

## GC INTERNATIONAL MATHEMATICS OLYMPIAD - LEVEL ONE SAMPLE PAPER

### Question 1

Identify the missing number in the given pattern.



- A. 74                      B. 87                      C. 82                      D. 81

**Key: C**

### Solution

EXPLANATION:

The number series follows +2 pattern.

Add 2 to number 80 to get the answer.

**$80+2= 82$ , is the answer.**

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### Question 2

Olivia bought 74 candies then her mother gave 35 more candies. How many candies does Olivia has now?

- A. 109                      B. 112                      C. 99                      D. 39

**Key: A**

### Solution

EXPLANATION:

To get the answer perform addition.

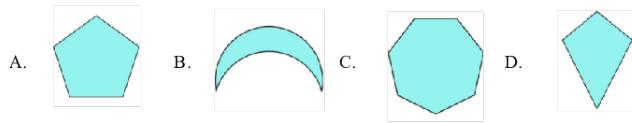
Add 74 and 35

$$\begin{array}{r} 74 \\ + \quad 35 \\ \hline 109 \end{array}$$

Olivia has 109 candies now.

### Question 3

Identify the shape with five sides.



Key: A

### Solution

EXPLANATION:

A. Has five sides.

B. Has 2 curved lines

C. Has 7 sides

D. Has 4 sides

So the answer is Option A

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### Question 4

Which is in the bottom right of the grid?



A. Apple

B. Hat

C. Cat

D. Ice Cream

**Key: D**

## Solution

EXPLANATION:

The positions of the grid are as follows.

Top left	Top middle	Top right
Middle Left	Middle	Middle Right
Bottom left	Bottom middle	Bottom right

Ice cream is at the bottom right position in the grid.

Answer is option D

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## Question 5

Select the number that is two less than 79.

56	57	58	59	60
66	67	68	69	70
76	77	78	79	80
86	87	88	89	90
96	97	98	99	100

A. 80

B. 77

C. 76

D. 78

**Key: B**

## Solution

EXPLANATION:

2 less than 79.

Perform subtraction.

$$\begin{array}{r} 79 \\ - 2 \\ \hline 77 \end{array}$$

Answer is 77.

## Question 6

Which of the following numbers are odd?

1. 84          2. 97          3. 16          4. 21          5. 63

- A. 1 AND 5                      B. 2, 4 AND 5  
C. 2, 3 AND 5                 D. 1 AND 3

**Key: B**

## Solution

### EXPLANATION:

A number is even if it ends in 2, 4, 6, 8, or 0.

A number is odd if it ends in 1, 3, 5, 7, or 9.

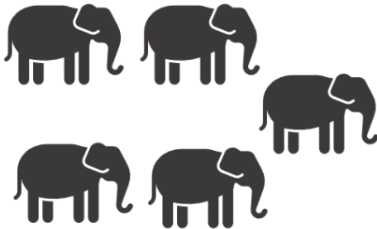
84,16 are even numbers.

97,21 and 63 are odd numbers

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## Question 7

Is the number of elephants even or odd?



**A**



**B**

**Key: B**

## Solution

### EXPLANATION:

Count the number of elephants in the picture given. Count is 5, which is an ODD number.

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Question 8

The teachers at a primary school counted the number of desks in their classrooms.

Desks in classrooms

Teacher	Number of desks
Mr. Gruber	15
Ms. Peters	13
Mr. Mehta	17
Miss Jimenez	19

Which teacher has the fewest desks?

- A. Mr. Mehta
- B. Ms. Peters
- C. Mr. Gruber
- D. Miss Jimenez

Key: B

Solution

EXPLANATION:

Find the least number in the table. Remember to compare the numbers starting with the highest place value. The least number is 13.

Now find the corresponding teacher. Ms. Peters corresponds to 13.

Question 9

What row comes next in the pattern?



