NO.	QUESTION
1	Allan, Peter, and Cayetano were suspected of leaving their trash on the cafeteria table yesterday. George knew that 2 of them are guilty. Before George would admonish them, they made the following statements: **Allan:** Peter is guilty. **Peter:** Allan is guilty. **Cayetano:** Peter is not guilty. However, only 2 of the three are telling the truth; the other 1 is lying. **Which of the following statements must be true?** A. Allan is not guilty but lying B. Peter is lying C. Allan is guilty and lying D. Cayetano is guilty and lying
2	Rodrigo and Roa have their secret code design for communication. The code is a variation on a substitution code. A letter is encoded as the following letter in the alphabet when it first occurs in a message (A becomes B, Z becomes A). On each subsequent appearance, it becomes the next letter again (A becomes C, Z becomes B). For example: "ARE YOU AT HOME TODAY?" is encoded as BSF ZPV CU IQNG VREDA? Rodrigo is about to text Roa "GET UP ALREADY" **How will Rodrigo encode the message?** A. HFU VQ BMSGCEZ B. HFU VQ MBSGCEZ C. HFU VQ BMSGECZ D. HFU VQ BMGSCEZ

3	Benson wants to tell his brother what ice cream flavour he wants to have through a mobile phone.
	Mobile phones use the following keys for forming words when sending text messages.

	2	3	4	5	6	7	8	9
	ABC	DEF	GHI	JKL	MNO	PQRS	TUV	WXYZ

To form the word RED, for instance, it requires 7 to be pressed three times, 3 to be pressed twice, then 3 to be pressed once more.

Which key is pressed the most when the word VANILLA is formed by Benson?

A. 8
B. 6
C. 5
D. 4
E. 2

4	Joshua has a 6-digit code for his bike locker and tries to memorise it.

Three of the digits are equal to 5.
By adding 12 to the middle two digits you get the last two digits.
The fourth digit is 5.
The second digit is 4 less than the first digit.
The third digit is the same as the 4th digit.

What is the first digit of Joshua's bike locker?

A. 4
B. 6
C. 7
D. 9

5	Harold is a craftsman that specialises in making Marvel action figures. He was able to make 384 figurines in the last 6 months. Each figurine needed about 6 pieces of medium-sized plywood. In the past decade, he had about 432 pieces of medium-sized plywood used in production.

	What is the total number of medium-sized plywood that Harold used this year? A. 496 B. 432 C. 72 D. 64
6	A special code uses these two rules in encoding words: 1. For letters in an <u>odd</u> position, the code will be the letter in its position if the alphabet was reversed. (A will become Z) 2. For letters in an <u>even </u>position, the code will be the letter found 2 steps before it. (C will become A) For example, BREATH is coded as YPVYGF, and AGENDA is coded as ZEVLWY **How would you code INSANITY?** A. RLHYMGGW B. RLHYGMGW C. RLYHMGGW D. RHLYMGGW
7	During his internship days at Tesla, Harry created his own set of codes. Below is an example of how his code language works: 'Becoming Conclude Platform Approval' is written as '15@m 13!c 21!f 20@r' 'Ceremony Bulletin Pursuant Adequate' is written as '33@m 22@l 28@s 13@d' 'Portable Bachelor Cautious Alliance' is written as '13@t 26@h 27@c 13+l' 'Announce Casualty Periodic Building' is written as '13+n 33+l 11+r 15!d' **What is the code for "MUSICIAN"?** A. 22@s B. 14@s

C. 12+c

D. 10!c

8	The programme committee for the Avengers Comic Conference 2022 recently conducted a survey. They asked the children which superhero they would choose to have a statue constructed: Iron Man, Captain America, Thor, or the Hulk
	
	The survey findings were as follows:
	
	    1. None of the students who chose Thor chose Iron Man.
	    2. Most people who chose Iron Man chose Hulk.
	    3. Some people who chose Thor also chose Captain America.
	    4. All who chose Hulk also chose two other options.
	
	Which of the following cannot be true?
	
