

## The author in brief

- Master degree in education, three diplomas, Bachelor degree in education
- 25 years of experience teaching mathematics at Generation Schools and Riyadh Schools.
- Instructional leader and supervisor for Qiyas tests at Riyadh Schools.
- Human development trainer, accredited by Mansoura University and Cambridge University.
- Accredited trainer by Qudrat Company and «Elkhawarezmy Junior».
- A trainer in Mawhiba Program which is related to King Abdul-Aziz \& His Companions Foundation for Giftedness and Creativity (MAWHIBA).
- The author of the book «The way to $100 \%$ in Qudrat Test, General Aptitude Test (GAT)».
- The author of $4101 \%$ in Mathematics and Achievement Tests for the secondary stage.
- The author of the book «My Son is Gifted» that enhances higher order thinking in mathematics.
- The author of the book «Educational Messages (True stories that make learning real fun)».
- The author of the book «Quick Answer Strategies» for Quodrat mathematics sums.
- The author of the book «My Potentials» which evaluates mathematics potentials for the primary stage.
- The author of the program «Computerized Quodrat» for training on electronic Quodrat Tests.
- The author of the series «Saud and Sara, in the Oasis of Mathematics», pre-school mathematics.
- The author of the book «100 Ideas \& Ideas» in Quodrat.
- Awarded the OMTA prize as a distinguished teacher in 2013 from King Abdul-Aziz \& His Companions Foundation for Giftedness and Creativity «MAWHIBA».


## My latest books and applications:

- The book «SAAT» which is the first English book for the Achievement Test in the Kingdom of Saudi Arabia.
- The book «The distinguished in Quodrat for university graduates».
- The first English book for Quodrat (General Aptitude Test) GAT, (Excellence at Quodrat).
- The book «Here we start the Quodrat»: skills, basics, and Quodrat strategies.
- The application «Quodrat $2 »$ : a free application which is compatible with all smart devices and tablets.
- The application «Maharati»: a free application for evaluating mathematics skills for the 4th, 5 th, and 6th grades.
- The program «The Tests»: an interesting and rigorous training program which is compliant with the tests of Qiyas Center.
- The application «Qiyas»: a comprehensive electronic library for all material related to Quodrat (Verbal and Quantitive).

Question and answer
The national project for acknowledging gifted students

Based on the high consideration of the kingdom of Saudi Arabia and the unlimited support of its wise leadership to sponsor and care for the gifted students, the idea of adopting a national joint project, carried out by the most important organizations in this field, has emerged.

This project aims at developing an approach that helps in discovering gifted students, sponsoring and supporting them. This project also guarantees using a developed scientific method to recognize gifted and promising male and female students across the whole kingdom of Saudi Arabia, of all ages at the different stages of public education.



## How to be nominated for Mawhiba Scale Tests?

 The student is required to do the scale test of Mawhiba throughout one of these ways:1) The student's school nominates him/her.
2) The nomination of the student's parent.
3) The student nominates himself/herself.

On condition that the student registers his/her details according to the following conditions:

- Completing and registering nomination in the project.
- The student should be one of the targeted categories: (third grade primary stage, sixth grade primary stage, or third grade intermediate stage).

For those students who are not registered in Mawhiba Gate, they should do registration:

[^0]
## In case of being accepted，can the student choose the program？

The national project provides services to students who get 665 and above，and distributing the accepted students on the programs is done according to the program criteria，hence each program has its own criteria．

The grade which obtained by the student will determine the type of participation in the project，and the student has the right to choose his program from the given ones．


In case of taking the scale of Mawhiba for the multiple mental abilities and achieving the required score，the student can have an opportunity to participate in a variety of programs and activities available for the same year and the following years．
1）The scholarships at the partnership schools under Mawhiba supervision．
2）Local summer programs of Mawhiba under Mawhiba supervision．
3）Mawhiba international summer programs under Mawhiba supervision．
4）The summer programs and gatherings which are supervised by the gifted students departments in ministry of education．
5）Being nominated for accelerated learning program offered by ministry of education．
6）Being nominated for national Olympiad for scientific creativity．
7）Being nominated for university scholarships．
8）Local and international participations in scientific conferences．

The results are announced on Mawhiba gate and inquiring about the result can be done by the civil register or the subscription．


## Mawhiba test measures the ability for...



## Understanding the question is half of the answer：

Reading the question carefully and getting what is required precisely is so important．This will help you to determine the correct answer and keep away from giving wrong answers，especially those tricky answers which tempt the inaccurate students．


## Use the general rule if you forget the special rule of the shape：

For example，if you forget the rule of the rhombus＇s perimeter； therefore，the general rule of the perimeter of any side is the length of the outside line surrounding the side． And if you forget the rule of area of any shape，then you can divide it into parts that are familiar to you，and you know the rule of its area．


