



Student application
number

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Given name(s)

Family name

Selective High School Placement Test

Thinking Skills Question Paper

11 March 2021

40 minutes

INSTRUCTIONS FOR CANDIDATES

Please read this page carefully.

DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO.

A separate answer sheet is provided for this test. Please fill in the following information on your answer sheet and on this question paper:

- Student application number
- Given name(s)
- Family name

There are **40** questions in this paper. For each question there are four possible answers, **A, B, C, and D**. Choose the **one** correct answer and record your choice on the separate answer sheet. If you make a mistake, erase thoroughly and try again.

You will **not** lose marks for incorrect answers, so you should attempt **all 40** questions.

You **must** complete the answer sheet within the time limit. There will **not** be any extra time at the end of the exam to record your answers on the answer sheet.

You can use the question paper for working out, but no extra paper is allowed.

Calculators and dictionaries are **NOT** allowed.



Cambridge Assessment
Admissions Testing

PV3



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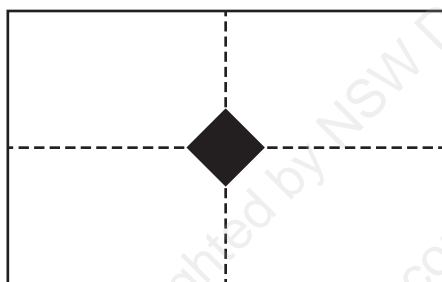
- 1 A piece of rectangular paper is folded in half, and then in half again. The second fold is at right-angles to the first.

A corner is cut off the folded paper. The paper is then completely unfolded.

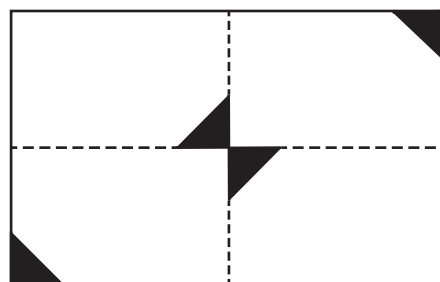
Which one of the following is **not** a possible appearance of the unfolded paper?

(The dotted lines represent the folds).

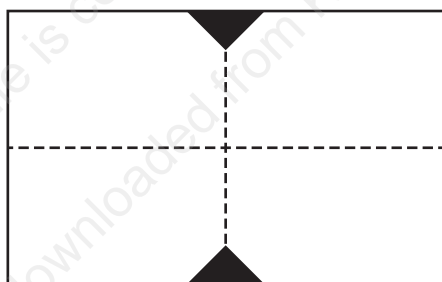
A



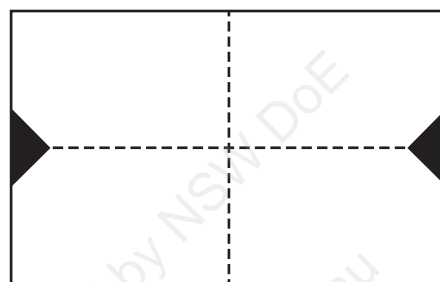
B



C



D



- 2 Four students had a race to see who could get to the top of the hill and back first.

No one arrived back after Bruce.

Only one person was faster than Ethan.

James finished after Ethan.

Where did Stephen finish?

A 1st

B 2nd

C 3rd

D 4th

3

Ms Walker would like to investigate whether drinking milk with lunch makes any difference to her students' results in a times tables test. She decides to do an experiment.

She splits her class into two groups according to their birthdays. For one whole month, students who were born between January and June are given milk with their lunch, and students who were born between July and December are given juice.

After one month she gives the whole class a times table test. On average, the students who drank milk with lunch score five marks better than the students who drank juice.



Ms Walker: "So it's true then – drinking milk with lunch improves children's ability to remember the times tables!"

Which one of the following sentences shows the mistake Ms Walker has made?

- A** Some of the students might drink a lot of milk or juice at home.
- B** The students who drank milk may have been better at times tables before the experiment started.
- C** The students who drank juice might do better in other kinds of activities.
- D** More of the students may have been born between January and June than between July and December.

- 4 In a competition, 11 students were allowed two attempts each at jumping as far as possible. The longer distance in the two attempts was counted as their 'result'. The attempts for the 11 students are shown in the table.