	    A. Chris chose 3 of the superheros.
	    B. Chris chose 2 of the superheros.
	    C. Chris chose all superheroes except Captain America.
	    D. Chris chose all superheroes except Iron Man.

9	
	
	Morbius: "Policemen are the only ones allowed to have a gun."
	
	If Morbius' statement is true, which of the following statements must also be true?
	
	    A. If Brian has a gun, he might be a policeman.
	    B. All policemen bring a gun with them responsibly.
	    C. If Michael is not allowed to have a gun, then he is not a policeman.
	    D. If Jackson has a gun in his possession, then he is definitely not a policeman.

10	For their family reunion, Jason asked his sister, Ericka, if she could come to the Nashville Resort, which is 130km away from their home. Jason went first and Ericka had to wait for his brother to tell her that he already arrived at the resort before she departed.
	Jason's vehicle accelerates at an average speed of 90km/h while Ericka's motorcycle has an average speed of 75km/h.
	How long will it take Ericka to be at the resort starting from the time that Jason departed?
	A. 104 mins
	B. 112 mins
	C. 174 mins
	D. 186 mins

11	
	Jade and Kristoffer are debaters. All debaters speak loudly. All professional debaters spend a lot of time reading. Some debaters prefer using parallel model techniques when debating. Both Jade and Kristoffer use parallel model techniques.
	If the information in the box is true, whose reasoning is correct?
	Brylle: "Athena speaks loudly and uses parallel models, so she could be a debater."
	Matt: "If Ashley is a poet and uses parallel model techniques, she's also a debater."
	A. Brylle only
	B. Matt only
	C. Both Brylle and Matt
	D. Neither Brylle nor Matt

12	In a local Tetris competition in Belgrade, Dominic, Aaron, and Lucin are competing for 5 preliminary rounds. Below are the results of each round.

Name	Round 1	Round 2	Round 3	Round 4	Round 5

Dominic	3rd	2nd	1st	1st	1st
Aaron	1st	3rd	2nd	2nd	2nd
Lucin	2nd	1st	3rd	3rd	3rd

Every 1st place is worth 5 points; 2nd place for 4 points; and 3rd place for 2 points.

Aaron is confident that he will never rank in 3rd place for the remaining rounds.

What is the minimum points needed for one among all contestants to be guaranteed the win?

    A. 2

    B. 3

    C. 4

    D. 5

13

A group of parkour enthusiasts had a friendly challenge to figure out who among them could make the most consecutive backflips.

Jared was in 4th place.

Gerald beat 2 people.

Vince came immediately before Gerald.

No one was after Nash.

What place did Pete finish among the group?

    A. 1st

    B. 2nd

    C. 3rd

    D. 4th

    E. 5th

14

People have grown more expressive than ever before when it comes to showing their gratitude towards others. Gratitude is regularly and substantially linked to happier lives in positive psychology studies. Receiving any words of gratitude, such as "thank you" or "I appreciate it" is found to improve

one's ability to experience more joyful feelings, enjoy pleasant memories, maintain excellent health, overcome challenges, and forge close personal bonds.

Which of the following statements, if true, best strengthens the argument?

A. Words of gratitude are delightful to hear.
B. Words of gratitude bring internal motivation.
C. Words of gratitude offer sympathy and empathy.
D. Words of gratitude exemplify good moral character.

| 15 | Human interaction is deemed to be fundamentally essential. This interaction enables us to encounter people who are expressive and extroverted. In truth, we will actually be better off in many ways if we are talkative people. We will have the natural ability to connect with others, and many will find us to be approachable.

Which of the following statements, if true, best weakens the argument?

A. Being talkative coerces us to always please other people.
B. Being talkative could irritate those who are around us.
C. Being talkative paints a picture that we are easy to get.
D. Being talkative gives a leeway for others to disrespect us. |

| 16 | When we converse with many friends, we have the opportunity to learn a great deal of new things. Our friends are also a source of information, especially if they live in diverse locations and experience a variety of activities. Therefore, talking to friends every now and then will help us immensely grow as individuals.