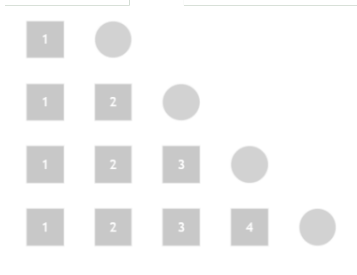
- A.
- B.
- C.
- D.



Key: A

## Solution

### EXPLANATION:

Count the  in each row.



The next row will have 5  before the 



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## Question 10

Tina has a chest of coins. Inside, there are 59 gold coins and 74 silver coins. How many coins are in the chest?

- A. 143      B. 123      C. 125      D. 133

Key: D

## Solution

### EXPLANATION:

Total number of coins in the chest

$$59 + 74 = 133$$

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## Question 11

Which number makes the equation true?

$$53 + 24 = 39 + ?$$

- A. 38      B. 27      C. 43      D. 48

**Key: A**

## Solution

EXPLANATION:

First, add  $53 + 24$ :

$$53 + 24 = 39 + ?$$

$$77 = 39 + ?$$

Decide which number makes the addition number sentence true. You can think of an addition fact you know, or you can subtract to find the answer.

The addition fact is:  $39 + 38 = 77$

Did you remember this addition fact? If not, you can find the answer by subtracting.

Subtract:

$$77 - 39 = 38$$

The missing number is **38**.

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## Question 12

Logan drove 24 kilometres to the post office. Next, he drove 28 kilometres to the dentist's office and another 3 kilometres to the grocery store. How many kilometres did Logan drive in all?

- |                  |                  |
|------------------|------------------|
| A. 57 kilometres | B. 65 kilometres |
| C. 55 kilometres | D. 46 kilometres |

**Key: C**

## Solution

EXPLANATION:

Add the numbers of kilometres.

$$24 + 28 + 3$$

First, add 24 and 28

$$52 + 3 = ?$$

Now add 52 and 3

$$52 + 3 = 55$$

Logan drove 55 kilometres in all.

## Question 13

Megan owns a bakery. This morning, her employees used 34 eggs to bake. If her employees used a total of 69 eggs today, how many eggs did they use in the afternoon?

Write a subtraction number sentence for the above scenario.

- A.  $69+34=103$       B.  $34-69=-35$       C.  $69-35=34$       D.  $69-34=35$

**Key: D**

## Solution

### EXPLANATION:

Write a subtraction number sentence. Subtract the number of eggs used in the morning from the total number of eggs. First write:  $69-34$

Now complete the subtraction number sentence by finding the difference of 69 and 34:

$$69 - 34 = 35$$

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## Question 14

Ellie and her friends collected 86 shells at the beach. 24 of the shells were whole, but the rest were broken. How many of the shells were broken?

- A. 62 shells      B. 110 shells      C. 61 shells      D. 72 shells

**Key: A**

## Solution

### EXPLANATION:

Subtract the number of whole shells from the total number of shells.

Subtract:

$$86-24$$

The difference is 62. So, 62 of the shells were broken.

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## Question 15

Which subtraction number sentence does the picture show?



Note: Each cube represents the number 15.

A.  $75-15=60$

B.  $75+15=80$

C.  $75-30=45$

D.  $60-15=45$

Key: A

## Solution

### EXPLANATION:

First, count all the cubes, even the ones that are crossed out. There are 5 cubes.

Now count how many cubes are crossed out. 1 cube is crossed out.

The first part of the subtraction number sentence is 5 cubes – 1 cube

Each cube represents 15.

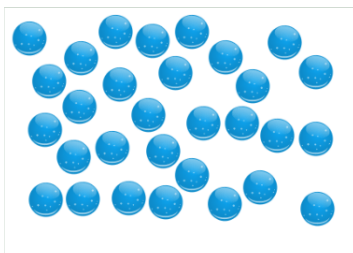
$$15+15+15+15+15=75$$

$$75-15=60.$$

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## Question 16

Estimate the number of marbles.