<i>student number</i>	<i>attempt 1 (in metres)</i>	<i>attempt 2 (in metres)</i>
1	4.9	5.0
2	5.7	5.8
3	4.8	4.9
4	4.6	4.7
5	5.0	5.1
6	4.6	5.7
7	5.6	5.4
8	5.1	5.3
9	5.5	4.8
10	4.4	4.5
11	5.9	5.2

Which student came 5th in the competition?

- A student 7
- B student 8
- C student 9
- D student 11
- 5 Gabriella says that zoos should be banned, because it is wrong to keep wild animals in captivity. She says that animals should have the right to live in their natural habitats.

Which one of these statements, if true, most **weakens** Gabriella's argument?

- A Zoos provide an opportunity for humans to see wild animals without having to go on safari.
- B Modern zoos try to ensure animals are given some exercise and stimulation.
- C Some wild animal species would die out completely if they were not bred in captivity.
- D Wild animals kept in confined spaces can display extremely distressed behaviour.

6

The Berruga lizard and Indora lizard are very similar. The only major difference between the two species is their diet.

Berrugas mostly eat termites and ants, but they will occasionally eat other insects, and even things like snails.

Indoras will eat almost anything if they are hungry, and they especially like termites, but they never eat ants (and in fact, ants are poisonous to Indoras).

Keira and Jun have rescued an injured lizard, and they want to find out which species it is.



Keira: “If we only feed it termites, we’ll be no closer to knowing whether it’s a Berruga or an Indora.”

Jun: “The only way that we could know for certain would be to give it some ants.”

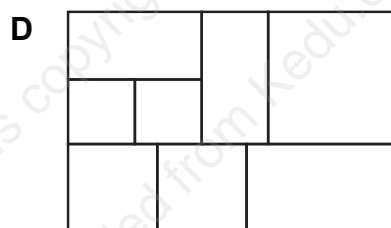
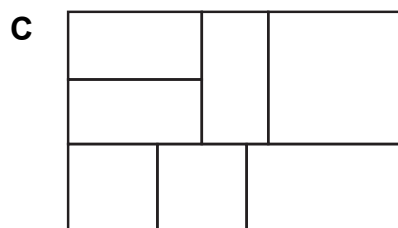
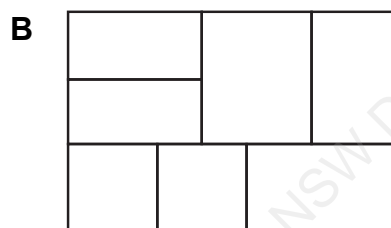
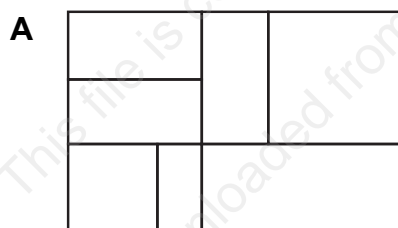
If the information in the box is true, whose reasoning is correct?

- A** Keira only
- B** Jun only
- C** Both Keira and Jun
- D** Neither Keira nor Jun

- 7 Plots of land within a community garden are allocated for people to grow fruit and vegetables. The plots come in a variety of sizes. The garden consists of seven plots as described in the table below.

	<i>length</i> (metres)	<i>width</i> (metres)
plot 1	4	4
plot 2	4	4
plot 3	6	3
plot 4	6	3
plot 5	6	3
plot 6	7	4
plot 7	6	6

Which one of the plans below could show the plots in the garden? (For each plot the length is the longest side and the width is the shortest side.)



- 8 You arrived at school this morning and saw the sports coach opening the sports hall.

The cleaner opens the hall every day except Sundays and Mondays, when the hall either remains closed or is opened by the sports coach. The sports coach is only there for training and for competitive events. The hall is reserved for training in the mornings and events in the afternoons.

The sports coach always arrives fifteen minutes early for both training and events, and schedules them to make sure that they do not occur on the same day.

Which one of the following sentences must be correct?

- A Today is Sunday.
- B The hall is open for training today.
- C There is a competitive event today.
- D The cleaner is unexpectedly away.

- 9 Because of all the trees around it, the waterfall at Blake's Point can only be seen from two places: Dwarda's Crossing, or the lookout across the valley. It's been impossible to get to the lookout since the rope bridge fell down two months ago.



Ivy: "I remember seeing the waterfall about a month ago, but I can't remember where I was. It must have been Dwarda's Crossing."

Annie: "My brother did a beautiful painting of the view of the waterfall from the lookout. That must have been more than two months ago."

