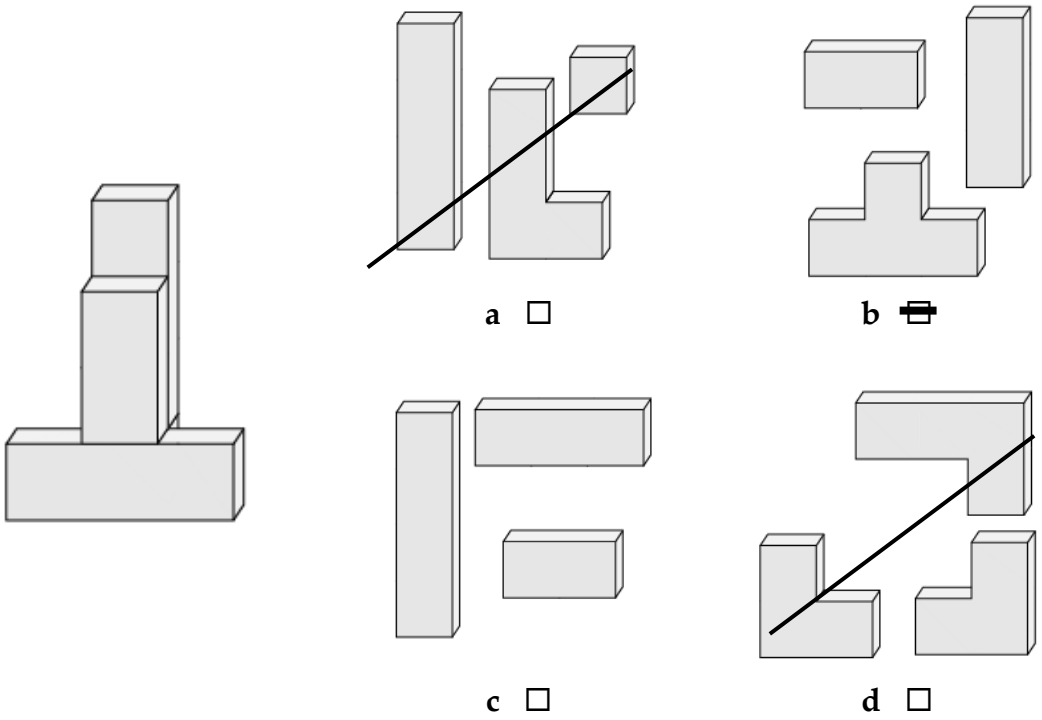
This kind of question is difficult.

- **Look at the 3D figure very carefully.**
- **Weigh each option before dismissing it.**

Be wary of choosing the first solution which looks correct: it's easy to be deceived!

For example, you could create the same overall shape with the blocks in **a**. However, no seam/dividing line between blocks is visible in the base of the 3D figure, as would have been the case if the two small blocks in **a** had been laid alongside each other.

48.

