



SAMPLE PAPER

CogATXCEL - Cognitive Abilities Test!

Greetings, Future Innovators!

Prepare to embark on an exciting journey of thinking and problem-solving in the International CogAT Competition! This booklet holds the key to unlocking your cognitive potential with a series of intriguing questions designed to test your reasoning skills and creativity. As you navigate through each challenge, remember that this is your opportunity to shine and showcase your unique abilities. Follow the instructions carefully, stay focused, and most importantly, enjoy the challenge ahead. Let's see how your brainpower can lead you to success!



CogATXCEL 2024, Sample Paper

Welcome to the CogATXCEL!

COGAT Mock Test Instructions

1. **Read Each Question Carefully:** Before answering, make sure you understand what is being asked. Each question may have different types of answers, so pay attention to the instructions provided.
2. **Answer All Questions:** The test consists of several sections. Ensure you answer every question to the best of your ability. If you are unsure about a question, make your best guess rather than leaving it blank.
3. **Time Management:** You will have a set amount of time for each section. Keep track of time and pace yourself to ensure you have enough time to complete all questions.
4. **No External Aids:** You are not allowed to use calculators, dictionaries, or any other external aids. Only use the materials provided in this test.
5. **Stay Focused:** Read each question and all answer choices carefully before making a selection. Pay close attention to patterns, sequences, and logical relationships.
6. **Check Your Work:** If time permits, review your answers before submitting your test to ensure you have not made any errors or missed any questions.

Type of questions:

1. Verbal:
 - Read each question and choose the correct answer from the options provided.
 - Some questions may ask you to identify synonyms, antonyms, or analogies.
2. Quantitative:
 - Solve the problems based on the numerical and mathematical information provided.
 - Pay attention to patterns and numerical sequences.
3. Non-Verbal:
 - Examine the patterns or shapes in each question and determine the correct answer based on the patterns you observe.
 - Some questions may involve identifying shapes, completing sequences, or determining relationships between shapes.

Good Luck!

Success is the result of preparation, hard work, and learning from failure. — Colin Powell

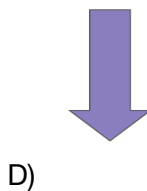
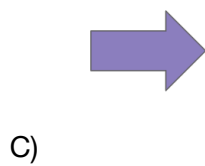
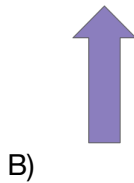
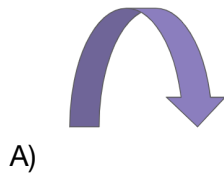


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1ST & 2ND GRADE

Sample Question 1:

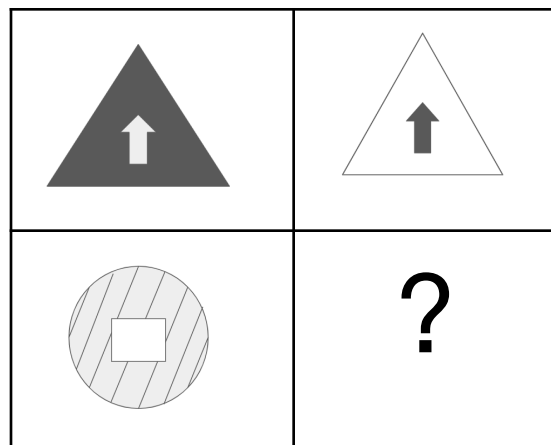
The shapes below follow a certain pattern. Select the option that follows the same pattern



Correct Answer: B) the arrows are rotating in a clockwise direction, so the missing arrow should be rotated 90 degrees clockwise from the previous image

Sample Question 2:

Select the image that pairs with the bottom picture in the same manner that the top images are paired together:



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Correct Answer: A) In the image above, the picture on the right is the opposite of the picture on the left. The colors of the outside shape and inside shape are swapped. So, the answer should be a white circle with a striped rectangle.

Sample Question 3:

What is the next number in the series?

4 8 12 16 20 24 28 ?

- A) 30
- B) 32
- C) 34
- D) 36

Correct Answer: B) 32. The series increase by 4 each time

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3RD & 4TH GRADE

Sample Question 1:

Which number should be placed in the square with the question mark?

$$12 \times 3 = ? + 17$$

- A) 3
- B) 17
- C) 36
- D) 19

Correct Answer: D) 19. $12 \times 3 = 36$, to make both sides equal deduct 17 from 36.