A. about 60

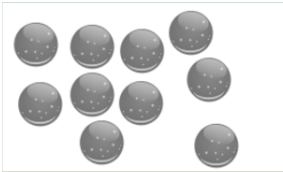
B. about 30

**Key: B**

## Solution

EXPLANATION:

This is a group of ten marbles:

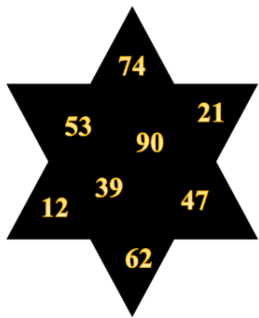


There are not enough marbles to make 6 groups of 10. There are fewer than 60 marbles.  
There are about 30 marbles.

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## Question 17

Find the number of odd numbers.



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

**Key: D**

## Solution

EXPLANATION:

A number is even if it ends in 2, 4, 6, 8, or 0.

A number is odd if it ends in 1, 3, 5, 7, or 9.

Numbers 21, 53, 39 and 47 are odd numbers.

Remaining all are even numbers.

Count the number of odd numbers i.e., 4

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## Question 18

Is 214 even or odd?

ODD

A

EVEN

B

Key: B

## Solution

EXPLANATION:

A number is even if it ends in 2, 4, 6, 8, or 0.

A number is odd if it ends in 1, 3, 5, 7, or 9.

214 ends with number 4

214 is an EVEN number

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## Question 19

To get 483, how much you have to add to 268?

A. 218

B. 345

C. 325

D. 215

Key: D

## Solution

EXPLANATION:

This can be solved in two ways.

1. Trial and error method.

Add 268 with every option given. If the result of addition is 483 then that option is the answer.

$$268 + 218 = 486$$

$$268 + 345 = 613$$

$$268 + 325 = 593$$

$$\mathbf{268 + 215 = 483}$$

2. Another way is subtracting 268 from 483. the result of subtraction is the answer.

$$\mathbf{483 - 268 = 215}$$

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## Question 20

Identify the missing number?



- A. 40                      B. 42                      C. 41                      D. 43

**Key: B**

## Solution

EXPLANATION:

The numbers in the given series are EVEN. Count back 2 from 44 to find the even number that comes before 44. The even number that comes before 44 is 42:

**42, 44, 46, 48, 50**

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## Question 21

In the classroom supply cabinet, there are 52 sheets of white paper, 27 sheets of yellow paper, and 48 sheets of blue paper. How many sheets of paper are there in all?

- A. 139                      B. 127                      C. 146                      D. 117

Key: B

## Solution

EXPLANATION:

Add the numbers of sheets of paper.

$$\begin{array}{r} 52 \\ 27 \\ + 48 \\ \hline \hline \end{array}$$

Add the ones. Add  $2 + 7 + 8$ . Remember to carry over.

$$\begin{array}{r} 1 \\ 52 \\ 27 \\ + 48 \\ \hline 7 \end{array}$$

Add the tens. Add  $1 + 5 + 2 + 4$ .

$$\begin{array}{r} 1 \\ 52 \\ 27 \\ + 48 \\ \hline 127 \end{array}$$

The sum is 127. There are 127 sheets of paper in all.

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## Question 22

Type the missing number.

Sixty-five =  tens +  ones

A. 60, 5

B. 6, 5

C. 60, 50

D. 6, 50

**Key: B**

## Solution

EXPLANATION:

T	O
6	5

tens	ones
6	5

Sixty- five: 6 tens and 5 ones

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## Question 23

What is 25 rounded to the nearest ten?

A. 20                      B. 35                      C. 25                      D. 30

**Key: D**

## Solution

EXPLANATION:

Find the place you want to round. Look one place to the right. If the digit is less than 5, round down. If the digit is 5 or higher, round up.

solve

First, find the digit in the tens place. This is the place you want to round:

25

Now look one place to the right:

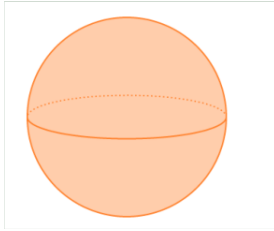
25

This number is 5, so you will round up.