Which of the following statements, if true, best strengthens the argument?

A. Having many friends teaches us how to properly communicate with people.
B. Having many friends makes it possible for knowledge to accumulate through their gossip.
C. Having many friends allows for the exploration of different perspectives and experiences.
D. Having many friends enables smart decision-making based on what our peers feel. |

17	The act of parents and children sharing a bed is referred to as "co-sleeping," which is regarded as a form of practice. While co-sleeping may cause a child to temporarily become dependent on a parent, in the long run, it makes them more resilient as it teaches them how to sleep alone when they are older and more capable.

Which of the following statements best concludes the argument?

    A. Co-sleeping strengthens the mental growth of children.
    B. Co-sleeping develops the independence of kids.
    C. Co-sleeping coerces children to cling to their parents.
    D. Co-sleeping tightens the ability of kids to be emotionally mature.

18

Celine Dion is known for having a fantastic vocal range when singing. When interviewed during a post-event dinner at an awarding ceremony, she was asked what her secret was to having such a melodic voice. She said that it was her herbal juice that helped her achieve the vocal range she has now. When the interview was publicised, her fans started purchasing herbal juices in the market in hopes of getting a good vocal range.

Cherry: "I will surely have the same vocal range as Celine Dion if I drink this herbal juice regularly."

Which among the options best describes the flaw in Cherry's statement?

    A. Cherry thought that by drinking herbal juice, she would become more like Celine Dion.
    B. Cherry was relying on the assertions of a person she supports and taking them at face value.
    C. Cherry showed her dedication by following the lead of the other supporters.
    D. Cherry still doesn't understand that dancing would be more beneficial to her than singing.

19

It is strongly discouraged by the locals for visitors to swim in or even near the waters of Bikini Bottom. Folklore has it that a sea monster lurks beneath the waves, ready to scavenge any unwary explorers. Locals persist in claiming its existence despite the lack of any evidence for it beyond hearsay.


Isa: "The presence of the sea monster has not been disputed by anyone who has returned from the shore. It is safe to conclude that it must be real."

Which among the options best describes the flaw in Isa's tatement?

A. Isa simply repeated what everyone else was saying and held it to be true.
B. Isa was surprised by the fact that the sea monster is residing on the shores.
C. Isa made the assumption that the sea monster was real just because the local residents said it was.
D. Isa's argument was purely based on the lack of evidence that refutes the existence of the sea monster.

20	A piece of a puzzle is shown below:
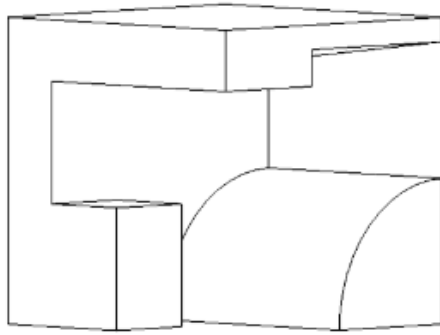
Which one of the following pieces will fit the piece above to make a complete cube?
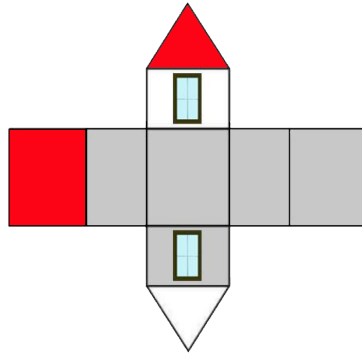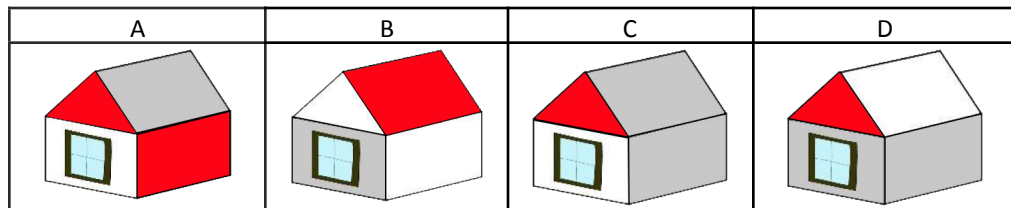
A.
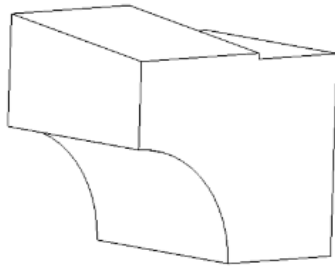
B.
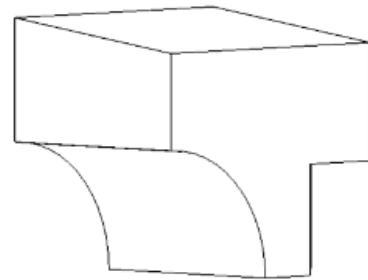
C.
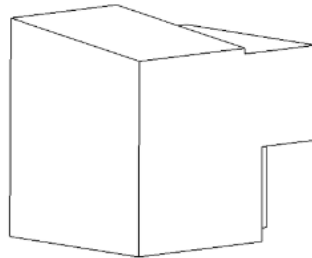
D.
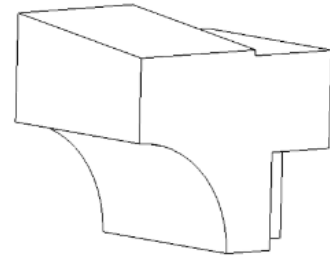
| 21	The piece of cardboard shown below folds to form a house for use with a model railway. The other side of the cardboard is black, which forms the inside of the house.