Sample Question 2:

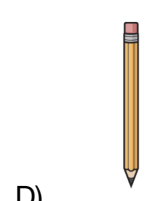
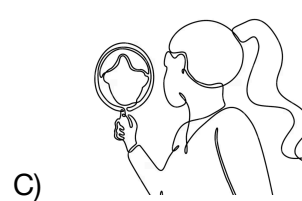
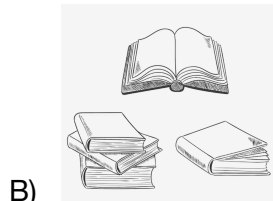
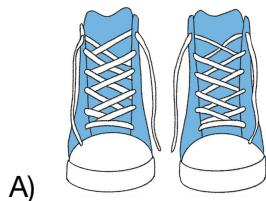
Given a number sequence, which number should replace the question mark?

3	4	5	7	8	9	11	12	13	?
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- A) 14
- B) 15
- C) 10
- D) 12

Sample Question 3:

Emy is packing her school bag. Which item won't she need?

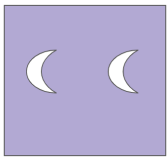
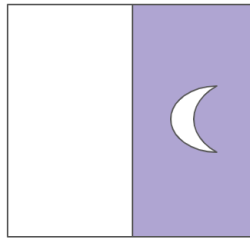
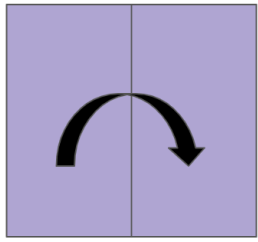
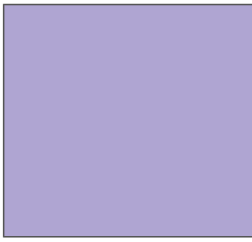


Correct Answer: A) Shoes, as she can put books, a mirror and a pencil in her school bag.
Shoes-she will need to wear.

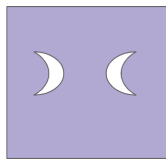
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5TH GRADE

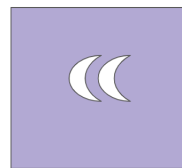
Sample Question 1:



A)



B)



C)



D)

Correct Answer: B) The picture above shows a folded piece of paper with a crescent cut out. When the paper is unfolded, a reversed crescent will appear on the other side.

Sample Question 2:

96 → 8

108 → 9

72 → ?

A) 3

B) 5

C) 7

D) 6

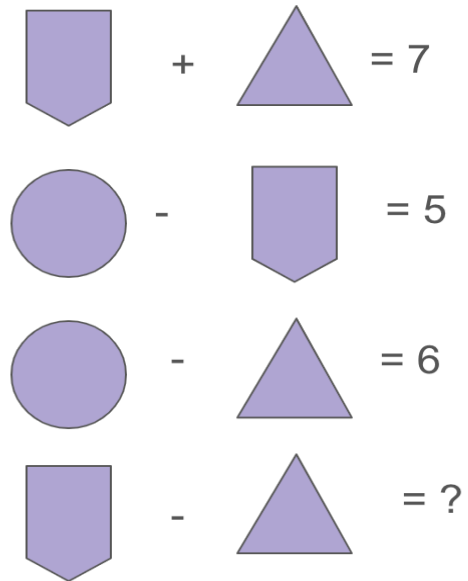
Correct Answer: D) 6. The first pair of numbers is 96 and 8, where 8 is $96 \div 12$. The second pair of numbers is 108 and 9, following the same pattern: 9 is $108 \div 12$. The last pair of numbers must also follow this pattern, so the missing number will be $72 \div 12$, which is 6.

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Sample Question 3:

Determine which digit should replace the question mark

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



Correct Answer: A) 1. There are 3 unknowns x, y, and z.

Let's make an equation using the picture above: $x+y=7$

$z-x=5$

$z-y=6$ making it to an equation of $x+2z-x=18$

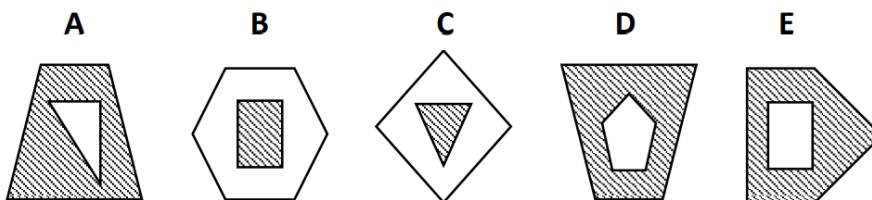
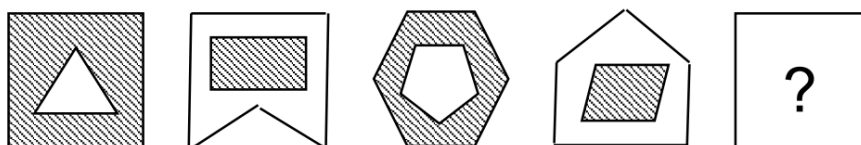
$$2z=18$$