If the information in the box is true, whose reasoning is correct?

- A Ivy only
- B Annie only
- C Both Ivy and Annie
- D Neither Ivy nor Annie

- 10 Mr Jackson has a large room which can be hired for children's parties.

He has a time limit of 4 hours and the room can accommodate a maximum of 25 children.

His charges are detailed in the following table:

	<i>number of children</i>			
	6–10	11–15	16–20	21–25
2 hours	\$100	\$150	\$200	\$250
2 hours and 30 minutes	\$121	\$171	\$221	\$271
3 hours	\$142	\$192	\$242	\$292
3 hours and 30 minutes	\$163	\$213	\$263	\$313
4 hours	\$184	\$234	\$284	\$334

What is the cost per child for a party lasting two and a half hours for 12 children?

- A \$11.40
- B \$11.75
- C \$12.50
- D \$14.25

- 11 Four online shops – Hughes Home, KX Hi-Fi, Brennan Audio, and Roberts Electricals – are all selling the same model of television but at different prices. Nathan needs to get one as quickly as possible but can't afford the most expensive.

KX Hi-Fi takes longer to deliver than Brennan Audio, but is faster than Roberts Electricals. Roberts Electricals is cheaper than Brennan Audio. KX Hi-Fi costs more than Brennan Audio, but is cheaper than Hughes Home.

Which of the four shops will Nathan choose?

- A Hughes Home
- B KX Hi-Fi
- C Brennan Audio
- D Roberts Electricals

12

Two different species of frog are known to live on the Quilpie Nature Reserve: speckled greenbacks, and red sentinels.

Ahmed and Melissa are investigating the populations of the two species, and have done an experiment.



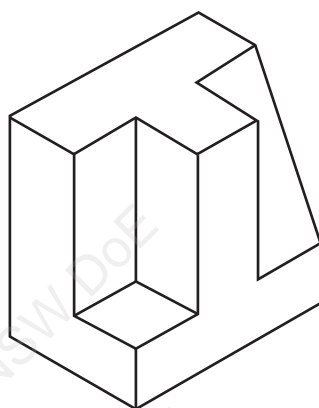
Ahmed: “For a whole year, every time a frog was spotted on the reserve, we made a note of which species it was. Over the year, we recorded 113 red sentinels and only 15 speckled greenbacks.”

Melissa: “That tells us that red sentinels are much more common on this reserve, and speckled greenbacks are actually quite rare.”

Which one of the following sentences shows the mistake Melissa has made?

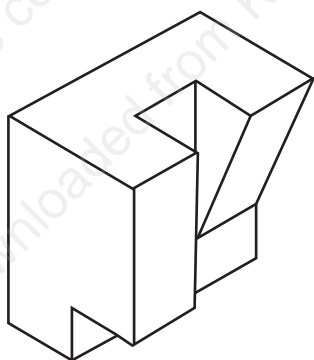
- A** Just because red sentinels are more common in Quilpie does not mean that they are more common in other places.
- B** There may be other species of frog on the reserve that have not been discovered yet.
- C** Seasonal changes in weather may affect the two species of frogs differently.
- D** Red sentinels may be easier to spot than speckled greenbacks.

13 A piece of a puzzle is shown below.

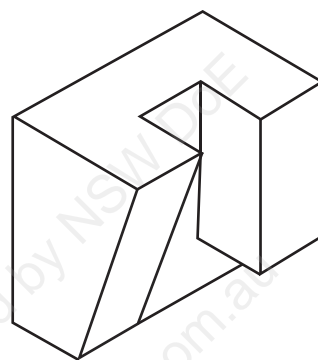


Which **one** of the following pieces will fit with the piece above to make a complete cube?

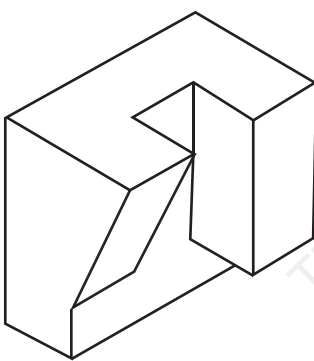
A



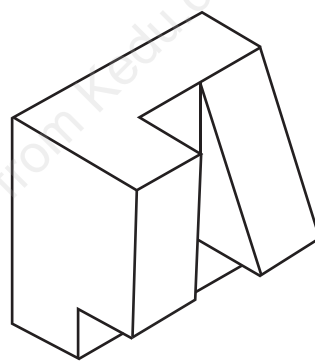
B



C



D



- 14 Leo and Nicole are discussing dramatised violence on television. Nicole says that it is harmless because it is not real violence. Leo replies: "That is obviously untrue. What people see on television influences their attitudes and their behaviour. Violent programmes can have serious consequences."