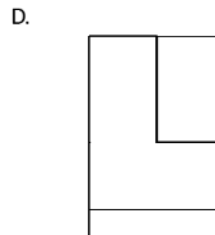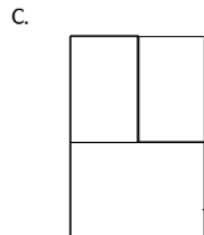

Which of the illustrations below correctly shows the assembled house?
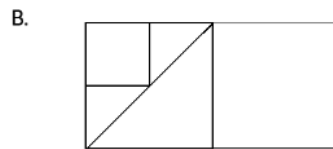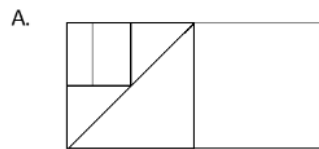
A	B	C	D

22	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.
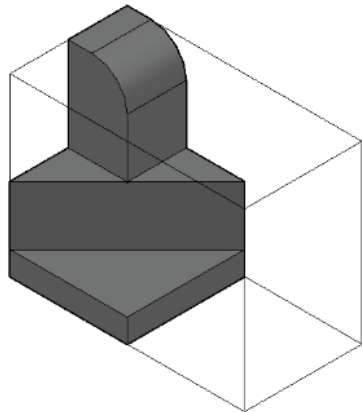
Which one of the following is a possible view from one of the sides of the glass box?

A.

B.

C.

D.

23

Jules needs a dozen eggs for his cheesecake order from a client. After a quick turmoil in his business' inability to generate profit, he wants to cut costs on his pastry products. He then wants to buy these eggs all at once and at the cheapest price possible. Fortunately, a friend of his knew some shops that sell eggs nearby.

Shop	Price per Egg	Discount
Eggs r Us	$5	40% Off Total Price
Egg Came Before Chicken	$4	Buy 6 Get 6 60% Off
Eggselent	$3	No Discount

Which should Jules pick?

A. Eggs r Us
B. Egg Came Before Chicken
C. Eggselent
D. All of the above.

24

Marcus: "I'm on a budget, but I still want to attend the SEA games in Beijing from January 3 to 12 consecutively."

One Day Ticket	Five Day Ticket (consecutive)	Nine Day Ticket (consecutive)
$20	$80	$190

If Marcus wants to spend as less as possible, how much will he spend for the SEA games?

A. $180
B. $170
C. $160
D. $150

25

Sana wanted to build a small food stall business near a school zone. To strategically pinpoint which types of food she should sell, she conducted a survey amongst students near the school. The results are shown in the table.