## Don＇t spend much time on the difficult questions：

Try to have a proper strategy for answering the questions．Otherwise when you find it hard，you can make＂educated guess＂ and answer the question because you are running out of time．

The given figures are not exact：

The figures in the quantitative section are often approximate， however they could be a source of the answer if you tackle
them well．

## Compatible with kangaroo and Olympiad tests



Kangaroo K.S.A

## Science 103 Section

- Experimental Test 14........... 104
- Experimental Test 15


## Quantitative Section

- Experimental Test 7 ............... 52
- Experimental Test 8 ............... 58
- Experimental Test 9............... 64
- Experimental Test 10.............. 70


## Experimental questions

- Mathematical and Spatial Reasoning 4
- Verbal and comprehension reasoning 6
- Mental flexibility 8
- Scientific and mechanical reasoning 10


## 77 Mental Flexibility

- Experimental Test 11 78
- Experimental Test 12.............. 86
- Experimental Test 13 94
13


## Verbal Section

- Experimental Test 1................ 14
- Experimental Test 2 ................ 21
- Experimental Test 3.............. 27
- Experimental Test 4.............. 30
- Experimental Test 5 ............... 35



## Contents of the book

## Experimental questions

- Mathematical and Spatial Reasoning
- Language Reasoning and Reading Comprehension.
- Mental flexibility. ... .omprehension...... 4
- Scientific and mechanical r..................................................... 6


## Mental Flexibility

It is the ability to produce creative ideas and solve problems.
(1) Identify the suitable shape to replace the question mark.

| (A) $\uparrow \uparrow \uparrow \uparrow$ (B) $\uparrow \uparrow \uparrow \downarrow$ | ( $\downarrow \uparrow \uparrow \uparrow$ (D) $\downarrow \downarrow \downarrow \downarrow$ |
| :--- | :--- | :--- | :--- |

A There are always three arrows pointing upwards, and just one arrow pointing downwards, and this arrow is alternatively placed, from the first, to the second, to the third, to the fourth. $B$

The following sentences contain an untrue underlined introduction. Choose the answer which completes the sentences logically

2 If a chicken hunts rabbits and an eagle is a bird of prey, then a chicken .........


A Since a chicken hunts rabbits, then a chicken preys on animals.
(C)

3 Find the missing number in the following figures:

(A) 10
$\square$ (C)

7
D

6

A The rule:
the sum of the two numbers in the squares below $\times 2=$ the number in the square above.
$(2+3) \times 2=10$
$(8+?) \times 28$
( -2$)$
$(7+4) \times 2=22$
$8+?=14$
$(9+11) \times 2=40$
$\therefore ?=6$

# Scientific and Mechanical Reasoning 

This is benefiting from facts and data in the fields of physics, chemistry, biology, and making a logical inference based on induction.

1 In the following shape there is an iron bar $(A)$ connected to another iron bar ( $B$ ) which has light metal coins ( $1,2,3,4$ ). They are attached to the bar with wax. If we heat the iron bar ( $A$ ), which coins fall first?

(A) 1 and 2
B) 3 and 4
(C) 2 and 3
(D) 4 and 1

A When we heat the bar $(A)$, heat is transferred to the bar $(B)$, and then the two coins 2 and 3 fall because they acquired the highest temperature (by being near to the bar (A)). The answer is: (C)

2
Which lamp, if not working, leads to turning off all the lamps in the circuit of the following figure?

(A) 1
(B)
2 $\square$

## Verbal Section

# 14 <br> - Experimental Test 4 <br> - Experimental Test 5 

## Experimental

## Test 1

Select the shape which fills in the space and gives a similar relation to what is inside the right box.


## Answers of Experimental Test 1

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | B | C | A | B | B | A | A | D | B |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| A | C | B | C | C | C | B | C | C | B |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| A | C | B | D | C | D | A | D | B | D |

## (1) B

The earphones are put on the ears, and the glasses are put on the eyes.


The washing machine is used for washing clothes, and the fridge is used for preserving fruit.

## (3) C

The laptop and the desktop computer are both computers; while the mobile phone and the landline telephone are of the same category.

## 4. A

The board is used inside classrooms at schools, and the electrocardiogram device is used in operation rooms at hospitals.

> (5) B

A bee gives us honey, and a cow gives us milk.


The balloon and the plane fly in the air, while the boat and the ship move in water.

## 7 A

Geese and ducks are domestic birds that don't usually fly, while the pigeon and the sparrow are of the birds which fly in the air.

The spoon is put in the plate to get out food and the bucket is put in the well to get out water from it.


The juice is made from oranges, and the ring is made of gold.
(10) B

The perfume is made from flowers, and the dress is made of cloth.
(11) A

The strawberries and the pomegranates are from fruit, while carrots and lettuce are from vegetables.