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## Question 24

What shape is this?



- A. Sphere      B. Cylinder      C. Cone      D. Cube

**Key: A**

## Solution

EXPLANATION:

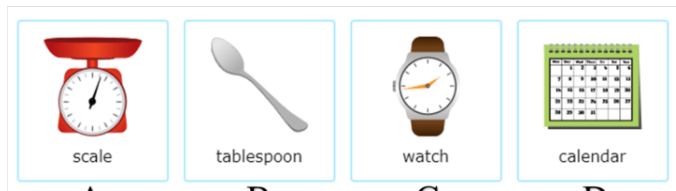
The shape is completely round. It has no flat surfaces.

This shape is a sphere.

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## Question 25

Which tool would you use to find out how much a bag of carrots weighs?



A

B

C

D

**Key: A**

## Solution

EXPLANATION:

You would use the weighing scale. A weighing scale measures weight.



## Question 26

Which sign is missing?

$$327 \quad ? \quad 104 \quad = \quad 223$$



A



B

Key: B

### Solution

EXPLANATION:

Try both the plus sign and the minus sign.

First try the plus sign:

$$327 + 104 = 431$$

Now try the minus sign:

$$327 - 104 = 223$$

The minus sign gives the right answer.

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## Question 27

Three hundred fifteen dollars and fifty cents is written as \_\_\_\_\_?

- A. \$ 351.50      B. \$ 315.05      C. \$ 315.50      D. None of these

Key: C

### Solution

EXPLANATION:

Three hundred fifteen is written as 315 in numbers.

Fifty is written as 50 in numbers.

Cents is written to the right side of the dot.

So, \$ **315.50**

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## Question 28

In the Number **4211**

Identify the place of the digit 4?

- A. Tens                      B. Thousands                      C. Ones                      D. Hundreds

**Key: B**

## Solution

### EXPLANATION:

The place values of the numbers are like

**T**housands    **H**undreds    **T**ens    **O**nes

For the number 4211,

<b>T</b> housands	<b>H</b> undreds	<b>T</b> ens	<b>O</b> nes
4	2	1	1

**4 is in thousands place.**

---

## Question 29

Mr. Gray has 137 books on one shelf. He has 58 books on another shelf. How many books are on the two shelves?

- A. 85                      B. 187                      C. 79                      D. 195

**Key: D**

## Solution

### EXPLANATION:

To identify the total number of books in two shelves. Add the number of books in both the shelves.

$$\begin{array}{r} 137 \\ + 58 \\ \hline \end{array}$$

**195**

### Question 30

A square has \_\_\_\_\_ number of curved lines.



- A. 4                      B. 3                      C. 5                      D. 0

**Key: D**

### Solution

EXPLANATION:

A square has four straight lines. A square has no curved lines.

---

### Question 31

Arrange below mentioned numbers in descending order.

**29, 19, 35, 43, 65**

- A. 19, 35, 29, 43, 65                      B. 65, 35, 43, 29, 19  
C. 65, 43, 35, 19, 29                      D. 65, 43, 35, 29, 19

**Key: D**

### Solution

EXPLANATION:

Descending order means arrange the numbers from highest to lowest.

65, 45, 35, 29, 19

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### Question 32

$$3 \text{ Tens} + 14 \text{ Ones} = \boxed{\phantom{00}} \text{ Tens} + \boxed{\phantom{00}} \text{ Ones} = \boxed{?}$$

- A. 4 Tens + 4 Ones = 44                      B. 3 Tens + 5 Ones = 35  
C. 5 Tens + 4 Ones = 54                      D. 3 Tens + 4 Ones = 34

Key: A

## Solution

EXPLANATION:

14 ones = 1 ten and 4 ones

3 tens + 14 ones = 3 tens + 1 ten and 4 ones

**= 4 tens + 4 ones**

4 tens = 40

4 ones = 4

**40 + 4 = 44**

**Answer is 4 Tens + 4 Ones = 44**

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## Question 33

Which of the following number sentences represents the given picture?