Hotdog with Bun	Ham Sandwich	Donuts	Meat Rolls	Pancake
421	383	400	440	414

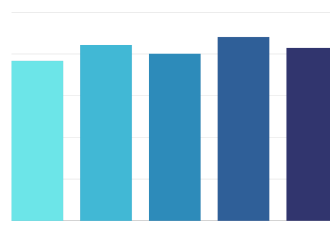Sana created a bar chart representation of her survey.

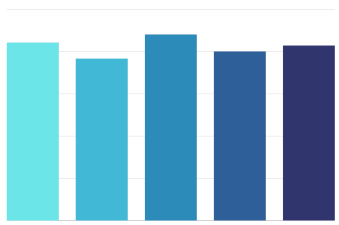**Which of the following bar charts best represents the data in the table?**
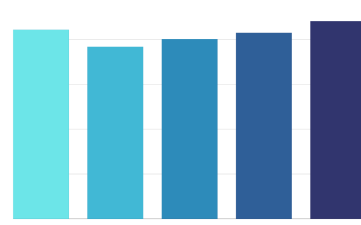
A.
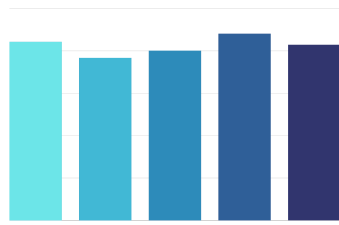
B.

C.

D.

| 26 | Carlos is building a robot prototype for their Science Fair this weekend. He needs the following items: A pair of Aluminum sheets, 4 pieces of plywood, a set of gloves, and one protective eyewear. |

ITEM	VARIATION	PRICE
Aluminum Sheet	Standard	$10
	1100 Aluminum	$22
Plywood	B - Grade	$6
	A - Grade	$12
Gloves Set	Red Head Glove Set	$5
	Bob the Builder Luxury Set	$10
Protective Eyewear	Johnson's Eyewear	$8
	Lenon's Eyewear	$7

If Carlos goes for the expensive options, how much would he have to pay?

A. $64

B. $63

C. $110

D. $120

| 27 | Sheena asked her mother for assistance in making a pumpkin pie. Her mother created a table that shows how much of each ingredient she'll need, as shown in the table below. They transferred the data to a pie chart, but put one of the lines of the pie chart in the wrong place. |

Variable	Sugar	Cinnamon	Eggs	Milk	Ginger
Value	380	330	210	290	180
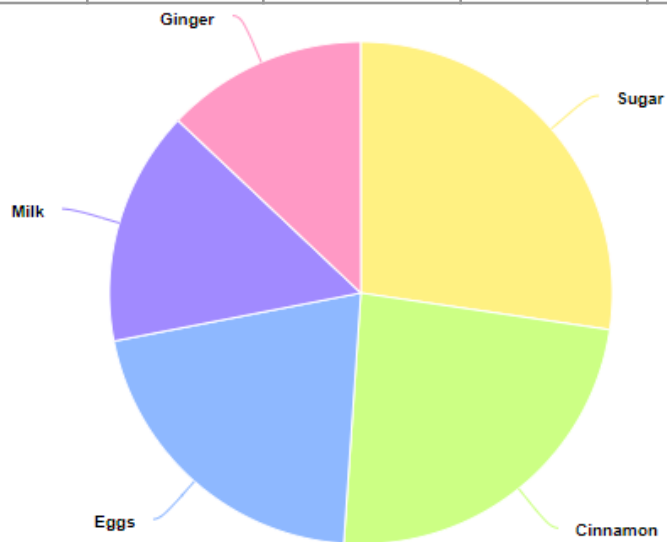
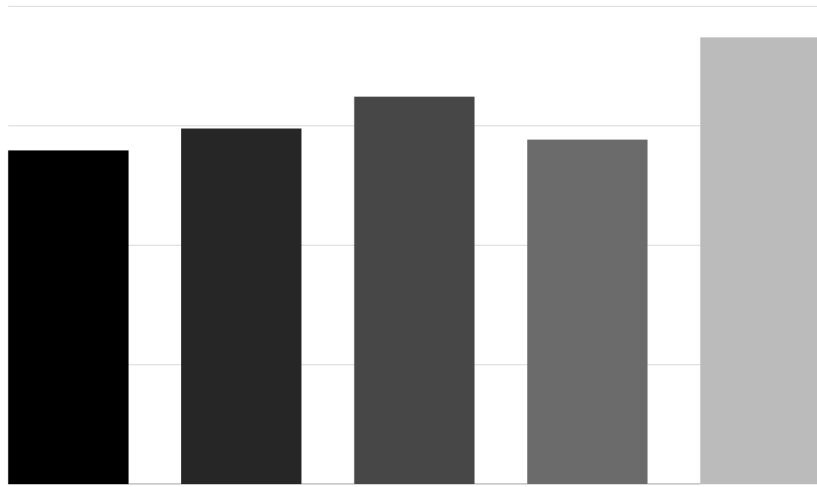