Which one of these statements, if true, most **strengthens** Leo's argument?

- A Violence is a fact of life, and banning it on television won't stop it happening.
- B Seeing violence on television can help people understand its consequences.
- C Television advertising is very effective in influencing people's behaviour.
- D People who don't want to see violent programmes don't have to watch them.

- 15 The Tang family are planning a day out tomorrow. They will decide where to go based on the weather in the morning. There are three possibilities:

- If it's sunny in the morning, they'll visit their aunt who lives by the beach.
- If it's raining, they'll go to the indoor market to do some shopping.
- If it's overcast but not raining, they will head into town. They might still go to the indoor market but they definitely won't go to the beach.

The weather forecast for tomorrow morning is for sunshine.



Victor: "If you see the Tangs in the indoor market tomorrow, it must mean it's been raining."

Aidan: "If you see them at the beach, it must mean the weather forecast was correct."

If the information in the box is true, whose reasoning is correct?

- A Victor only
- B Aidan only
- C Both Victor and Aidan
- D Neither Victor nor Aidan

- 16** The table below shows the lists of classes available each day at a summer school. Each student must take one class each day. This class can be either in the morning or in the afternoon.

	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
morning	economics	geography	economics	science	economics
	geography	science	digital technologies	digital technologies	sport
	art	art	art	art	art
afternoon	sport	sport	maths	maths	maths
	English	history	sport	sport	history
	digital technologies	economics	science	geography	geography

Zach has chosen classes in art, geography, maths, history and English. He wants to have Friday afternoon free.

On which day must Zach do geography?

- A** Monday
- B** Tuesday
- C** Thursday
- D** Friday

- 17 Gabi and Luke want to use a code to send secret messages to each other. In the code, each letter of the alphabet is represented by a one-digit number, as follows:

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
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6

For example, the word BELL would be written in the code as 2-5-2-2.

To test the system, Gabi writes four words in the code and sends them to Luke. Luke tries to decode them, and gets the following answers:

TOOK

DONE

HIGH

SORT

Luke is confident that he has three of these words correct, but he is unsure about the other one.

Which word is Luke unsure about?

- A TOOK
- B DONE
- C HIGH
- D SORT

18

To be able to go on the school excursion, permission slips must be handed in by Friday. There are only 50 places available, and these are allocated to the first 50 students to hand in their permission slips.



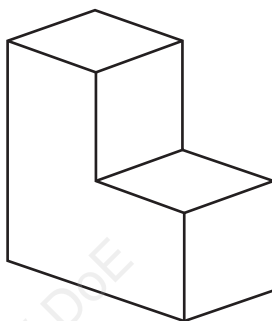
Megan: “I’ve already handed in my slip, so I’ll definitely get a place on the excursion.”

Kate: “I won’t be able to hand my slip in until Friday, so I won’t get a place on the excursion.”