Oranges and bananas are from the fruit, while beans and green beans are from legumes.


The doctor uses a scalpel, and the soldier uses a rifle.

# Quantitative Section 

- Experimental test 6
- Experimental test 7

Experimenta test 8- Experimental test 9
52

- Experimental test 10 ..... 58

15 Which one of the following numbers when approximated to the nearest thousand, it does not become 10000?
(A) 10387
(B)
9531
(c)
9522
(D) 9499

16 Mazen divided each pizza into 8 pieces; therefore, if the total number of all pieces of pizza was 72 pieces, then how many pizzas did Mazen have?

$\square$
$\square$
 C 9 7

17 The greatest number we can form from these digits: $6,9,0,1,4$ without repeating them is:
(A) 96410
$\square$

$\square$
$\square$ D 01469

18 Which one of the following companies produces the biggest numbers of mobile phones?


D SONY
9899800

19 Sara memorized 7 more Suras of Quran than Arwa memorized. Then if the total of what Sara and Arwa together memorized was 37 Suras, how many Suras did Arwa memorize?

A 30 (B) $\square$
 C 17 D 15

20 Identify the pattern in the sequence of these numbers: 1, 3, 7, 15, 31
(A) We multiply by 2 and add 1
(C) We multiply by 3
(B)
We add 2 each time
D We add 4 each time

The distinguished in Mawhiba Scale

|  | A | (B) | C | D |
| :---: | :---: | :---: | :---: | :---: |
|  | (A) | B | C | D |
|  | (A) | (B) | (c) | D |
|  | (A) | (B) | (c) | D |
|  | (A) | (B) | (c) | D |
|  | (A) | (B) | (c) | ( ${ }^{\text {d }}$ |
|  | (A) | B | (c) | (D) |
|  | (A) | (B) | (c) | D |
|  | A | B | (c) | (D) |
|  | (A) | B | c | D |
|  | (A) | (B) | (c) | D |
|  | (A) | (B) | c | D |
|  | (A) | (B) | (c) | D |
|  | (A) | (B) | (c) | (D) |
|  | (A) | B | (c) | D |
|  | (A) | B | c | (D) |
|  | (A) | B | (c) | D |
|  | (A) | (B) | c | D |
|  | (A) | B | c | D |
|  | (A) | B | c | D |

## Experimental <br> Test 7

## Remember:

There is only one correct answer for each question.
The answer should be shaded for each question in the answer sheet.

1 You went to a farm and saw a group of sheep, and you counted their legs and their eyes and found that they all have 28 legs and 14 eyes. Then how many sheep did you see?


2 If Abdullah was taller than Mohammed and Mohammed was shorter than Khalid and taller than Mahmoud. Then which one is the shortest?
A Abdullah
(B) Mohammed
(C) Khalid
(D) Mahmoud

3 A person saw a herd of cows and said: If I owned a similar number and half of it in addition to the cow I already have, I would have one hundred cows. How many cows are there in the herd?

(A) 66
$\square$
$\square$
38
(D) 36

4 If we need 3 sticks of matches to form one triangle, 5 sticks of matches to form two triangles, and 7 sticks to form 3 triangles, then how many sticks are needed to form 37 triangles?

(A) 73
(B)
75
c)

108
111

5 Mohammed said: The number of my brothers is similar to the number of my sisters, and his sister Mariam said: The number of my brothers is double the number of my sisters. Then how many children are there in this family?
A
4
B
5
c
7
D
8


2
The pen's price $=\frac{45}{5}=9$ riyals
81 riyals The price of 9 pens $(9 \times 9=81)$


4
(D
If the price of the two thobes $=200$ riyals Then the price of one thobe $=100$ riyals And the price of the ghotra $=30$ riyals
5. C


C $=D+B$
(30) 0 + 0
, A $=40$

(11.C


Half Pizza $=6$ pieces
Therefore, the whole pizza $=2 \times 6=12$ pieces
The found parts are 8 parts The missing parts are 4 parts
(12)


In the figure we find that all cubes were painted on 4 sides except for the two cubes at the top.


$$
\text { If: } 5 \times 7=35
$$

Then: we buy 7 groups with 35 riyals and each group has 6 pieces of ice cream $(6 \times 7=42)$
The remaining will be only one riyal we use to buy one piece ( $42+1=43$ pieces)

$$
\begin{array}{r}
2,5,10,17,26, \ldots . \\
26+11=37
\end{array}
$$

## (15) $D$

Noura: 3 arrows outside $=6$ points (each arrow 2 points) Hessa: 2 arrows outside $=4$ points, and one arrow in the middle $=4$ points
Ghazal: 3 arrows in the middle $=4 \times 3=12$ points
(16) C

The length of the shadow $=\frac{1}{2}$ the real length If the minaret's height is 15 m , then the length of its shadow $=7 \frac{1}{2} \mathrm{~m}$

$$
\text { (17) } B
$$

We use the method of answering from the end of the question.