The lines between which variables must be incorrect?

A. Eggs and Milk

B. Milk and Ginger

C. Ginger and Sugar

D. Sugar and Cinnamon

E. Cinnamon and Eggs

| 28 | Troy tracked down his food expenses for the last weekdays. He made a chart to represent the bill for |

each weekday.

Which of the following data best matches the bar chart?

A.

Monday	Tuesday	Wednesday	Thursday	Friday
$698	$743	$810	$720	$934

B.

Monday	Tuesday	Wednesday	Thursday	Friday
$698	$810	$743	$720	$934

C.

Monday	Tuesday	Wednesday	Thursday	Friday
$698	$743	$720	$810	$934

D.

Monday	Tuesday	Wednesday	Thursday	Friday
$698	$743	$810	$934	$720

29 | ONIC Esports was assessing its team of gamers regarding their favourite mobile game. The results of the assessment are as follows:

Mobile Game	Minecraft	Fortnite	Warframe	PUBG	League of Legends
Number of votes	490	700	35	100	70

A divided bar chart was then produced of the results, but votes for League of Legends were mistakenly added to another mobile game.
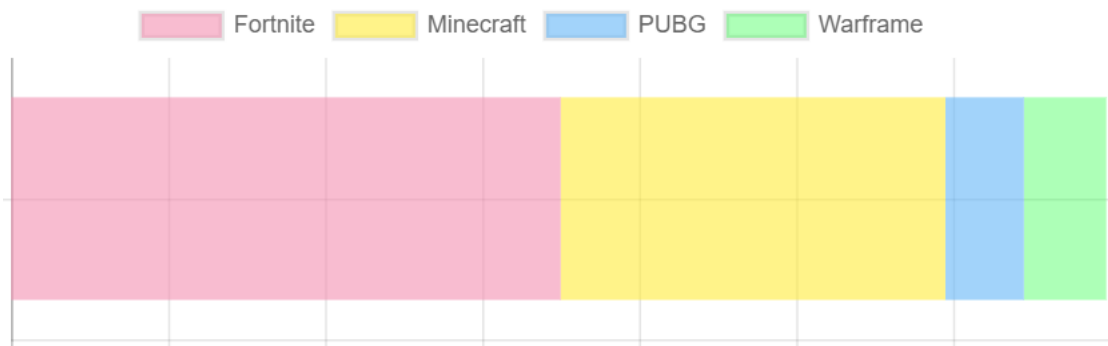
Which mobile game were the votes of League of Legends added to?

A. Fortnite

B. Minecraft

C. PUBG

D. Warframe

30 | Angelo works at the cafeteria of Princeton University. He took into account the number of students that purchased meals at their food stall. He kept a tally based on their age. The results can be seen below.

AGE RANGE	January	February	March	April
12-15	453	200	321	303
16-18	321	252	405	425
19-21	222	256	215	287
21 Above	300	190	250	305

Which of the following line charts best represents the total number of people per month range?

A.

B.

C.

D.