

Read the following instructions:

Answer **all** the questions on the answer sheet.

Read the instructions on the answer sheet.

Use **pencil** only.

The use of dictionaries is NOT permitted during the exam.

You must complete the answer sheet within the time limit.

At the end of the test, hand in your answer sheet.

Additional materials: Ruler and eraser.

Students are permitted to use calculators.

- 1 Jasem went to the toy store with his son Mustafa to buy him some toys. Mustafa placed some toys in the trolley.

The table below shows the price of each toy placed by Mustafa in the trolley:

Toy	Price (BD)
Water gun	3.000
Electric toy gun	4.000
Trucks	7.000
Remote control car	12.000
Phone	5.500
Building blocks	10.000
Roller skate	8.500
Colouring books	6.500

Jasem provided that his son can buy toys with a total price that does not exceed BD 25.

Which of the following groups Jasem **will not buy** for his son Mustafa?

- A Water Gun – remote control car – building blocks
- B Remote control car – roller skate – colouring books
- C Water gun – trucks – phone – roller skate
- D Electric toy gun – phone – roller skate – colouring books

- 2 In 2017, an automobile company introduced two new models of cars.

The following table shows the number of cars of the two new models sold in each quarter in Region 1:

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Model 1	90	80	110	122
Model 2	108	115	100	94

While the following table shows the number of cars sold in each quarter in Region 2:

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Model 1	95	100	123	105
Model 2	120	70	77	99

In which quarter of the year 2017 was the total number of sold cars of the two new models in both regions the highest?

- A** Quarter 1
- B** Quarter 2
- C** Quarter 3
- D** Quarter 4

3 Hesham's farm is famous for its large production of seasonal fruits.

Last year, its production was as following:

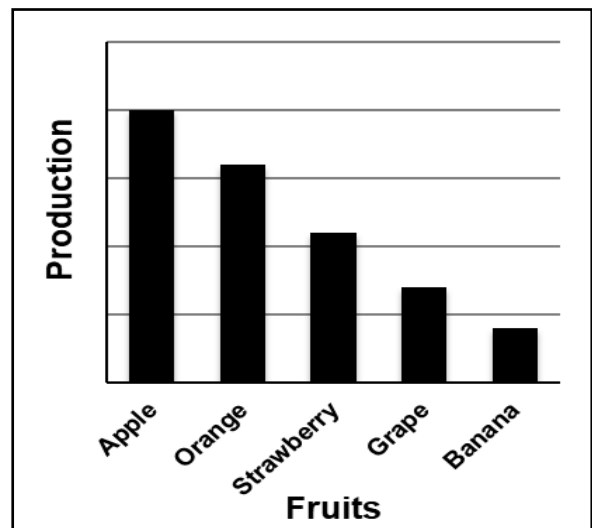
- Apples crop was bigger than the oranges crop and bigger than the strawberries crop.
- Grapes crop was less than the strawberries crop and bigger than the oranges crop.
- Orange crop was bigger than the bananas crop.

Which of the following graphs represents Hesham's fruit crops production for last year?

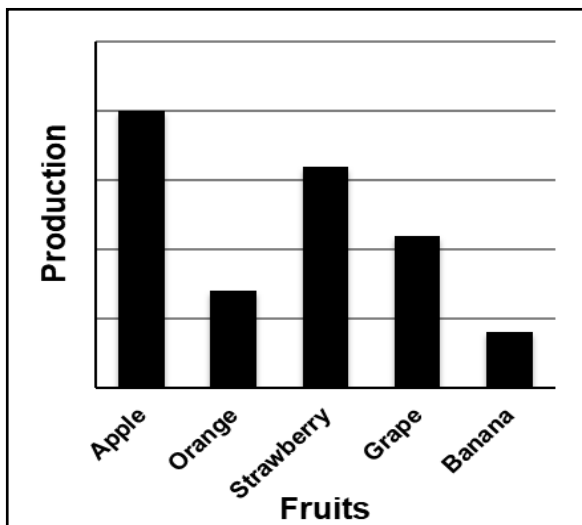
A



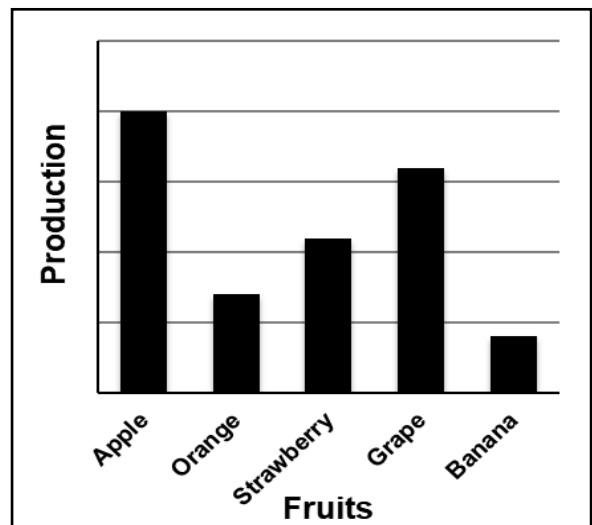
B



C



D



- 4 A Shawerma restaurant offers 10% discount on all available chicken dishes. The table below shows the types of available shawerma along with the price of each type according to its size.

Type	Price (BD)		
	Small Size	Medium Size	Large Size
Chicken Shawerma Dish	1.000	1.500	2.000
Beef Shawerma Dish	1.500	2.100	2.600
Chicken Tikka Shawerma Dish	1.200	1.800	2.300
Beef Tikka Shawerma Dish	1.800	2.400	3.000

Laila bought one small Chicken Shawerma dish, two medium Beef Tikka Shawerma dishes, and one medium Chicken Tikka Shawerma dish.

How much did Laila pay the restaurant for what she bought?

- A BD 5.080
- B BD 6.840
- C BD 7.320
- D BD 7.600

- 5 'Prosperity Company' achieves annual growth in its profits, and the table below shows the company's revenue and the growth rate for each year.

Year	Total Company Revenue (in million Dinars)	Annual Growth Rate
2018	500	10%
2019	550	10%
2020	605	10%

What is the expected total company revenue for the year 2022 if the annual growth rate continues at the same rate?

- A 66.56
- B 127.05
- C 665.50
- D 732.05

- 6** Hasan designed a simple digital code to write the words in English by replacing each letter of the alphabet with a two-digit number according to the order of each letter.
For example, letter A= 01, B= 02,, Y= 25, Z= 26 and so on.

What is the correct digital code for the word (BAHRAIN)?