$$z=9, \text{ thus } x \text{ is } 4 \text{ and } y \text{ is } 3. 4-3=1$$

6TH GRADE

Sample Question 1:

Which of the images A to E is next in the sequence?

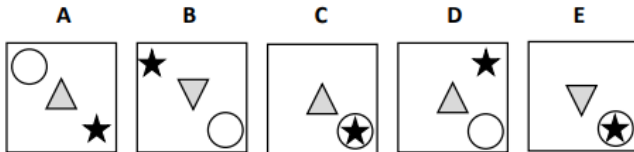


Correct Answer: A

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Sample Question 2:

Which of the images A to E goes in the missing part of the sequence?



Correct Answer: E

Sample Question 3:

If ENGLAND is written as 1234526 and FRANCE is written as 785291, how is GREECE coded?

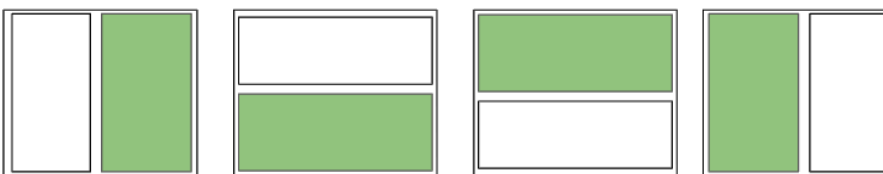
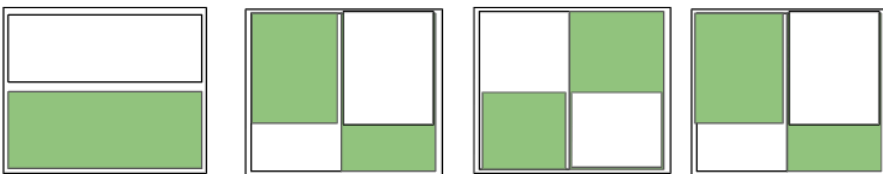
- A) 381171
- B) 381191
- C) 832252
- D) 835545

Correct Answer: B

7TH GRADE

Sample Question 1:

Which figure completes the series?



A B C D

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Correct Answer: C. Subsequent figures are rotated through 90 degrees clockwise and an increasing amount of the original color is inverted. Option C completes the sequence.

Sample Question 2:

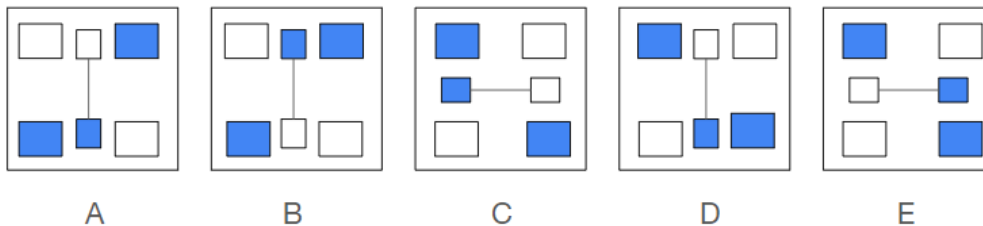
If '-' stands for 'division', '+' stands for 'multiplication', ' \div ' stands for 'subtraction' and ' \times ' stands for 'addition', which one of the following equations is CORRECT?

- A) $6+20-12-7-1=38$
- B) $6-3\div 12\times 7+1=57$
- C) $6+20-12\div 7\times 1=62$
- D) $6\div 20\times 12+7-1=70$

Correct Answer: D.

Sample Question 3:

Which of the images A to E is the odd one out?



Correct Answer: D. Option D is the odd one out as it is a reflection, not a rotation, of the others.

8TH GRADE

Sample Question 1:

Find the next term in the sequence: 2, 5, 10, 17, 26, ?

- A) 33
- B) 37
- C) 41
- D) 46

Which option is the correct next term?