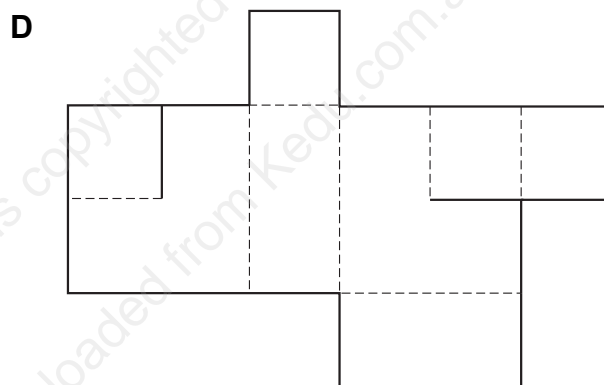
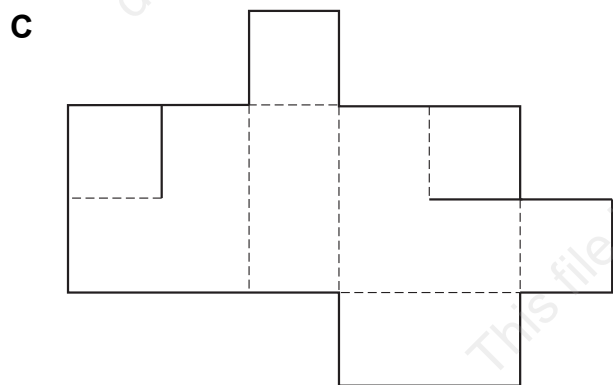
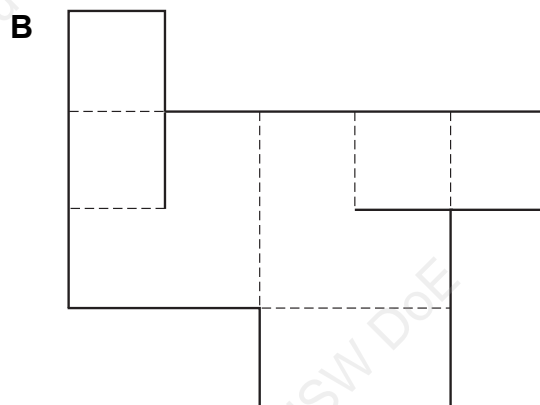
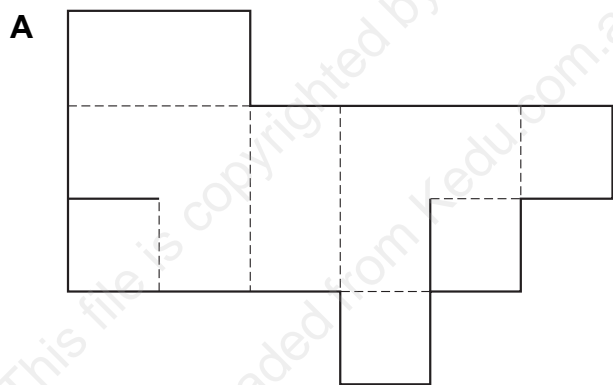
If the information in the box is true, whose reasoning is correct?

- A Megan only
- B Kate only
- C Both Megan and Kate
- D Neither Megan nor Kate

- 19 The drawing below shows an L-shaped box.



Which one of the nets below can **not** be folded up to form the L-shaped box?



- 20** For the last five years, the Colby Street pie-eating contest has been won by a different person every year. Two years ago, the winner was Mr Green, and Mrs Black was runner-up.

Last year, four contestants entered: Mr Green, Mrs Black, Miss Orange, and Ms White.

Ms White had no appetite and finished last.

Mrs Black started well but didn't do as well as she had the previous year.

Who was last year's runner-up?

- A** Mr Green
- B** Mrs Black
- C** Miss Orange
- D** Ms White

21

To qualify for the Kings' County Volleyball Trophy finals, teams must meet at least one of three conditions:

1. coming first or second in their qualifying group
2. scoring 15 match points or more in the qualifying stages
3. winning the 'Fair Play Award' in the qualifying stages

Lucy is looking at the qualifying results, and planning the final stage of the tournament.



Lucy: "There were six groups, so twelve teams came first or second. Fourteen teams scored at least 15 match points. And of course one team won the Fair Play Award. So I should plan for 27 teams in the finals."

Which one of the following sentences shows the mistake Lucy has made?

- A** The winner of the Fair Play Award may have scored fewer than 15 match points.
- B** Some teams may have met more than one of the conditions, so there will be fewer than 27 teams.
- C** Some teams may have scored a lot more than 15 match points.
- D** Some teams may have met more than one of the conditions, so there will be more than 27 teams.

- 22 I have a six-digit code for my bike lock.

The two-digit number formed by the middle two digits was the result of multiplying the first digit by the second digit.

The two-digit number formed by the last two digits of the code was double the number formed by the middle two digits.

The first digit was 7 and all six digits were different.

What is the last digit of the code for my bike lock?

- A 2
- B 4
- C 6
- D 8

- 23 A famous archaeologist has said that, although it is vital to encourage public interest in archaeology, large numbers of people should not be allowed to visit historical sites of interest, because they cause lasting damage to the sites over the years.

Which one of these statements, if true, most **strengthens** the archaeologist's argument?

- A It is possible to create accurate replicas of historical sites to satisfy the interest of the general public.
- B People's fascination for experiencing the ancient world is an important part of tourism.
- C Many historical sites around the world have already banned visitors in order to prevent damage.
- D There is a growing interest in ancient history, especially among young people.