Friday Saturday Sunday Monday Tuesday Wednesday


1,2
$3,4 \quad 5,6-7$
(18) D
$\underset{\text { The sister }}{8}+\underset{\text { Rima }}{9}+\underset{\text { The brother }}{10}=27$
(19.c)

The integers which are greater than 10 and smaller than 25 are:

1112131415161718192021222324
The required numbers are: $12,18,20,21$
They are (4)


Therefore, the most expensive is
 and the least expensive is

## Mental Flexibility



- Experimental Test 17
- Experimental Test 12
- Experimental Test 13

If the following figure is folded, to from a cube, which one of the following shapes will be the cube?

A

B



17 Zeinab folded the paper to the half and cut a part of it (while being folded) as it is shown in the picture. Then what is the shape that appears when she unfolds the paper?


18 In an ancient language, the symbols represent

the following numbers $1,2,3,4,5$ but no one knows each symbol and what it represents for numbers. However, we have:
$\pi 11 T=$



Then which symbol represents number 3 ?
(A)

(B)次 (c) 8 (D) TMT

19 Some pirates have two boxes, the one on the left contains 10 coins, and the one on the right is empty. Starting from tomorrow, the pirates will put one coin inside the left box and two coins inside the right box every day. Then how many days will it take the pirates to fill in the two boxes with an equal number of the coins?

A
5 $\square$
$\square$ c 10
D
12

20 Which one of these bugs should leave to have the total number of the dots on the rest of the bugs to be 20 dots?

A The bug with the five dots.
C The bug with the six dots.
B The bug with the seven dots.
D The bug with the four dots.

## Science Section

## Experimental Test 14

Remember:
There is only one correct answer for each question. The answer should be shaded for each question in the answer sheet.

1 At the weekend, Fahd and his family went on a picnic near Al Taif city.
Fahd noticed that there were high mountains to the east, and flat plains to the west.
Which reason is behind forming this?

There is a river
The intensity of hot temperature
There is an earthquake
The change of weather conditions

2 Ahmed wanted to push a box in a straight line. Then what is the best possible way?


3 Which phase of the moon will be next according to the following order?



8 Meshaal decided to increase the speed of his toy car using his tools to make a smooth sloping surface as shown in the illustration. What do you suggest for him to increase the speed of his car?


Increasing the size of the car tires
B
Increasing the angle of the sloping surface
Coloring the surface of the slopeExchanging the sloping surface with a longer one

9 Four things were put at the same distance from the magnet. Which one is easily attracted to the magnet?


A 3 grams of nails
2 grams of iron pieces

10 In the following figure, there are some buttons fixed by using pieces of wax. From which item will the buttons fall first?
A All of them at the same time
(C) The ruler
The pen
The spoon

11 Nawaf did an experiment using a thin stick to measure the change of the stick's shadow according to the sun's position along the day. He wrote down his notes on a paper. Which figure shows that he is at noon?


12 When you let the ball ( $x$ ) slide on this smooth surface, what do you expect to happen?


Only ball number (3) falls.
C The two balls (2) and (3) fall
B
The tree balls fall in the hole
D The given data isn't enough

Compatible with kangaroo and Olympiad tests

Kangaroo K.S.A

## Experimental questions

- Mathematical and Spatial Reasoning
- Verbal and comprehension reasoning
- Mental flexibility ............................ 4



## Verbal

## and comprehension reasoning

This is applying language rules and using them to deal with the reading context to deduce meanings and rearrange them.

1 The relation between: (Brush : Art) is similar to the relation between:
(A) Book: Paper
C Microscope: Magnifying
(B) Measurement : Length
(D) Water: Glass

A A Brush is used for drawing, and a microscope is used for magnifying things. (C)

2 A cub is to a lion as a puppy is to
(A) Sheep
(B) Dog
(C) Donkey
(D) Tiger

A A cub is a small lion, and a puppy is a small dog.
B

3 Fill in the spaces with a suitable choice:
A

B

c

D


A A cow, a tiger, and a rabbit are mammals, but a crocodile lays eggs.
A penguin, a duck, and an ostrich are birds which cannot fly and lay eggs, but a human is a mammal.. (C)

4 The word which is given to a group of birds is:
(A) Herd
(B)
Team
(c)
Chickens
D
Flock

A A group of birds is called flock. D

A Point (C) represents the highest altitude and therefore it represents the point in which the ball has the largest force. (C)

5 If there is an escalator moving downward, and a person wanted to ascend it in the opposite direction with the same speed of the escalator. Which figure represents the right position after half a minute?


A The speed of the person to an observer equals zero, since the person's speed is equal to the escalator when they are in two opposite directions. Therefore, the person appears as if he is fixed in the same place from the starting point.