- A** 02010818010914
- B** 218181914
- C** 2010818010914
- D** 02010814010918

- 7** Faisal wanted to buy a TV and 4 air conditioners, so he went to an electronics store. The price of the items including a 10% value-added tax (VAT) are BD 143 for one TV and BD 275 for one air conditioner.

The store is offering a promotion on air conditioners by excluding the value-added tax (VAT) for purchases of 3 air conditioners or more.

What is the total amount paid by Faisal for his purchase?

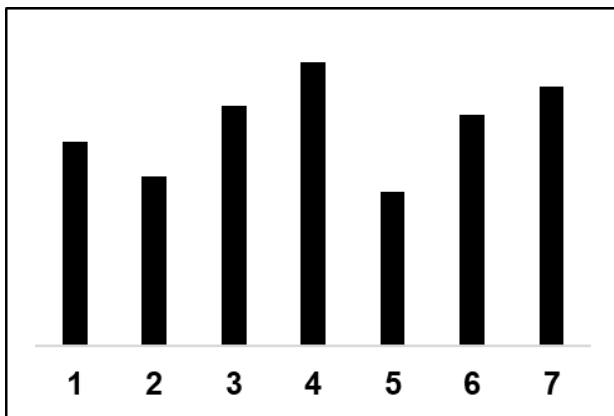
- A** BD 1130
- B** BD 1143
- C** BD 1230
- D** BD 1243

- 8 A beverages store owner conducted a study included 500 customers to find out their favourite flavour. The study data were as shown in the following table:

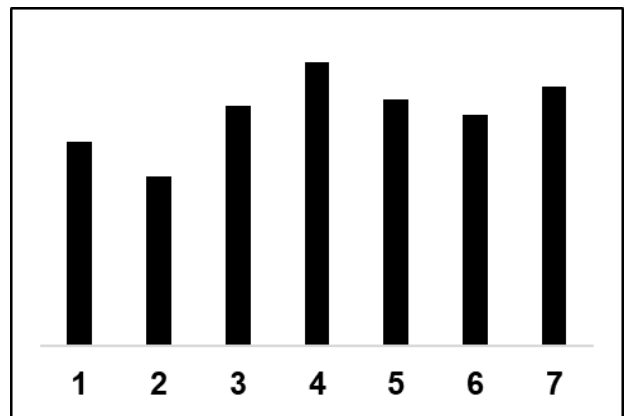
Order	1	2	3	4	5	6	7
Beverage Flavour	Orange	Apple	Blueberry	Peach	Vanilla	Strawberry	Mint
Number of People	66	55	78	92	50	75	84

Which of the following graphs illustrates the study data?

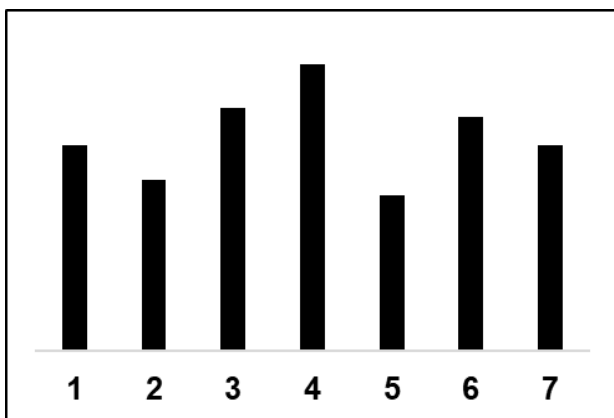
A



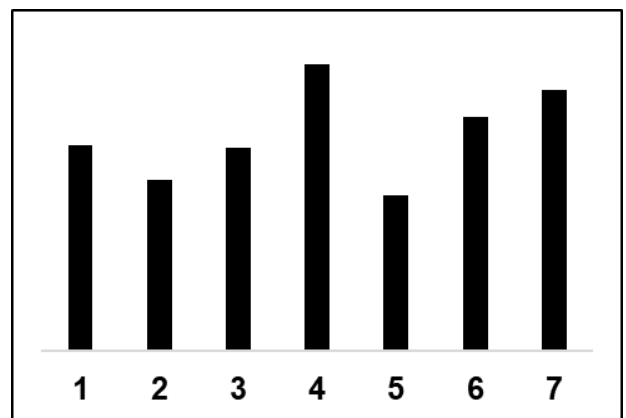
B



C



D



- 9 A sports club wanted to purchase 5 suits for its members who have completed 10 years of club membership. The club found two types of suits in two different stores, each with its own special offer as shown in the table below:

	Suit 1	Suit 2
Price (BD)	20	25
Offer	BD 10 discount for every BD 50	BD 25 discount for every BD 60

The club bought suits for its 5 members of both types.

What is the lowest price the club paid to purchase these 5 suits?

- A BD 75
- B BD 80
- C BD 90
- D BD 100

- 10** Ibrahim has 4 children; Anwar, Osama, Moein and Ala'a, aged 28, 50, 55, 47, in no particular order. Ibrahim wrote several notes about the ages of his children, which are:

- Anwar is younger than Osama.
- Osama is younger than Moein.
- Moein is not the oldest.

How old is Ala'a?

- A** 28
- B** 47
- C** 50
- D** 55

- 11** One of the coffee roasters sells only two types of coffee in bags. The first type is for BD 6 per bag, the second type is for BD 4 per bag.

If the roasters' revenue in one day was BD 46 by selling at least 2 bags of each type.

What is the highest number of bags that the roaster sold of both types?

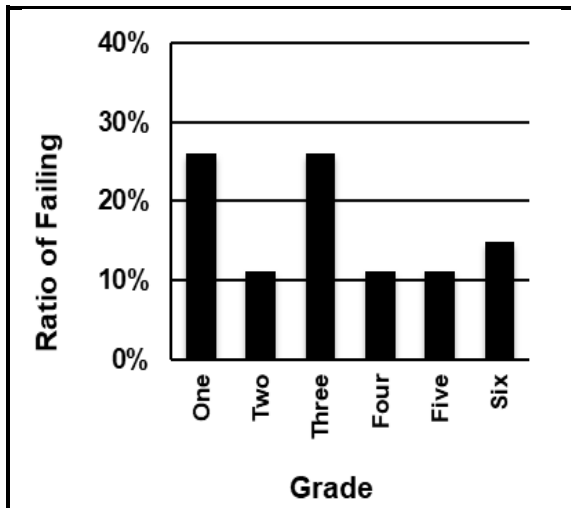
- A** 8
- B** 9
- C** 10
- D** 11

- 12 The table below shows the number of students who passed in a primary school in each grade:

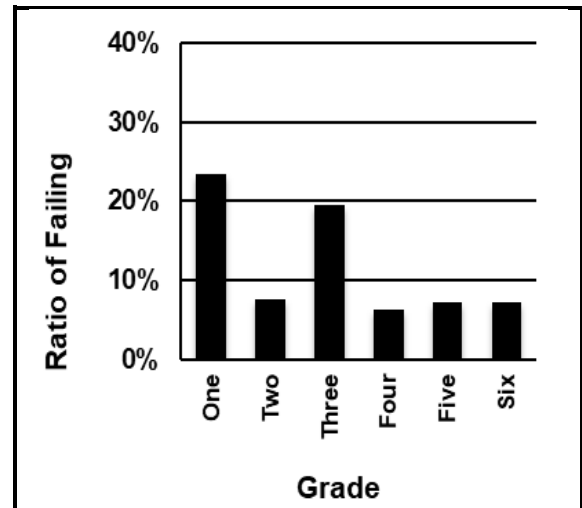
Grade	One	Two	Three	Four	Five	Six
Total number of students	150	200	180	240	210	280
Number of passed students	115	185	145	225	195	260

Which of the following graphical representations can represent the ratio of failing students in each grade compared to the total number of failing students in the school?

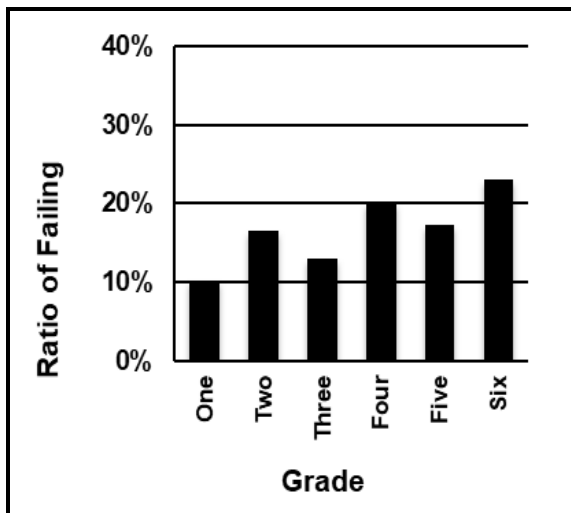
A



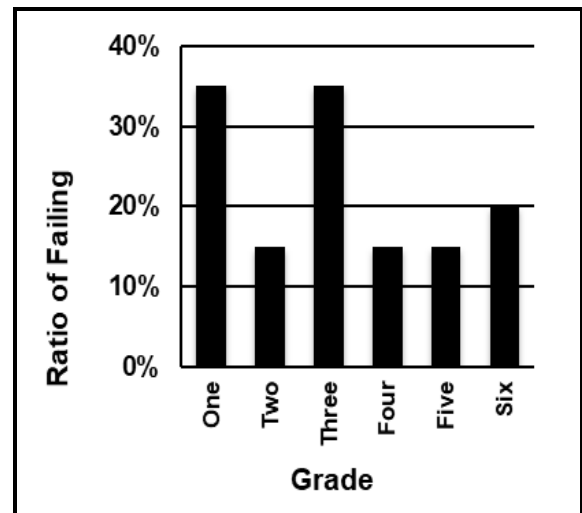
B



C



D



- 13** A family is planning to go directly to Souq Al-Mubarakiya in Kuwait. They found that they need to travel a distance of at least 450 km and up to 500 km.

The family will use their own car, which consumes between 12 liters and 15 liters of fuel per 100 km. The price of 1 liter of fuel ranges between BD 0.150 and BD 0.200.

What is the minimum fuel cost a family would pay to go to the Souq Al-Mubarakiya?

- A** BD 8.100
- B** BD 10.125
- C** BD 11.220
- D** BD 15.000

- 14** Mohammed asked his friend to create a password for him consisting of 4 different digit. The sum of the first and second digits should be 6, and the product of the third and fourth digits should also be 6.

How many passwords did Mohammed's friend provide for him to choose from?

- A** 3
- B** 6
- C** 12
- D** 28

- 15** Moosa wants to make 12 wooden chairs in 6 working hours in his carpentry workshop. Moosa knows that he needs 3 workers to make 2 chairs in 3 hours. He also has no less than 20 workers in his workshop who are trained to work at the same speed.

How many workers does Moosa need to make 12 wooden chairs in 6 hours?

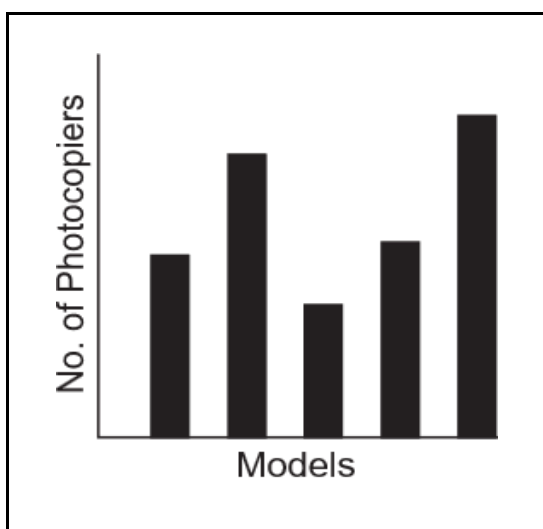
- A** 6
- B** 9
- C** 12
- D** 18

- 16** A Company conducts an inventory of the number of photocopiers sold each year. The following table illustrates data from the previous year:

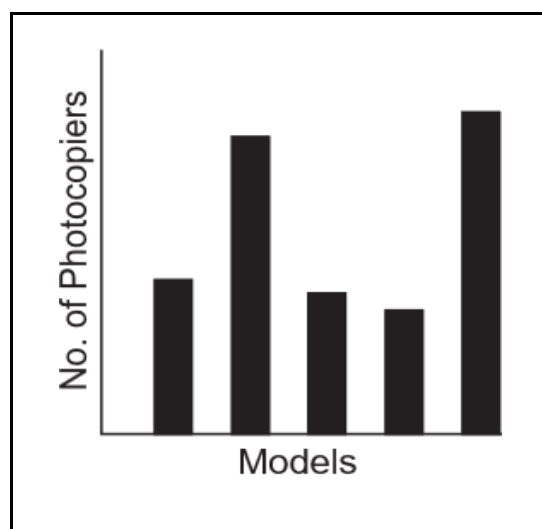
Model	Black & White 1	Black & White 2	Black & White 3	Coloured 1	Coloured 2
Number of photocopiers	240	450	294	190	510

Which of the following graphs is appropriately designed to represent the data mentioned above?