There are three ways to cross the Korra River:

Archer Bridge is open to cars and pedestrians. It is only open on Mondays, Wednesdays and Saturdays. It is one of the highest bridges in Australia.

Djorlom Bridge is open to cars, but not pedestrians. It is only open on Tuesdays, Thursdays and Fridays.

The Korra Ferry is for pedestrians only. It is open on Sundays. It is also sometimes open on other days, but only if the bridge that would normally be open is damaged.



Amanda: "If the ferry operates for three days in a row, it must mean that both bridges are damaged."

Declan: "I don't have a car, and I'm terrified of heights. Unless I get someone to drive me, I'll only ever be able to cross on a Sunday."

If the information in the box is true, whose reasoning is correct?

- A** Amanda only
- B** Declan only
- C** Both Amanda and Declan
- D** Neither Amanda nor Declan

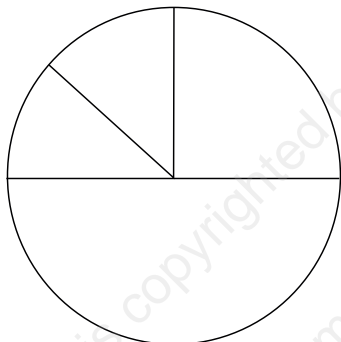
- 25** A group of 60 students were asked to name their favourite game. The games were then identified as one of four types: card games, board games, computer games or other.

15 of the students named a card game.

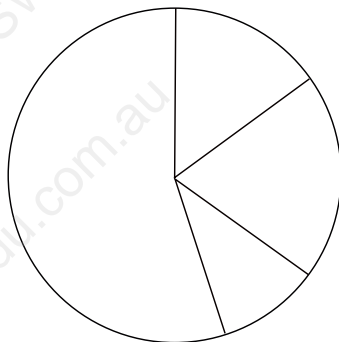
Twice as many students chose a computer game as chose a board game.

Which one of the pie charts could correctly represent the information about the students' choices?

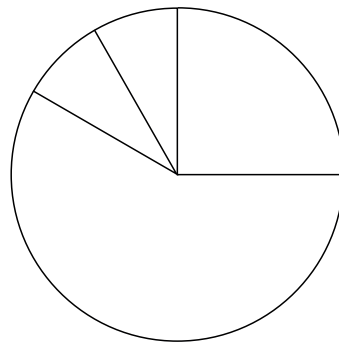
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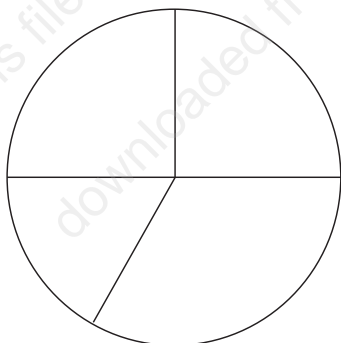
B



C



D



- 26 If we don't sell three quarters of the tickets then the school play will be cancelled.

If the play goes ahead and we make it a success, then we might just be able to convince the principal to let us put on another play next summer. It won't be a success, though, if people don't work hard and learn their lines.

If the play is not a success, then it will be the last play we are allowed to do.

Which one of the following outcomes is **not** possible?

- A The play did not go ahead even though they sold all the tickets.
- B The play did not go ahead even though they all worked hard and learned their lines.
- C The play was not a success even though they all worked hard and learned their lines.
- D The principal let them put on another play even though they didn't all learn their lines.

27

The Port Sunday Canoe Race is held once per year. There are three ways to qualify:

- Any team that comes first or second in a regional heat qualifies automatically.
- Last year's winning team qualifies automatically (as long as the team has exactly the same members).
- One team can qualify as a 'wild card': this team is chosen randomly from all the teams that failed to qualify otherwise.

Glen and Hayden are on the same team. They are trying to qualify for this year's race.



Glen: "We came third in our regional heat. We won the race last year, but one of our members has left. Our only chance of qualifying is to get her to come back."

Hayden: "If we can get her to come back, it won't matter that we didn't do well enough in the regional heat."

If the information in the box is true, whose reasoning is correct?

- A Glen only
- B Hayden only
- C Both Glen and Hayden
- D Neither Glen nor Hayden

- 28** At a zoo there are snakes, horses and eagles. Snakes have no legs, horses have 4 legs, and eagles have 2 legs. There are 9 of these animals altogether, with 10 legs in total.

What is the highest number of snakes that can be at the zoo?