A.  $22 - 9 = 15$

B.  $22 - 9 = 13$

C.  $20 - 9 = 11$

D.  $20 - 8 = 12$

Key: B

## Solution

EXPLANATION:

Total number of butterflies = 22

Number of butterflies crossed = 9

So, given picture represents  $22 - 9 = 13$

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## Question 34

How much is a quarter dollar worth?



¢ = cents

- A. 5¢                      B. 10¢                      C. 25¢                      D. 50¢

**Key: C**

## Solution

EXPLANATION:

Quarter of a number is  $\text{Number} \div 4$ .

$$100¢ \div 4 = 25¢$$

---

## Question 35

Jackson went to a movie and bought a drink for \$11.50 and popcorn for \$18.00. How much did Jackson spend in all?

- A. \$ 27.50                      B. \$ 38.50                      C. \$39                      D. \$29.50

**Key: D**

## Solution

EXPLANATION:

$$\begin{array}{r} 11.50 \\ + 18.00 \\ \hline 29.50 \end{array}$$

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## Question 36

How many days are there in 3 weeks?

- A. 14                      B. 7                      C. 21                      D. 28

**Key: C**

## Solution

EXPLANATION:

Number of days in 1 week = 7

So, number of days in 3 weeks =  $7 + 7 + 7$   
= 21

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## Question 37

Identify which of the following is correct symbol for the given expression.

942 \_\_\_\_\_ 864



A



B



C

**Key: A**

## Solution

EXPLANATION:

942 is greater than 864

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## Question 38

15 tens = \_\_\_\_\_

A. 15

B. 5

C. 10

D. 150

**Key: D**

## Solution

EXPLANATION:

15 tens = add 15 ten times or  $15 \times 10$   
= 150

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### Question 39

Laury has some shoes. She buys 50 more, now Laury has a total of 105 shoes. How many shoes did Laury start with?

- A. 55                      B. 62                      C. 41                      D. 39

**Key: A**

### Solution

EXPLANATION:

Initially Laury has some shoes, say it A

Later she buys 50 more

$$A + 50 = 105$$

$$A = 105 - 50$$

$$= 55$$

Initially, Laury has 55 shoes.

---

### Question 40

Which container can hold maximum water?

- A. Water-bottle                      B. Glass                      C. Water tank                      D. Spoon

**Key: C**

### Solution

EXPLANATION:

Water tank is biggest of all. It can hold maximum water.

---

### Question 41

Fill in the blank

Weight of 300 g of oranges is \_\_\_\_\_ than 50 g of grapes.

- A. Equal                      B. Smaller                      C. Greater                      D. None of these

**Key: C**

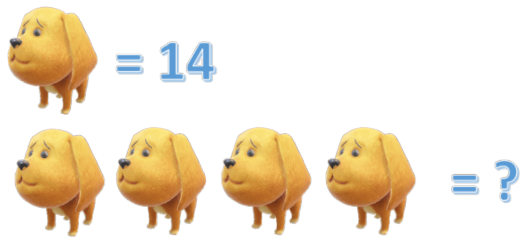
### Solution

EXPLANATION:

Weight of 300 g of oranges is greater than 50 g of grapes.

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## Question 42

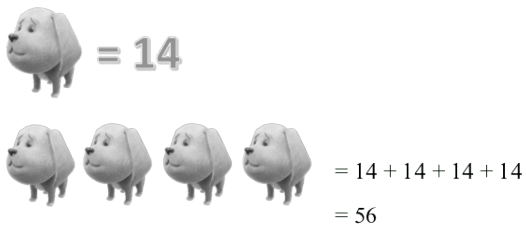


- A. 28      B. 54      C. 36      D. 56

Key: D

Solution

EXPLANATION:







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## Question 43

Which figure comes next in the figure pattern given below?



- A.  B. 
- C.  D. 