5 In the given figure, which vehicle arrives first?

(A) The bus
B The car
C They arrive together
It is unknown

A Since: Time $=\frac{\text { Distance }}{\text { Speed }}$
Therefore: time of the car's arrival $=\frac{1000}{100}=10$ hours.
And the time of the bus's arrival $=\frac{500}{50}=10$ hours.
They arrive at the same time. C


## Experimental Tests

87 Appendixes
of the book

- Mental flexibility appendix 88
- Kangaroo and Olympiad Important appendix.101

13

Experimental
tose
13

- Experimental Test 1 ..... 14
- Experimental Test 2 ..... 21
- Experimental Test 3 ..... 28
- Experimental Test 4 ..... 35
- Experimental Test 5 ..... 42
- Experimental Test 6 ..... 49
- Experimental Test 7 ..... 57
- Experimental Test 8 ..... 64
- Experimental Test 9 ..... 72
- Experimental Test 10 ..... 79Important appendix8- Kangaroo and Olympiad.



## Experimental questions

- Verbal and comprehension reasoning 6
- Mental flexibility 8
- Scientific and mechanical reasoning 10


## Introductions of the book

## Experimental Test 1

$\ddot{O}=$ Remember:
There is only one correct answer for each question. Shading the correct answer should be done in front of each question in the answer sheet.

1 Mohamed spends quarter of his day at school and one third of his day sleeping. The fraction which represents the remainder of his day is:
(A) $\frac{3}{12}$
(B) $\frac{4}{21}$ $\square$ (C) $\frac{6}{21}$ (D) $\frac{5}{12}$

2 Six consecutive integers, the total of their last three numbers equals 324, what is the total the first three numbers?
(A)
321
(B)
318
(c)
C
315
D 106

3 Fill in the gap with the suitable answer:


5 You went to a farm and saw a group of sheep. You counted their legs and their eyes; and you found that they all have 28 legs and 14 eyes. Then, how many sheep did you see?
(A)
7
B
14

$$
c
$$

21
(D
42

6 If Abdullah is taller than Mohammad, and Mohammad is shorter than Khalid and taller than Mahmoud. Then, which one is the shortest?
(A) Abdullah
(B)
Mohammad
(C)
Khalid
(D) Mahmoud

7 A cubic container with edge length 6 cm . Its third is filled with water then the volume of water in this container in cubic centimeter is:
(A)
72
(B)
84
-
114
D
216

## 1. D

$\because \frac{1}{4}+\frac{1}{3}$
(Make a common denominator)
$=\frac{3}{12}+\frac{4}{12}$
$=\frac{7}{12}$
Therefore, the remaining of the day $=1-\frac{7}{12}$

$$
=\frac{12}{12}-\frac{7}{12}=\frac{5}{12}
$$

## (2) C

The mean of the first three numbers $=\frac{324}{3}=108$
Therefore, the last three numbers are:
109, 108, 107
Therefore, the sum of the first three numbers
$=106+105+104$
$=315$
$\left\{\begin{array}{c}\begin{array}{c|c|c|c|}\hline 90^{\circ} & \frac{1}{4} & 180^{\circ} & \frac{1}{2} \\ \because \text { AS The total measurement of the circle's angle }=360^{\circ}\end{array} \\ \therefore 90^{\circ}=\frac{1}{4}, 180^{\circ}=\frac{1}{2} \\ , 360^{\circ}=\text { a complete circle }=1\end{array}\right\}$


In the first circle:

$\frac{1}{2}(4) \times(1)$
In the second circle: $\frac{1}{2}(8) \times(4)=16(\checkmark)$
In the third circle: $\frac{1}{2}(18) \times(L)=36$

$$
\begin{aligned}
& \therefore 9 \times L=36 \\
& \therefore L=4
\end{aligned}
$$

## (5) A

The sheep has 4 legs and 2 eyes

$$
28 \div 4=7, \quad 14 \div 2=7
$$

$\therefore$ Then the number of sheep is 7
(6) D

By using the strategy of drawing the problem and excluding.

$\because$ Abdullah is taller than Mohammed.
$\therefore$ Abdullah isn't the shortest.
,$\because$ Mohammed is shorter than Khalid.
$\therefore$ Khalid isn't the shortest.
,$\because$ Mohammed is taller than Mahmoud.
$\therefore$ Mohammed isn't the shortest.
$\therefore$ Mahmoud is the shortest.