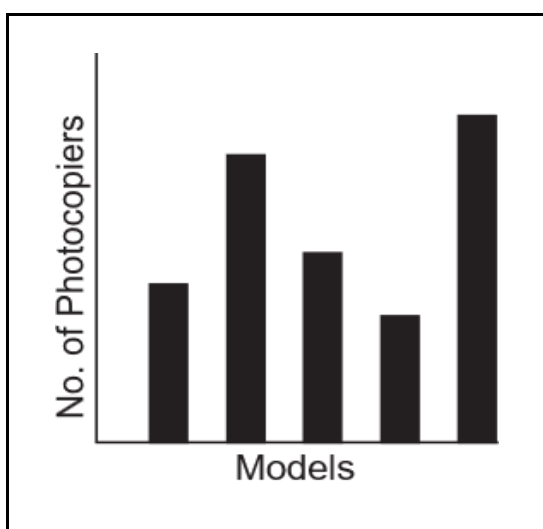
A



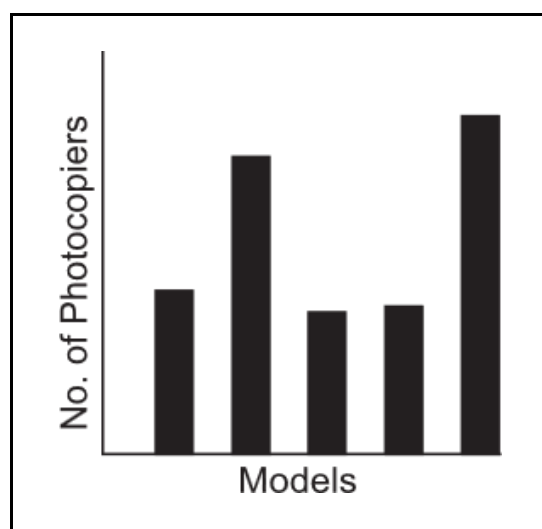
B



C



D



- 17** The student's academic number in high schools is written using 8 digits that can be repeated, according to certain conditions; the academic number consists of two parts: the 4 digits on the left represent the year the student entered high school, and the 4 digits on the right represent the student's sequence number.

For example, the student with the academic number 20220045 joined high school in 2022, and their sequence number is 45 among the students of that year.

After Ayman graduated from university, he worked in the registration office of a school and remembered that his academic number was unique because the number representing his sequence was half the number representing the year he joined high school. He mentioned to his colleague that he joined high school in the nineties.

How many possible academic numbers could Ayman's high school academic number have had?

- A** 1
- B** 4
- C** 5
- D** 10

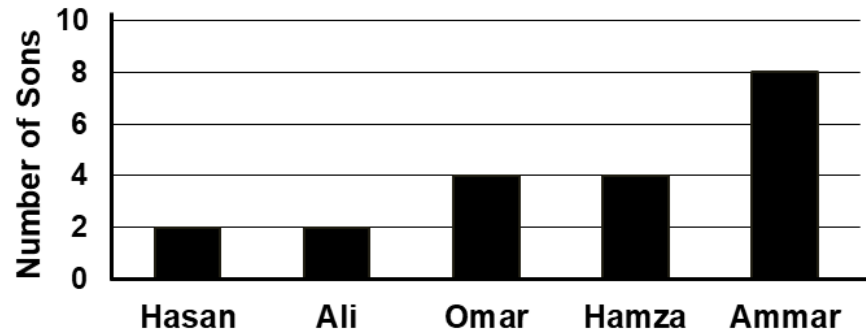
- 18** Hamed is working on preparing two types of meals. Preparing the first type takes half an hour, and he sells it for BD 6, while the second type takes a quarter of an hour to prepare, and he sells it for BD 4.

One day, Hamed worked for five consecutive hours to prepare the two types of meals and sold them all for BD 66.

How many meals of the first type did Hamed sell?

- A** 1
- B** 6
- C** 7
- D** 13

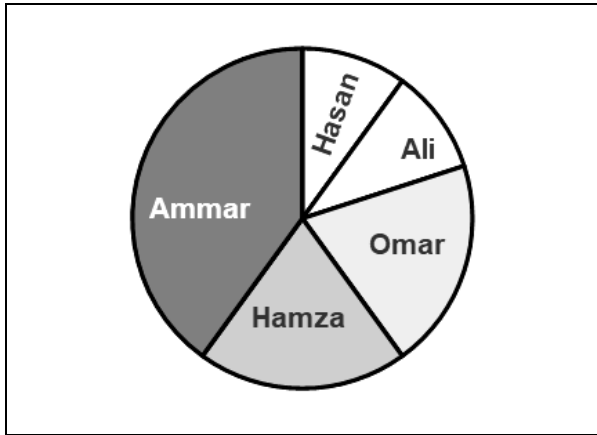
- 19 The following graph shows the number of children of five friends in 2015:



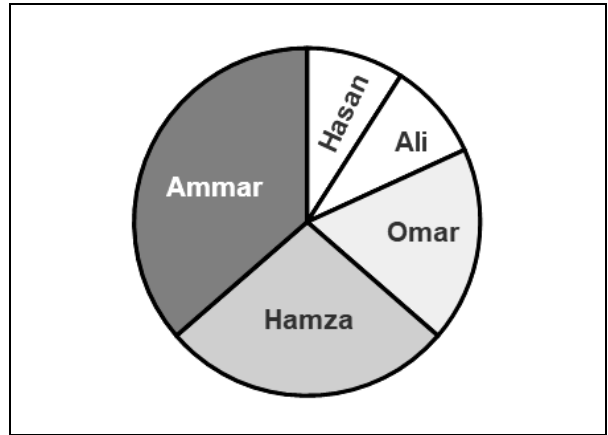
In 2016, each of Hasan and Ali had one child, and Hamza had twins, while Omar and Ammar did not have any children.

Which of the following charts shows the number of children each friend had in 2016?