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Correct Answer: B

- Find the differences between consecutive terms:
 - $5 - 2 = 3$
 - $10 - 5 = 5$
 - $17 - 10 = 7$
 - $26 - 17 = 9$
- The differences form an arithmetic sequence: 3, 5, 7, 9, with a common difference of 2.
- The next difference would be $9 + 2 = 11$.
- Add this to the last term:
 - $26 + 11 = 37$

So, the next term is **37**.

Sample Question 2:

In the following alphabetic, all the different letters stand for different digits.

Find X and C.

$$\begin{array}{r} \text{C} \\ \text{C} \\ + \text{C} \\ \hline \end{array}$$















$$\text{XC}$$





Correct Answer: X=1 C=5


Sample Question 3:

In the following grid, each row and column follow a specific pattern of shapes. Determine the missing shape that completes the pattern.

Grid:

			?
			
			
?			

- A) 
- B) 
- C) 
- D) 

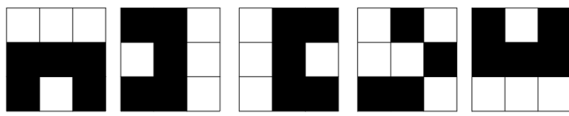
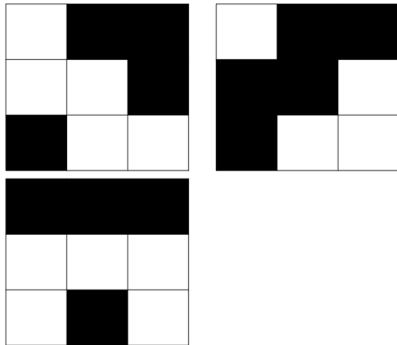
Correct answer: A. Each shape appears once per row and once per column.
The missing shape in the first row and fourth column is 

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9TH GRADE

Sample question 1:

Which of the following continues the shape below



A B C D E

Correct answer: A

Sample question 2:

Complete the following analogy: **SYMPHONY : COMPOSER :: NOVEL : ?**

- A) Reader
- B) Author
- C) Publisher
- D) Editor
- E) Bookstore

Correct answer: B

Sample question 3:

Identify the next number in the sequence: 3, 7, 15, 31, 63, ?

- A) 95
- B) 117
- C) 127
- D) 135
- E) 159

Correct answer: C

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10TH GRADE

Sample question 1:

Find a correct answer

RED BLUE ORANGE

COLORS	GREEN	SHADE	RAINBOW	DARK
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A B C D E

Correct answer: A

Sample question 2:

Solve the following equation for x:

$$2x+3 = 7x-12 \quad 2x+3 = 7x-12$$

- A) 3
- B) 5
- C) -3
- D) -5
- E) 7

Correct answer: C

Sample question 3:

Identify the word that does not belong in the group:

- A) Triangle
- B) Square
- C) Circle
- D) Rectangle
- E) Pentagon

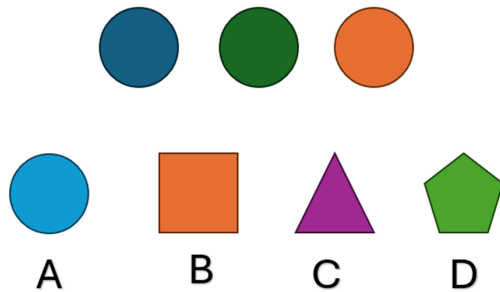
Correct answer: C

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11TH GRADE

Sample question 1:

What is the relationship between these figures?



Correct answer: A

Sample question 2:

Choose the word that best completes the sentence: Despite the professor's detailed explanations, the students remained _____ about the complex theory.

- A) enlightened
- B) confused
- C) knowledgeable
- D) indifferent
- E) enthusiastic

Correct answer: B

Sample question 3:

Identify the next number in the series: 5, 11, 23, 47, ?

- A) 95
- B) 99
- C) 103
- D) 105
- E) 107

Correct answer: B

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12TH GRADE

Sample question 1:

Sage → wisdom : expert →

- A. herb
- B. experience
- C. training
- D. smart
- E. savvy

Correct answer: B

Sample question 2:

Complete the analogy: PROTON : NUCLEUS :: ELECTRON : ?

- A) Atom
- B) Neutron
- C) Orbit
- D) Molecule
- E) Proton

Correct answer: C

Sample question 3:

Solve for y in the equation:

$$3y - 4(2y - 5) = 63y - 4(2y - 5) = 6$$

- A) 2
- B) 4
- C) 6
- D) 8
- E) 10

Correct answer: D