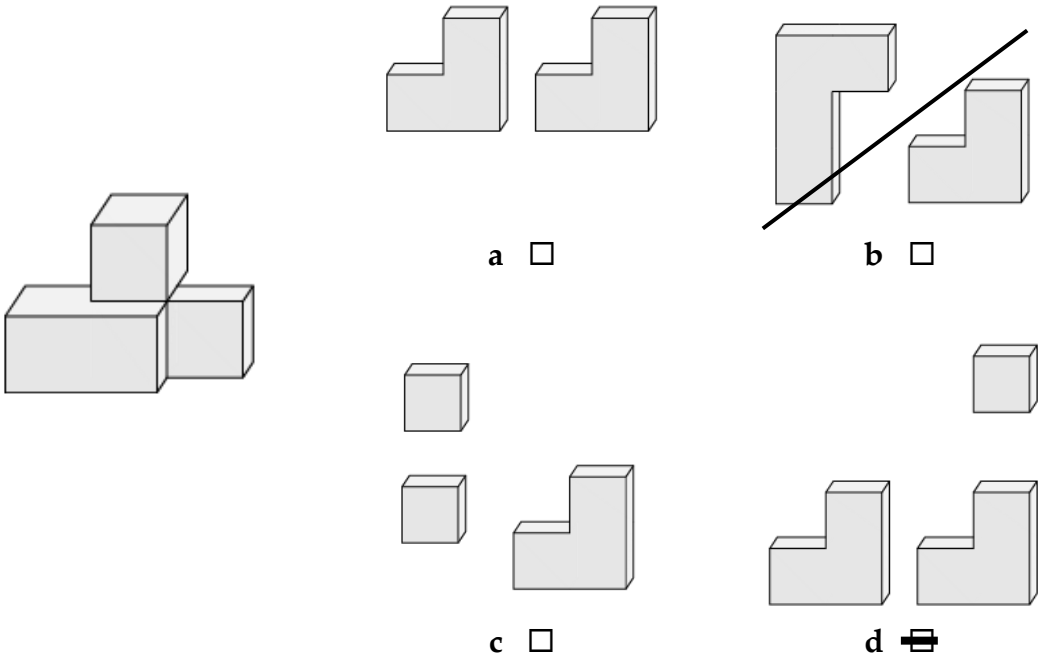


This is a bit fiendish …

The blocks in **c** *almost* work. However, if you look at the figure very carefully, you'll see that there is a block underneath, at the back, which is separate from what rests above it.

In fact, this block is the central prong of the T-shape in **b**, which is resting flat, with the two narrow blocks standing on top of it.

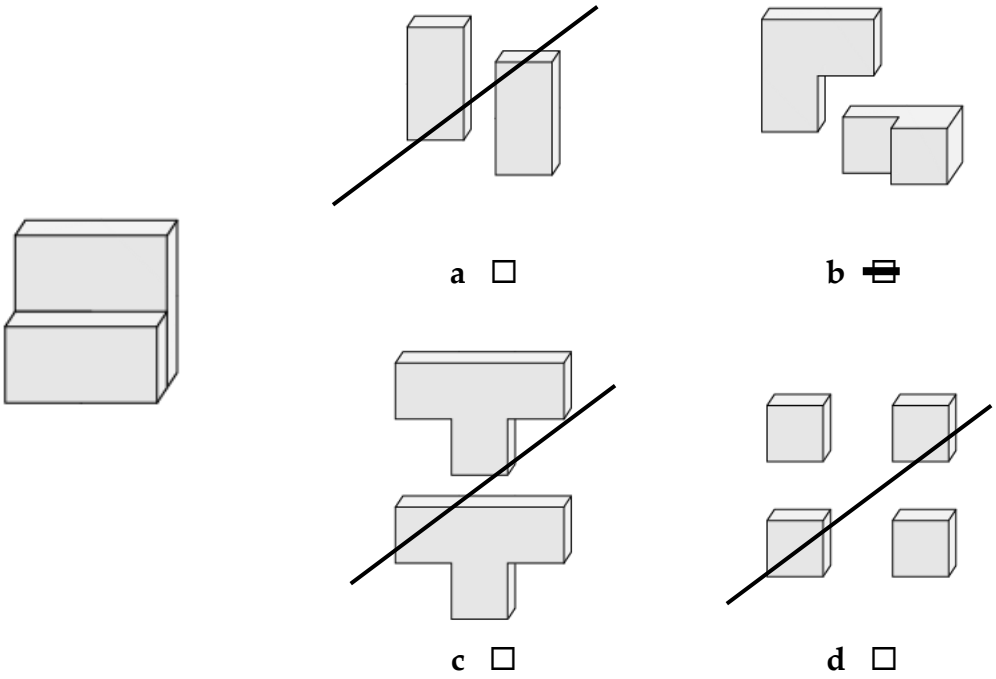
49.



You need to notice that the highest block in the 3D figure points away/protrudes from the back.

The shape is only possible using the two L-shapes in d – one lying on its side, the other resting on one of its points and 'aiming' away from you – with the small cube resting at the right-hand side of the figure.

50.



You may well get to **b** simply by deciding that none of the other options is possible!

b works through having one of the L-shapes lying on its side, and the other standing on end, 'aiming' left.

END