$\because$ Since the height of water level $=\frac{6}{3}=2 \mathrm{~cm}$
Therefore, the water's volume $=6 \times 6 \times 2$

$$
=72 \mathrm{~cm}^{3}
$$



The area of the shaded part = The area of $-4 \times$ The area of the square $-4 \times$ the triangle

$$
\begin{aligned}
& =(10 \times 10)-4\left(\frac{1}{2} \times 6 \times 4\right) \\
& =100-4 \times 12 \\
& =100-48=52 \mathrm{~cm}^{2}
\end{aligned}
$$

The distinguished in Mawhiba Scale


## EL-Safady

EL-Safady (Salah Eldin Khalil Aibak) was born in 764 Hejri. His literature was the best in his era. He doesn't stick to rhyme if he wrote biographies. His poetry is abundant, and some of it is very good. He is considered as an active clever author. As he said, he wrote in his own handwriting, 500 volumes included in 50 classifications. Moreover, he wrote many books in poetry and composition.

21 EL-Safady was born in:
A the seventh decade of the seventh century
B the sixth decade of the eighth century
C the sixth decade of the seventh century
(D the seventh decade of the eighth century

22 From the text, we understand that El-Safady's poetry:
A mostly distinguished and little is undistinguished
B some of it is distinguished and some other parts are more distinguished
C half of it is distinguished
D little of it is distinguished

23 From the context of the text we understand that the words volume and classification are:
(A) synonym

B The volume is more general than the classification
C The classification is more general than the volumeThe volume may contain more than one classification

24 The two pronouns in the sentence (his poetry $\qquad$ and some of it):

A The first and the second refer to El-safady
B The first refers to the poet and the second to the poetry
C The first and the second refer to the poetry
D The first refers to the poetry and the second refers to the poet
25 The best title for this text is:
(A) El-safady's history
(C) El-safady's literature
B
El-safady's life
(D) El-safady's poetry

## Appendixes of the book

Mental flexibility appendix


7 The drawing shows 3 flying arrows and 9 fixed balloons. When an arrow hits a balloon, it bursts, and the arrow flies further in the same direction. How many balloons will not be hit by arrow?


9 A fly has 6 legs, a spider has 8 . Together, 3 files and 2 spiders have as many legs as 9 chickens and
(A) 2 Cats
B 3 Cats
C) 4 Cats
D 5 Cats
E 6 Cats

10 The people of the Maya tribe write numbers using dots and dashes. A dot represents number one, and a dash represents number 5 . How do they write number 17 in this tribe?

(C) $\stackrel{\bullet}{\Longrightarrow}$


11 There are three objects on the table, What does Salman see if he looks at the table from above?

A

B

c


E


12 Anas has 4 pieces of this shape $\square$ Which figure he cannot make from these 4 pieces?
$\square \square \square$
$\square$ (


13 Noura first got 14 points with two arrows on the target. The second time she got 16 points. How many points did she get the third time?


15 If you know that $1111 \times 1111=1234321$ then the sum of $1111 \times 2222=$
(A) 3456543
(B) 2345432
(C) 2234322
(D) 2468642
(E) 4321234

16 A garden is divided into 4 congruent parts, and the length of each side of the square is 1 meter. There are 2 snails that move on the perimeter of the garden in two opposite directions starting at point $S$ as shown in the figure. One of the snails is fast and the other one is slow. The slow snail moves at speed of ( $1 \mathrm{~m} / \mathrm{h}$ ), and the fast snail moves at speed of $(2 \mathrm{~m} / \mathrm{h})$. At which point do the two snails meet?

$\square$ B $\quad B$ $\square$
D $D$
E $\quad E$

17 A nursery school has 14 girls and 12 boys. If half of the children went to play in the garden, what is the least number of girls that remained inside the building?
A 5
B $\square$
$\square$ (D)
D 2
(E) 1
18 On a planet there are 10 islands and 12 bridges. How many bridges must be closed in order to stop the traffic between $A$ and $B$.

A $\quad 1$
B 2
C 3
D $\quad 4$
(E) 5

33 The 5 Keys fit the 5 padlocks. The numbers on the keys refer to the letters on the padlocks.


3 Nine cars arrive at a crossroads and drive off as indicated by the arrows. Which figure shows the position of the cars after passing the crossroads?


35 Each spot in the figure covers one of the numbers 1, 2, 3, 4, or 5 provided that the calculating process in all arrow directions is correct. What is the number that is covered by the star?

$\square$
$\square$
$\square$
$\square$
(E) 5

36 A Lion is behind one of the three doors. A sentence is written on each door but only one of the three sentences is true. Behind which door is the lion?