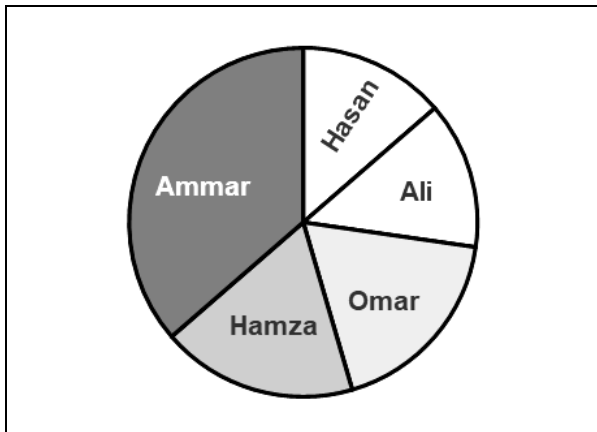
A



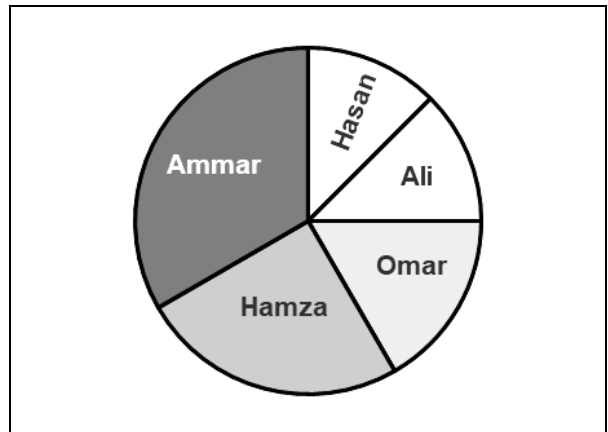
B



C



D



- 20** Hasan has a collection of coloured balls in three different colours (yellow, red, blue) and they are all in one bag. Hasan knows that 8 balls are not yellow, 12 balls are not red, and 10 balls are not blue.

How many blue balls does Hasan have?

- A** 5
- B** 10
- C** 15
- D** 20

- 21** Mariam participated in a cultural competition consisting of 15 questions. The competition relies on the following system for calculating points:

- The contestant receives one point for each question answered correctly (T).
- The contestant loses one point for each question answered incorrectly (F).
- The contestant receives one extra point each time when answering 3 consecutive questions correctly.
- The contestant loses one extra point each time when answering 3 consecutive questions incorrectly.
- The contestant cannot leave any question unanswered.

The table below shows some of Mariam's answers:

Question No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	T	T	T	F	F	T	T		F	T	T		F	F	T

By the end of the competition, Mariam scored 5 points in total.

What are the answers of Mariam in question 8 and question 12?

	Question 8	Question 12
A	T	T
B	T	F
C	F	T
D	F	F

- 22** On Bahrain Sport's Day, a school distributed 200 cards numbered from 100 to 300 to a group of students for a prize draw. The cards the school used were red, except for the cards that contained both digits 7 and 2 together, which were blue.

(For example, card number 137 is red, while card number 127 is blue)

How many blue cards were distributed to the students?

- A** 21
- B** 22
- C** 23
- D** 24

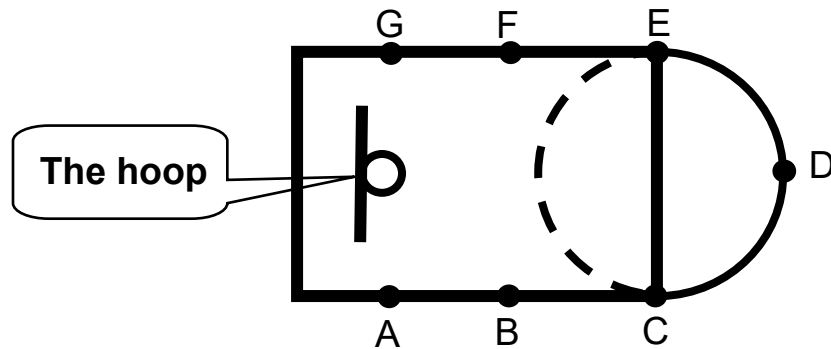
23 Grandpa Faisal is very happy when his grandchildren visit his house. Last Eid, all his 21 grandchildren visited him. Among them, 10 grandchildren are under 5 years old, 3 grandchildren are 8 years old, 5 grandchildren are over 20 years old. The remaining grandchildren are over 10 years old but under 20 years old. Every Eid, Grandpa Faisal gives some of his grandchildren who visit him during lunch a random amount of money, according to the following system:

- The grandchild who is under 5 years old is given BD 1 or BD 2.
- The grandchild who is over 5 years old but not exceeding 10 years old is given BD 3 or BD 5.
- The grandchild who is over 10 years old but not exceeding 20 years old is given BD 10 or BD 20.
- The grandchild who is over 20 years old gets only a greeting.

What is the minimum amount of money that Grandpa Faisal should have to ensure he gives his grandchildren the amounts he allocates for them each Eid in all possible scenarios?

- A** BD 35
- B** BD 49
- C** BD 72
- D** BD 95

- 24** Nasser set up a system for playing with his friend to earn points by scoring goals through shooting a basketball in to the hoop from specific spots, as shown in the diagram below.



The table below shows the system set up by Nasser to earn points in each round carried out by the player, where in each round the player throws the ball into the hoop to score goals from all the spots specified in the diagram. The player earns points for scoring or loses points for not scoring according to the following table below.

Spot	Win (point)	Lose (point)
A, G	3	2
B, F	5	3
C, E	7	5
D	10	7

Nasser's friend finished the first round with 8 points, and at the end of the second round he failed to score goals at spots A, D, E.

How many points are earned by Nasser's friend in both rounds?

- A** 6
- B** 8
- C** 14
- D** 42

- 25** Mahmood wants to reach a company for a job interview at 4:00 PM, yet he left his house late at 3:30 PM. Therefore, he used the navigation programme to find the best route to take to reach the company on time. The table below shows the options suggested by the programme based on the distance, the average speed, and the maximum delay time on the road.

Route	Distance (km)	Average speed (km/h)	Maximum delay time (min)
First	27	80	8
Second	30	100	4
Third	40	120	7
Fourth	25	100	9

What is the fastest route that Mahmood should take to reach the interview as soon as possible?

- A** First
- B** Second
- C** Third
- D** Fourth

26 Zainab and three of her friends got employed at the beginning of January 2006, with each friend working at a different company. They received different offers in terms of salary and annual increase over the basic salary. The job offers that the four friends received from four different companies are detailed below.

- The first company's offer provides a basic salary of BD 935, with 2.25% annual increase on the basic salary to be added to her monthly salary starting from January of each year.
- The second company's offer provides a basic salary of BD 940, with 3% annual increase on the basic salary added to her monthly salary starting from September of each year, provided that one year has passed since starting the job.
- The third company's offer provides a basic salary of BD 963, with 1.25% annual increase on the basic salary added to her monthly salary in the same month she started the job of each year, after one year of starting the job.
- The fourth company's offer provides a basic salary of BD 1000 without an annual increase.

In March 2009, Zainab received a salary higher than the salaries of her three friends.

In which company does Zainab work?