- A** 4
- B** 5
- C** 6
- D** 7

- 29** Three men – Arthur, Bobby and Darren – are suspects in a crime investigation. Only one man is guilty. When they are questioned, they give the following statements:

Darren: "Bobby is guilty."

Bobby: "I am not guilty."

Arthur: "I am not guilty."

However, only one of the three men is telling the truth; the other two are lying.

Which one of the following statements must be true?

- A** Darren is guilty.
- B** Bobby is lying.
- C** Arthur is not guilty.
- D** Darren is lying.

30

The Northern Intercity Railway employs ticket inspectors to check that everyone travelling on a train has a valid ticket, and catch anyone trying to ride for free. Anyone caught without a ticket has to pay a \$500 fine.

In the last five years, not a single person has been caught without a valid ticket.

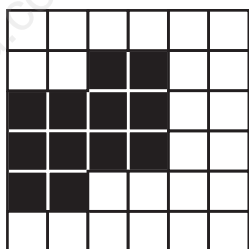


Linda: “That just shows that the ticket inspectors are a waste of time and money – they never catch anyone. The Railway should save the money, or employ them to do something more useful.”

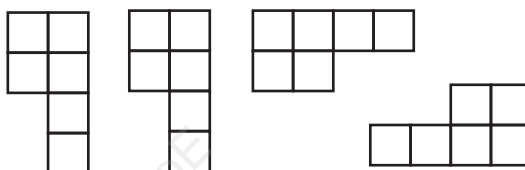
Which one of the following sentences shows the mistake Linda has made?

- A** Fear of being caught may be the reason that nobody tries to travel without a ticket.
- B** Just because nobody has been caught in the last five years does not mean they will not be in future.
- C** The Northern Intercity Railway may not have anything more useful to spend the money on.
- D** Just because the inspectors have not caught anyone does not mean that nobody has travelled without a valid ticket.

- 31 A 6×6 square puzzle is shown below. It is made up of four white pieces and one black piece.



square puzzle



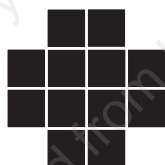
four white pieces



one black piece

Which one of the following black pieces will **not** fit with the four white pieces to make another 6×6 square?

A



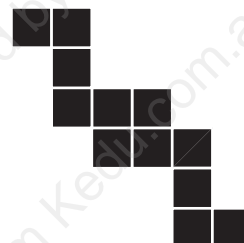
B



C



D



- 32 When Olivia got a car, her cousin Natalie said to her: "More people are injured in car crashes between 4 pm and 7 pm than at other times. This means you should be more careful driving then, as you are more likely to be hurt in a crash."

Which one of these statements, if true, most **weakens** Natalie's argument?

- A Many more people drive between 4 pm and 7 pm than at other times.
- B Natalie has never driven a car herself.
- C People can still have car crashes even when they are driving carefully.
- D Olivia has no choice but to drive at that time, because she finishes work at 5 pm.

- 33 The three languages of Mekani, Kaiana and Sekludi are quite similar to each other, and they have some words in common. For example, 'kanu' means 'house' in all three languages.

Any word that is the same in Mekani and Kaiana is also the same in Sekludi.

Kaiana and Sekludi have lots of words in common, but never words for animals. Words for animals are always different.



Patricia: "If a word is the same in Mekani and Kaiana, it can't be an animal."

Yilin: "If a word is the same in Mekani and Sekludi, it can't be an animal."

If the information in the box is true, whose reasoning is correct?

- A Patricia only
- B Yilin only
- C Both Patricia and Yilin
- D Neither Patricia nor Yilin

- 34 Izzie is making cards to send to all of her friends. She needs to buy blank cards to print her design on. The prices for different sizes of cards are shown in the table below.

size	price			
	pack of 50	pack of 100	pack of 250	pack of 500
small	\$10	\$18	\$44	\$80
medium	\$12	\$20	\$48	\$90
large	\$15	\$25	\$58	\$100

Izzie wants to print her design on 67 small cards and 130 medium cards.

What is the lowest amount that Izzie can pay for the cards?

- A \$48
- B \$50
- C \$60
- D \$66

- 35 In end-of-year tests, the following results were achieved by students taking Maths, Physics and Computing:

- Everyone who passed Physics also passed at least one of the other two subjects.
- No one who passed Maths failed Computing.
- No one passed all three subjects.
- No one failed all three subjects.

Which one of the following is **not** possible?