Key: D

Solution

EXPLANATION:


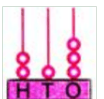
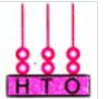

The pattern repeats itself after every third figure. So, the next figure is



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## Question 44

Danny arranges six beads in columns of an abacus. He puts three beads in one's column, 1 bead in ten's column and 2 beads in hundreds column. Which of the following can be Suman's abacus?

- A. 
- B. 
- C. 
- D. 

Key: B

## Solution

### EXPLANATION:

The abacus formed by Danny will be

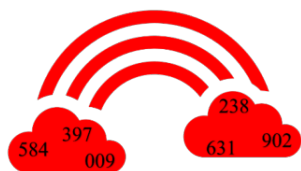


3 beads in ones place, 1 bead in tens place and 2 beads in hundreds place.

---

## Question 45

Which number is more than 500 but less than 600 present on the rainbow?



- A. 397      B. 584      C. 631      D. 009



**Key: B**

**Solution**

EXPLANATION:

The number more than 500 but less than 600 present on the rainbow is 584.

---

**Question 46**

90 tens is \_\_\_\_\_ 9 hundreds.

- A. Greater than                      B. Less than  
C. Equal to                          D. Can't say

**Key: C**

**Solution**

EXPLANATION:

90 tens                      = 900

9 hundreds                = 900

Hence, 90 tens = 9 hundreds

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**Question 47**

DIRECTION: Complete the number pattern in the following questions. 529, 532, 535, 538,

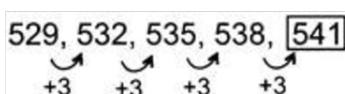
\_\_\_\_\_

- A. 540                      B. 542                      C. 541                      D. 543

**Key: C**

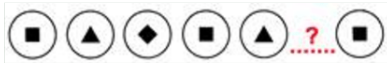
**Solution**

EXPLANATION:



## Question 48

DIRECTION: Find the missing figure to complete the given pattern.



A.



B.



C.



D.




**Key: D**

## Solution

EXPLANATION:

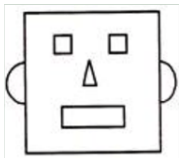
The pattern  is repeated.

So, the missing figure is 

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## Question 49

Which of the following shape is missing in the given figure?



A. Square

B. Rectangle

C. Triangle

D. Circle

**Key: D**

## Solution

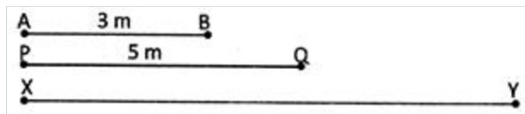
EXPLANATION:

In the given picture square, triangle, semi-circle and rectangle shapes are present.

But circle is not present.

## Question 50

There are three sticks AB, PQ and XY. Length of stick XY is equal to the sum of length of sticks AB and PQ. Find the length of stick XY.



- A. 4 m                      B. 8 m                      C. 15 m                      D. None of these

**Key: B**

## Solution

EXPLANATION:

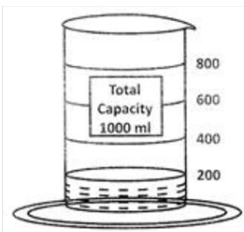
$$\begin{aligned} XY &= AB + PQ \\ &= 3 + 5 \\ &= 8 \end{aligned}$$

The length of the stick XY is 8 m.

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## Question 51

How much water is needed to fill the cylinder completely?



- A. 200 ml                      B. 400 ml                      C. 800 ml                      D. 600 ml

**Key: C**

## Solution

EXPLANATION:

Total capacity of the cylinder is 1000 ml

200 ml of the cylinder is already filled.

To fill the cylinder, remaining part of the cylinder is to be filled.

$$1000 - 200 = 800$$

**800 ml is needed to fill the cylinder completely.**

## Question 52

Which one of the following options is correct for the given figure?



- I. The sum of the numbers in the given picture is 171
- II. The sum of the numbers in the given picture is 160
- III. The series follows plus five pattern.
- IV. The sum of the numbers in the given picture is an even number.