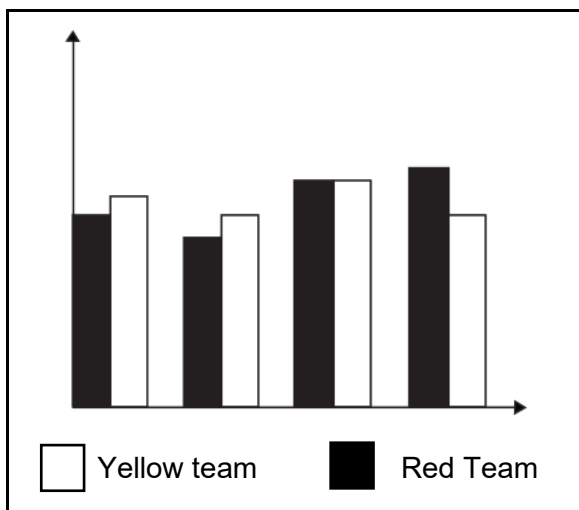
- A** First company
- B** Second company
- C** Third company
- D** Fourth company

- 27** Basketball is a team game in which the team that scores the most points in four quarters wins.

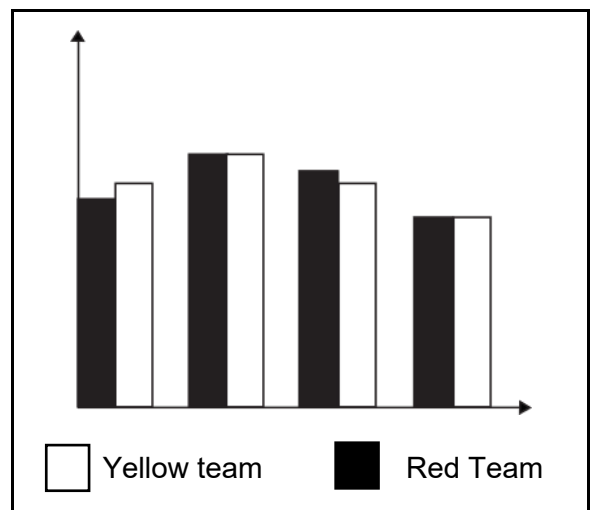
The red team played a match against the yellow team, and the yellow team won the game. Ahmed drew a chart showing the points scored by both teams in each of the four quarters.

Which of the following graphs could represent what Ahmed drew?

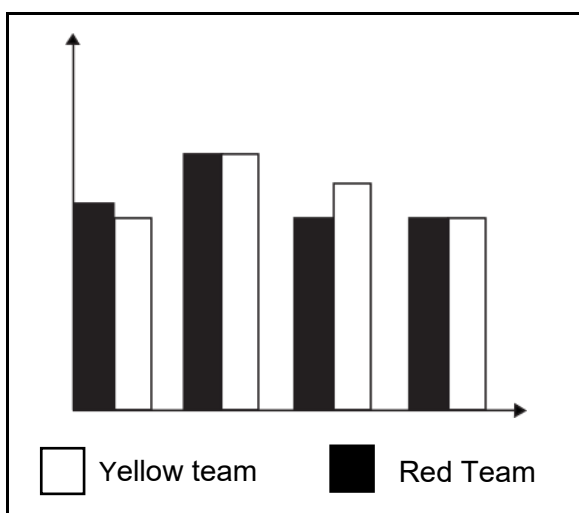
A



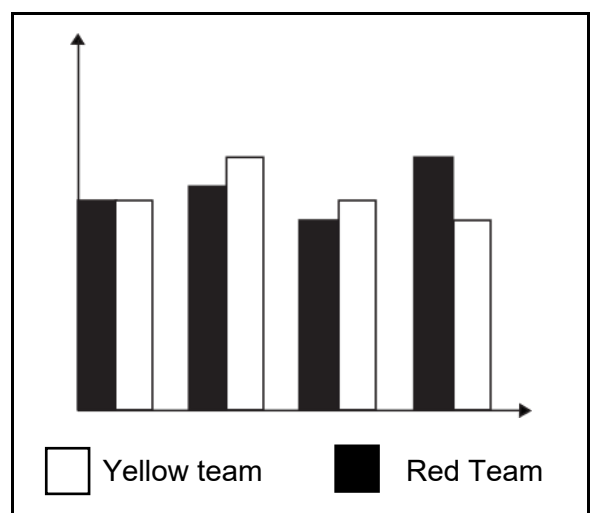
B



C



D



28 A university has set conditions for admission to medical colleges, and conditions for admission to engineering colleges, as follows:

- Medical colleges: Achieving a grade exceeding 95% in each of the following: chemistry, biology, and the GPA.
- Engineering colleges: Achieving a grade exceeding 90% in each of the following: mathematics, physics and the GPA.

The table below shows the grades of ten students in mathematics, physics, chemistry, biology, and their GPA.

Name	Mathematics	Physics	Chemistry	Biology	GPA
Fatima	90%	90%	98%	97%	96%
Hussein	95%	93%	90%	89%	91%
Mona	91%	90%	85%	87%	88%
Ayman	92%	89%	96%	97%	93%
Hala	98%	97%	97%	96%	97%
Abdullah	91%	91%	89%	90%	91%
Ali	89%	90%	95%	95%	90%
Dana	88%	81%	85%	86%	85%
Hessa	97%	95%	91%	92%	93%
Sameer	90%	87%	97%	98%	96%