- A Luca failed Physics and Maths.
- B Luca passed Physics and Maths.
- C Luca passed Physics and Computing.
- D Luca passed either only Maths or only Computing.

36 A famous author has written three children's books. The titles are: *Morning*, *Noon*, and *Night*. Year 5 did a survey to discover which of the books was most popular in the class. It was found that:

- All the children who had read *Morning* had also read *Noon*.
- Most of the children who had read *Morning* had also read *Night*.
- No child had read *Night* who had not read *Noon*.

We know that Tim has read *Noon*. Which one of the following statements is true?

- A** We know that he has read *Morning*, but has not read *Night*.
- B** We know that he has read *Night*, but has not read *Morning*.
- C** We know that he has read both *Morning* and *Night*.
- D** We do not know whether he has read either *Morning* or *Night*.

- 37 In the following pair of images, the right-hand image is the result of applying a series of changes to the left-hand image. These changes are a difference in the order of the shapes and the application of rotations to two of the shapes:



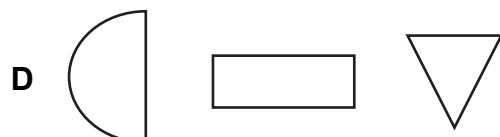
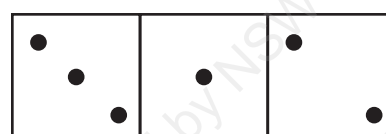
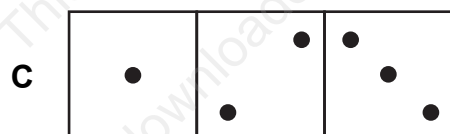
Which one of the following pairs of images shows the same series of changes applied to the left-hand image to produce the right-hand image?

A 1 2 3

3 1 2

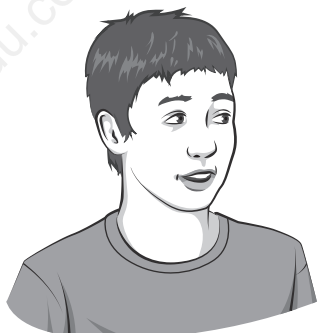
B A B C

C B A



38

Rob and Paul are citizens of Bolivistan. In Bolivistan, whenever the national football team is playing, shopkeepers always decorate their windows with the Bolivistani national flag.



Rob: “That’s funny. I thought the national team were playing today, but I don’t see any flags in shop windows. I must have got the date wrong.”

Paul: “Well, I saw quite a few flags in the shops last Wednesday – that must have been when they were playing.”

If the information in the box is true, whose reasoning is correct?

- A** Rob only
- B** Paul only
- C** Both Rob and Paul
- D** Neither Rob nor Paul

39 Four students had a competition to see who could read the most books.

Olivia did not read the fewest books.

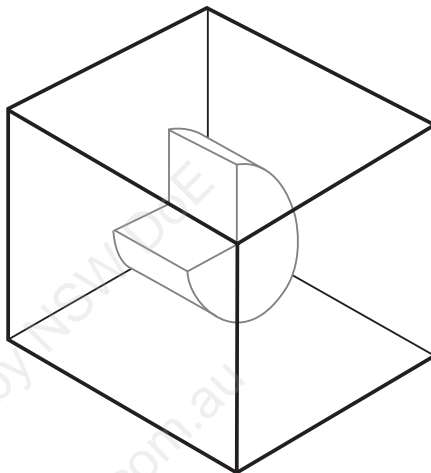
Only two people read fewer books than Carlos.

Bryan read fewer books than Sharon.

Which one of the following must also be true?

- A** Carlos read more books than Bryan.
- B** Bryan read more books than Carlos.
- C** Carlos read more books than Sharon.
- D** Sharon read more books than Carlos.

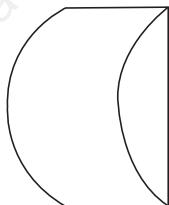
- 40 A sculpture is placed in a glass box and displayed in a museum as shown in the diagram below.



The sculpture can be viewed from all sides.

Which one of the following is **not** a possible view from one of the sides of the glass box?

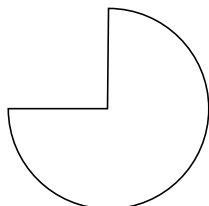
A



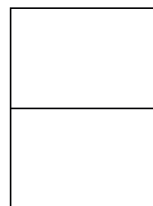
B



C



D



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