Door 1


Door 2


Door 3

(A)
Door 1
(B)
Door 2
Door 3

[^1]E Both door 1 and door 2 are possible

## Experimental questions

- Mathematical and Spatial Reasoning 4
- Verbal and comprehension reasoning 6
- Mental flexibility 8
- Scientific and mechanical reasoning 10


## Introductions of the book

Questions and answers
B
What is Mawhiba Scale? D
The test measures abilities to... E
Student registration form -
How to fill in the answer sheet $G$
Techniques of the answers $K$
Tips L
Introduction

- Mental flexibility appendix 96
- Verbal analogy appendix 109

43 Experimental

- Experimental Test 1................. 14
- Experimental Test 2 .............. 21
- Experimental Test 3 .............. 28
- Experimental Test 4 ............. 35
- Experimental Test 5 ............... 42
- Experimental Test 6 ............... 49
- Experimental Test 7 ............... 57
- Experimental Test 8 ............. 64
- Experimental Test9............... 72
- Experimental Test 10 ............ 79
- Experimental Test 11 ............ 87



## Contents of the book

## Experimental questions

- Mathematical and Spatial Reasoning
- Verbal and comprehension reasoning
- Mental flexibility ........................ 4



# Mathematical and Spatial Reasoning 

This part is based on using mathematical skills and logical reasoning to reach solutions or results throughout specific strategies.
The fields of this part: analogy, arithmetic, geometry, data analysis and probabilities.
1 If: $\frac{1}{x}+\frac{1}{y}=\frac{1}{8}, x+y=4$ then $x y$ equals:
(A)
32
(B)
16
(c)
(C)
2
(D)
0.5

A $\frac{1}{x}+\frac{1}{y}=\frac{x+y}{x y}$ (adding fractions by finding the common denominator)
$\frac{x+y}{x y}=\frac{1}{8} \quad($ We replace $x+y=4)$
$\frac{4}{x y}=\frac{1}{8} \quad$ Therefore: $x y=4 \times 8=32$ (A)
(2) A bag has 40 balls which are numbered from 1 to 40 , and one ball was randomly drawn from it; then what is the probability of having a prime number for this ball?
(B)
(B) $40 \%$
(C) $30 \%$
(D) $25 \%$
(A)

The prime numbers from 1 to 40 are: $2,3,5,7,11,13,17,19,23,29,31,37$ Probability $=\frac{12}{40}=\frac{3}{10}=30 \%$

3 The value of: $\sqrt{\sqrt{81+81+81+81}}$ equals:
(A)
81
(B)
9
(C) $4 \sqrt{3}$
(D) $3 \sqrt{2}$

A $\sqrt{\sqrt{81+81+81+81}}=\sqrt{\sqrt{4 \times 81}}=\sqrt{2 \times(9)}=3 \sqrt{2} \quad$ D

4 Find the next number in the pattern:
1,5,12,21,27,
(A) 35
(B) 29
(C) 18
(D

A Rule: Multiply the difference between each consecutive number ( $\times 3$ )
$5-1=4$
$4 \times(3)=12$
12-5=7
$7 \times(3)=21$
21-12 = (9)
$9 \times(3)=27$
27-21= 6
$6 \times(3)=18$

## Experimental Tests

$\because$ Abdullah is taller than Mohammed.
$\therefore$ Abdullah isn't the shortest.
,$\because$ Mohammed is shorter than Khalid.
$\therefore$ Khalid isn't the shortest.
,$\because$ Mohammed is taller than Mahmoud.
$\therefore$ Mohammed isn't the shortest.
$\therefore$ Mahmoud is the shortest.
(7)
$\because$ The sequence: $55,60,65, \ldots$.
Is arithmetic sequence in which the first term $(a)=55$, and the difference $(d)=5$
,$\because$ The $n^{\text {th }}$ term $=a+(n-1) d$

$$
\begin{aligned}
A_{999} & =55+998 \times 5 \\
& =55+4990 \\
& =5045
\end{aligned}
$$



The area of the shaded part =
The area of The area of the area of the the rectangle ${ }^{-}$the triangle ${ }^{+}$parallelogram

$$
\begin{aligned}
& =(3 \times 10)-\left(\frac{3 \times 4}{2}+5 \times 3\right) \\
& =30-(6+15) \\
& =30-21=9 \mathrm{~cm}^{2}
\end{aligned}
$$

## Experimental Test 5

## Remember:

- There is only one correct answer for each question.
- Shading the correct answer should be done in front of each question in the answer sheet.

1 Mohamed sold his car at 8100 SR; and his loss percentage was $10 \%$ from its original price; then what is its original price?
(A) 100000 SR
(B) 90000 SR
(C) 86000 SR
(D) 72900 SR
(2) Which choice is the nearest value to the expression: $\frac{3 \times 11^{2}}{\sqrt{142}}$
(A)
30
(B) 45 (C) 60
(D
73

3 When the time is 12 at noon in the city $x$, it is 9 am. in the city $y$; therefore, if a plane took off from the city $x$ at 7 am., in the time of the city $y$; then how many hours did the flight take?
(A) 9 $\square$ (C) 7
D
6

4 If a cylinder's weight, which is filled to its half capacity, is 250 Kg , and its weight, when it is filled to its three quarters, is 300 Kg , then find the weight of the cylinder when it is empty.
(A) 150 Kg B $180 \mathrm{Kg} \quad$ C $200 \mathrm{Kg} \quad$ D 210 Kg