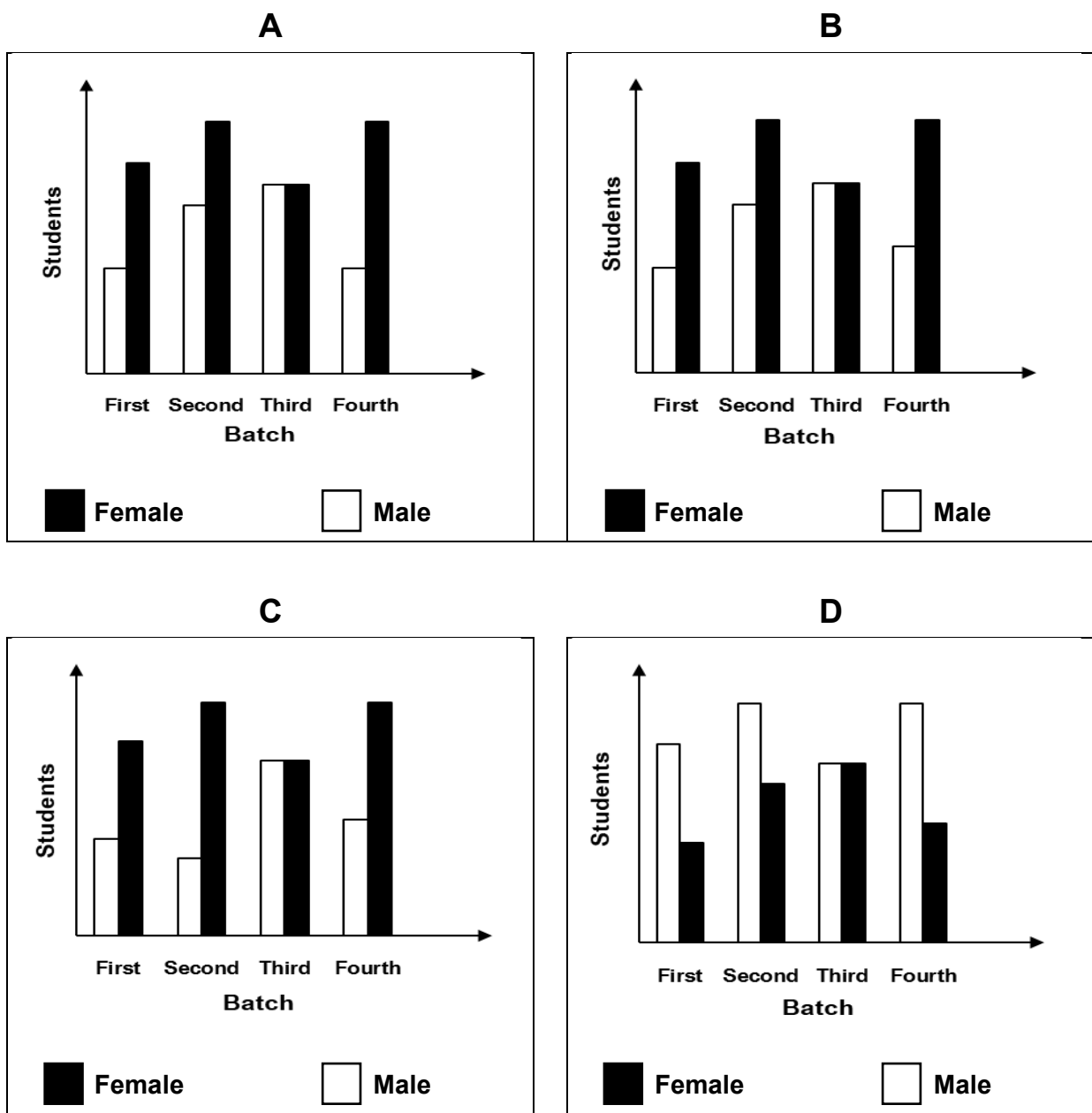
How many students can enroll in the engineering colleges at this university?

- A** 3
- B** 4
- C** 5
- D** 6

29 Four batches of students graduated from a university, as follows:

- The number of female students in the first batch is twice the number of male students in the same batch.
- The number of male students in the second batch is two-thirds the number of female students in the same batch.
- The number of male and female students is equal in the third batch.
- The number of male students in the fourth batch is more than half the number of female students in the same batch.

Which of the following graphs can represent the number of students in the four batches?



- 30** Khalid created a password for an account on an educational website consisting of four letters and four different digit numbers. He used the letters at the beginning of the password and the digit numbers at the end. For the letters, Khalid chose the first four letters of his full name in order, as for the number consist of the 4 digits is an odd number and divisible by 7, and the sum of its digits is 30.

How many options does Khalid have to write the numbers of the password according to the mentioned conditions?

- A** 1
- B** 2
- C** 3
- D** 12

- 31** Adnan booked a type X room at a resort for three nights using an online booking website, but when he arrived at the resort, he noticed that there was a 30% discount on type Z rooms if they were booked for more than four nights. Therefore, he decided to change his booking from type X to type Z for a period of five nights.

The table below shows the prices of rooms at the resort in Bahraini Dinars according to the number of nights.

Number of Nights	Room Booking Price (BD)						
	1	2	3	4	5	6	7
Type X	25	40	55	70	85	100	115
Type Y	31	51	71	91	109	129	145
Type Z	35	67	99	131	161	191	221

How much is the additional amount that should be paid by Adnan for changing his booking?

- A** BD 36.700
- B** BD 57.700
- C** BD 74.200
- D** BD 106.000

- 32** Ahmad, Muhammad and Jaber are friends who participated in a dart throwing match consisting of 4 consecutive rounds. Each player throws 5 times in each round, and gets one point for each successful throw. Then, the points of each player in the four rounds are summed, and the player with the highest total points wins.

The table below shows some of the rounds' points for the three friends, and the total points for each round:

Round	Ahmad's Points	Jaber's Points	Muhammad's Points	Total Points
1			2	6
2	4	1	1	6
3		3		12
4	2			9

All the friends scored at least one point in all of their rounds. Muhammad was the only one to score 5 points in just one round, and all of them did not score similar points in any round. By the end of the rounds, Ahmad won.

How many points did Ahmad score in the first round?

- A** 1
- B** 2
- C** 3
- D** 4

- 33** A high school organised a cultural competition for high school students, with only two students from each school participating.

The table below shows the stages of the cultural competition, the number of questions, and how points are calculated in each stage.

Stage	Number of Questions	Scoring
First	6	For each correct answer, the team receives 8 points, and does not lose any points for any wrong answer.
Second	4	For each correct answer, the team receives 12 points, and loses 4 points for each wrong answer.
Third	2	For each correct answer, the team receives double its total points, and loses half of its total points for each wrong answer.

The competition rules state that no questions should be left un answered and the correct answers for Al Walaa School team as follow:

4 correct answers in the first stage, 3 correct answers in the second stage, and no correct answers in the third stage.

What is the final score achieved by Al Walaa school team participating in the cultural competition?

- A** 16
- B** 17
- C** 32
- D** 64

- 34** The table below shows the details of one of the cars owned by Wael in his own car showroom:

Car Features	Cost Price (BD)	Selling Price (BD)
Full-option	22000	24500
Medium-option	17000	18600
Standard	15000	15900

Last month, Wael was able to get a net profit of BD 10700 by selling 5 cars from his showroom.

How many cars of 'medium-option' features did Wael sell?

- A** 2
- B** 3
- C** 4
- D** 5

- 35** Mohannad received BD 50000 prize from a bank and wanted to buy three cars for his three children.

Mohannad asked one of his children to gather data on three specific cars in terms of features. The table below shows the results of the son's research.

Car Type	Features (BD)		
	Standard	Medium	High
X	13500	15500	18500
Y	14000	16000	23000
Z	17000	20000	24000

Mohannad decided to spend the entire amount on three specific cars based on his son's research. Only one of the cars is of type Y, and he will not buy the same car twice in terms of type and features. However, he can buy two or three of the same type with different features.

What is the cost of type Y car that Mohannad will buy?

- A** 14000
- B** 16000
- C** 18500
- D** 23000

- 36** Khadija's job is transcribing research papers on the computer, as she receives the documents handwritten and then types it into the computer.