- A. I AND IV
- B. I, II AND III
- C. III AND IV
- D. II, III AND IV

**Key: D**

## Solution

### EXPLANATION:

1. The sum of the numbers in the given picture is 160  
 $22 + 27 + 32 + 37 + 42 = 160$
  2. The series follows addition of 5 to get the next number.
  3. The sum of the numbers in the given picture is 160, which is an even number.
- Options II, III and IV are correct.  
So, the answer is D.

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## Question 53

Dana skip counted, beginning at 60, until she reached 75. Could she be counting by tens?



**A**



**B**

**Key: B**

## Solution

EXPLANATION:

We know that Dana started at 60 and skip-counted until she got to 75. We want to find out if she could have been counting by tens. Try counting like Dana. Start at 60 and count by tens until you say 75 or go past it.

**60, 70, 80**

You go past 75 without saying it. Dana could not have been counting by tens.

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## Question 54

Which of the following is/are ordinal number/s? (There may be more than one.)

- A. fifteen                      B. 81                      C. eighty-eight                      D. 69<sup>th</sup>

**Key: D**

## Solution

EXPLANATION:

Cardinal numbers tell how many.

Counting numbers like one (1), two (2), and three (3) are cardinal numbers.

Ordinal numbers tell position.

Position numbers like first (1st), second (2nd), and third (3rd) are ordinal numbers.

These are cardinal numbers:

fifteen, 81, eighty-eight

This is not a cardinal number. This is an ordinal number:

69<sup>th</sup>

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## Question 55

Which of these makes **86**.

- A.  $44+31$                       B.  $52+37$                       C.  $67+19$                       D.  $103-32$

**Key: C**

## Solution

EXPLANATION:

These are ways to make 86:

$$67+19=86$$

These are not ways to make 86:

$$44+31=75$$

$$52+37=89$$

$$103-32=71$$

---

## Question 56

Katie made 66 rag dolls. She gave away 24 of them as gifts. Which expression gives the number of rag dolls Katie had left?

- A.  $66 + 24$       B.  $66 \times 24$       C.  $66 - 24$       D.  $66 \div 24$

**Key: C**

## Solution

EXPLANATION:

Perform subtraction to find the number of dolls left with Katie after giving away few dolls as gifts.

So the correct expression would be  $66 - 24$ .

---

## Question 57

Which is the correct statement among the following.

- I.  $556 < 450$       II.  $756 > 750$       III.  $356 = 450$       IV.  $250 > 56$   
A. I AND III      B. II AND IV  
C. I, II AND III      D. III AND IV

**Key: B**

## Solution

EXPLANATION:

I.  $556 > 450$

II.  $756 > 750$

III.  $356 < 450$

IV.  $250 > 56$

Options II AND IV are correct statements.

Answer is B

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## Question 58

Which numbers have the same digits but not in the same place?



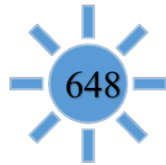
I



II



III



IV

A. I AND III

B. II AND IV

C. III AND IV

D. I AND II

**Key: D**

## Solution

EXPLANATION:

I AND II have same digits 7 8 and 4 in both the numbers and have different place values.

III AND IV have different digits and also different place values.

So, the answer is D which has I and II.

## Question 59

How many shapes has the number of sides equal to 4?



- A. 4      B. 3      C. 2      D. 5

**Key: B**

**Solution**

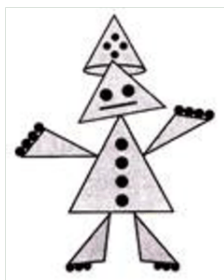
EXPLANATION:

The shapes having number of sides equal to 4 are P, Q and W.

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## Question 60

There are \_\_\_\_\_ more circles than triangles in the given figure.



- A. 22      B. 12      C. 18      D. 24

**Key: C**

**Solution**

EXPLANATION:

Number of triangles in the figure = 6

Number of circles in the figure = 24

So, there are  $24 - 6 = 18$  more circles than triangles.