5 If a father's age is 50 , and his childrens' ages are $3,5,10$, then after how many years the father's age becomes equal the sum of his childrens' age?

| (A) | 14 | B | 15 | C | 16 | D | 26 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

6 If we divided a stick that is 20 meters long into two equal parts, then we divided each part into two equal parts, and so on. Then after how many cutting processes the length of each one will be 62.5 cm ?
(A) 30
(B)
B)
31
c
C 32
D
35

7 Mohammad, Ali, Mazen, and Khaled traveled by different means of transport (car, plane, train, ship). If Mohammad neither traveled by land nor by sea, Mazen traveled in his car, Khaled didn't travel by train. Then Ali traveled by:
(A)
Car
B Ship
C
Train
D Plane

15 Suppose that you have a bar of iron that weighs 200 grams; and it's hung in the hole referred to in the figure. And it's balanced with an unknown weight at the other end as shown in figure (1). Then move the weight of the 200 grams bar to the hole 8 as shown in figure (2). Then, in which hole you out the unknown weight at the other end to have a state of balance when you start counting from point $(B)$ towards $(A)$ ?

figure (1)


A The unknown weight remains in the same place
$B$ The unknown weight is hung in the seventh hole
C The unknown weight is hung in the fourth hole
D The unknown weight is hung in the sixth hole

16 In the following figures, the value of $x$ equals:

$\square$ (B) 6


D $\quad 9$


17 Which shapes completes the group?


18 In the balances below, each shape represents a quantity. Which shape is the lightest?

(1)

(2)

(3)
(A) $\triangle$
B
-
(C) $t o$
D $\rightarrow t$

22 In the following figure, there are two boxes which have the same size. They were filled with balls of the same material

- The box $(A)$ is filled with small balls.
- The box $(B)$ is filled with big balls.

Which box will be heavier?

(A) $\operatorname{Box}(A)$

B $\quad \operatorname{Box}(B)$
(C) Equal

D It is unknown
23 In which one of the following figures, the attraction of the iron fillings is less to the magnet?
 (A) The wood (B) The glass (C) The Aluminum $\square$ (A)

(A) Half of it moves out
(C) It falls

B Two thirds of it move out
D It doesn't fall

25 In the following figure, iron was put in the container. Which type of iron if added makes the balloon filled faster?
24 If the perimeter of circular gear equals half of the length of the straight gear, and if the circular spins three rounds; then what happens to the straight gear $(A)$ ?


## A iron pieces

B iron filling
C) iron plates

D iron cubes
26 In the following figures, there are 4 containers filled with water, and pieces of iron were put in them. These pieces are different in their temperatures. Which container was hotter when the iron piece was put?

(A)

(B)

(C)

(D)
(A) Container $(A)$
B Container (B)
C Container (C)
D Container (D)

## Answers of Experimental Test 11

| A | B | C | D |
| :---: | :---: | :---: | :---: |
| A | (B) | C | D |
| (A) | (B) | C) | D |
| A | (B) | (C) | D |
| A | (B) | (C) | D |
| A | (B) | C | D |
| (A) | (B) | C | D |
| A | (B) | C | D |
| A | (B) | (C) | D |
| (A) | B | (C) | D |
| A | (B) | (C) | D |
| A | (B) | (c) | D |
| A | (B) | C | D |
| A | (B) | C | D |
| (A) | (B) | C | D |
| (A) | (B) | (C) | (D) |
| (A) | (B) | (c) | D |
| (A) | (B) | C | (D) |
| (A) | (B) | C | (D) |
| (A) | (B) | (c) | D |
| A | B | (C) | (D) |
| A | (B) | (c) | (D) |
| A | (B) | C | (D) |
| A | (B) | C | D |
| A | (B) | C | D |
| A | (B) | C | D |

## Appendixes of the book



14 If the following shape is folded to form a cube, which one of the following shapes will be the cube?

A

B

C

D


15 There is a logical relation among the following shapes except for one shape. What is it?
A

B

c

D


16 There is a logical relation among the numbers in each of the following shapes. What is the number that should be replaced instead of $x$ ?

(A)
14
B
16
c
C $\quad 19$
(D) 20

17 This lock has a secret code that contains three numbers, Find these numbers according to the given data:

* 548 one of these numbers is correct and it is in the right place.
* 530 there is no correct number here.
* 157 there are two correct numbers here but they are in the wrong place.
* 806 there is a correct number here but it is the wrong place.


18 What is the logical relation among the shapes in the opposite table? The relation on which we can complete the missing shape?

A
B
$>$
C
$\checkmark$
D



[^0]:    1) Log in using Mawhiba Gate user name and password.
    2) Filling in the application form
    3) Registering for the test throughout Qiyas site.
[^1]:    D
    All three doors are possible