From her experience, Khadija divided the research papers into two types: simple and complex. Khadija needs 8 to 9 hours to type the simple research, and 10 to 11 hours to type the complex research.

To ensure easy communication with customers, she has set fixed prices for her work, simple research typing is for BD 30, complex research typing is for BD 45.

Last week, Khadija worked 208 hours on research typing, and she worked on at least 10 research papers of each type.

What is the maximum amount Khadija can earn for working 208 hours?

- A** 750
- B** 795
- C** 840
- D** 870

- 37** Hashem's family consists of a couple and five adult children (3 daughters and 2 sons). They decided to preform Umrah in the holy month of Ramadan this year. They found two offers from two different travel agencies. The table below shows the two offers with prices for accommodation per person according to the type of room and the cost of meals per person, along with the discount offered by both agencies.

Travel Agencies	Accommodation price per person according to the room (BD)			Meals per person	Discount
	Double	Triple	Quadruple		
First	65	56	43	20	10% on total price
Second	60	55	50	17	Only one person will receive a 50% discount, covering the cost of accommodations and meals, who has the lowest cost.

Hashem wants to book a private room for himself and his wife, and a private room for his daughters, but he does not mind if the travel agent added people from outside the family to his sons' room. He also wants to add meals to all the family members.

What is the lowest amount that Hashem can pay for their trip to perform Umrah?

- A** 345.600
- B** 470.500
- C** 471.600
- D** 488.000

- 38** Dalal bought four different products from a gift shop, the prices of which are shown in the table below. Two of the products bought by Dalal are subject to a 5% tax.

The following table shows the products' numbers and their original prices:

Product	Price
1	1.100
2	1.200
3	1.400
4	1.300

When Dalal paid the bill, she could not determine what of the two products were subject to tax.

What amount did Dalal pay for her purchase from the gift shop, given that she cannot determine with two items were subject to tax?

- A** BD 5.115
- B** BD 5.120
- C** BD 5.125
- D** BD 5.130

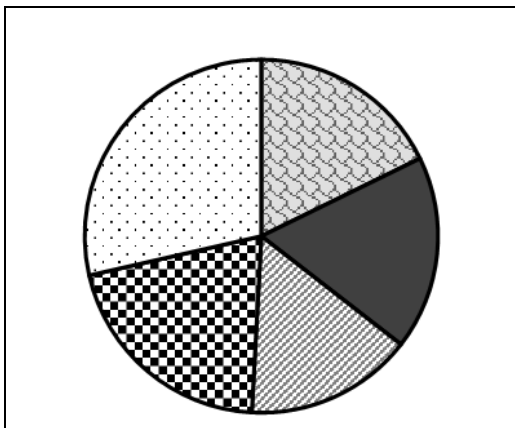
- 39** A learning resource centre specialist conducted an inventory of the books available in the school's centre. After completing the inventory, he provided the school principal the table below, which shows the type and number of books available.

Book type	Novel	History	Culture	Religion	Science
Number	102	82	71	95	132

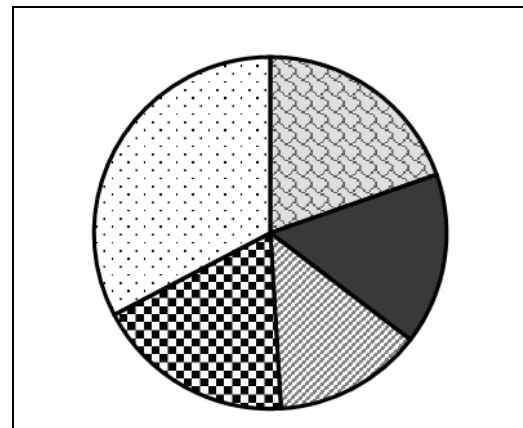
The school principal requested a chart of the data to present to the school board.

Which of the following charts could represent what the school principal requested?

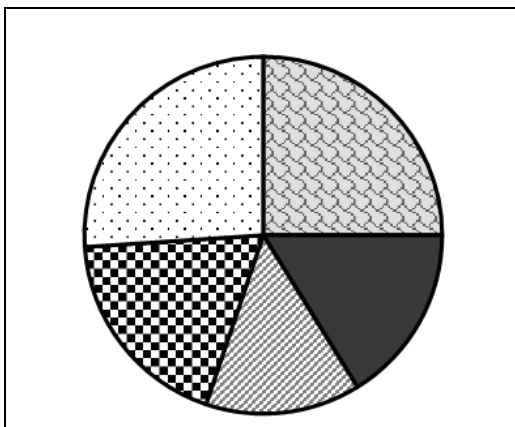
A



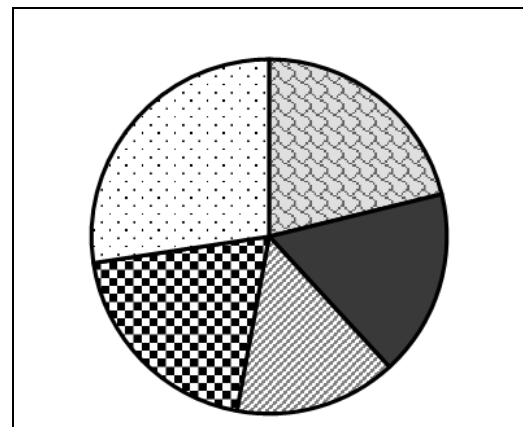
B



C



D



- 40** The electricity and water bills in a country are calculated using the tables below.

Electricity consumption cost calculation system:

Category	Consumption (in kilowatt)	Unit price	Added tax
1	First 100 kilowatts	\$ 0.20	-
2	Second 100 kilowatts	\$ 0.30	1% of the total financial value of the consumption
3	Third 100 kilowatts	\$ 0.50	3% of the total financial value of the consumption
4	Any extra kilowatts	\$ 0.70	5% of the total financial value of the consumption

Water consumption cost calculating system:

Category	Consumption (cubic metre)	Unit price	Added tax
1	First 50 cubic metres	\$ 0.60	-
2	Second 50 cubic metres	\$ 0.70	1% of the total financial value of the consumption
3	Third 50 cubic metres	\$ 0.80	3% of the total financial value of the consumption
4	Any extra cubic metres	\$ 0.90	5% of the total financial value of the consumption

The added tax value is calculated after calculating the total financial value of consumption using the percentage allocated for the category reached only.

If Mustafa's family consumed 210 kilowatts of electricity and 90 cubic metres of water last month, what is the value of electricity and water bill that Mustafa will pay this month?

- A** \$ 113.00
- B** \$ 113.73
- C** \$ 115.23
- D** \$ 115.75

