

National Level ScienceX Olympiads

ScienceX Mathematics Olympiad | Level 2

Name: _____

Date: _____

Exam Instructions

1. The timer has been set for the exam, and a countdown will display the remaining time. When the timer runs out, the exam will end automatically. No further action will be required after that.
2. You can flag any question that you want.
3. If you don't want to submit any of your provided answers, you can clear them.
4. If you choose to drop this exam, it will not be submitted, and no result will be generated.
5. Once you finish the exam, you cannot resume it.

Secure Exam Advice

This exam is specially secured. Which means you cannot leave your browser window once the exam starts.

The following actions are not supported during your exam.

- Minimizing the browser
- Resizing the browser
- Open a new tab
- Open a new program
- Taking a screenshot
- Pressing Ctrl + C
- Pressing Ctrl + V
- Pressing Print Screen
- Pressing F12

We are monitoring your activity during the exam, and any unusual behaviour is being tracked. Your admin has set the exam to terminate if a certain number of unusual activities are detected, which could be as low as one. To avoid your exam from being terminated, please refrain from any behaviour that may be considered unusual. All the best!

Question: 1 of 50

QID: 397

Marks: 4

What is the next letter in the following sequence? J, F, M, A, M, J, _____

Please mark (✓) for the correct answer.

 A. F B. A C. J D. K

When a certain number m , is divided by 5 and added to 8, the result is equal to $3m$ subtracted from 4. The value of m is

Please mark (✓) for the correct answer.

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

. Vikash wants to plant a flower on the ground in the form of a rhombus. The diagonals of the rhombus measure 42 cm and 56 cm. Find the perimeter of the field.

Please mark (✓) for the correct answer.

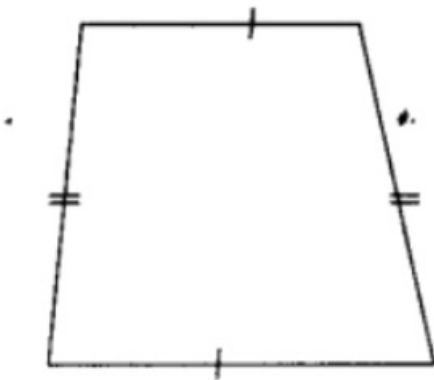
- A. 140 cm B. 130cm
 C. 120cm D. 150 cm

The factorisation of $12a^2b+15ab^2$ gives:

Please mark (✓) for the correct answer.

- A. $3ab(4ab+5)$ B. $3ab(4a+5b)$
 C. $3b(4a + 5b)$ D. $3a(4a+5b)$

how many lines of symmetry does the fig. have ?



Please mark (✓) for the correct answer.

- A. No line of symmetry B. 1
 C. 3 D. 2

If p: The total measure of the three angles of a triangle is 180° and q: Sum of the length of any two sides of a triangle is less than the length of the third side, then which of the following options hold?

Please mark (✓) for the correct answer.

- A. Both p and q are true
- B. p is false and q is true
- C. Both p and q are false
- D. p is true and q is false

How many legs (total) do 4 dogs, 2 elephants, 15 cats, and 26 people have?

Please mark (✓) for the correct answer.

- A. 142
- B. 98
- C. 136
- D. 110

which of the following pairs of number are co prime ?

Please mark (✓) for the correct answer.

- A. 17,68
- B. 15,100
- C. 30,415
- D. 16,81

What is the next number in the following sequence? 4,16; 5, 25; 6, 36; 7, 49; 8, _____.

Please mark (✓) for the correct answer.

- A. 64
- B. 52
- C. 36
- D. 56

Identify the instruments used to bisect a given line segment

Please mark (✓) for the correct answer.

- A. scale and compasses
- B. A scale and protractor
- C. a scale
- D. scale and setsquare

The value of $(x - y)(x + y) + (y - z)(y + z) + (z - x)(z + x)$ is:

Please mark (✓) for the correct answer.

- A. $x + y + z$ B. $xy + yz + zx$
- C. $x^2 + y^2 + z^2$ D. 0

how many verticals are there in a quadrilateral?

Please mark (✓) for the correct answer.

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

What is the difference between a rectangle and a cube?

Please mark (✓) for the correct answer.

- A. A rectangle is 3-dimensional and a cube is 2-dimensional
- B. A rectangle and a cube are both 3-dimensional
- C. A rectangle and a cube are both 2-dimensional
- D. A rectangle is 2-dimensional and a cube is 3-dimensional

How many natural numbers lie between 92 and 102?

Please mark (✓) for the correct answer.

- A. 19 B. 20
- C. 18 D. 17

1 litre is equal to how many cubic centimeters?

Please mark (✓) for the correct answer.

- A. 10 cu.cm B. 1000 cu.cm
- C. 100 cu.cm D. 10000 cu.cm

Write the statements "Seven times a number plus 7 gets you 77" in the form of equations:

Please mark (✓) for the correct answer.

- A. None of these
- B. $7x + 6 = 66$
- C. $7x + 7 = 77$
- D. $7x - 7 = 77$

The height of sonu is 150cm and the height of monu is 120cm. the ratio of the height of sonu to the height of monu is

Please mark (✓) for the correct answer.

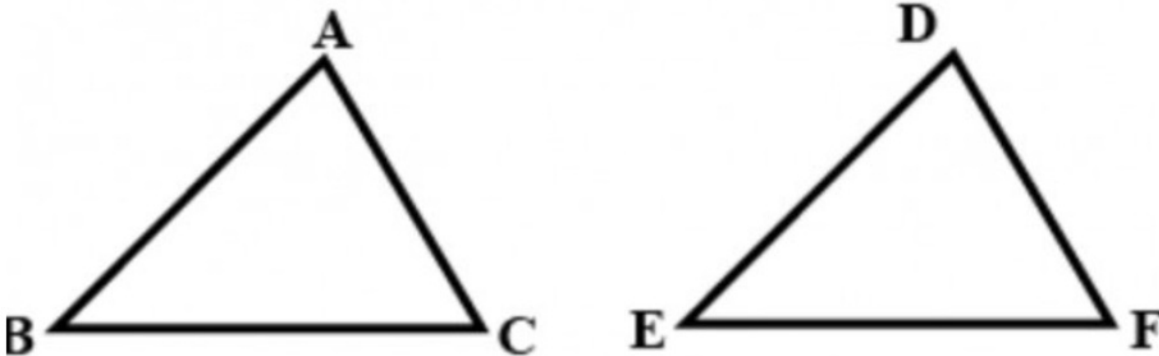
- A. 4:5
- B. 5:2
- C. 5:4
- D. 4:1

Three consecutive integers add up to 51. The integers are:

Please mark (✓) for the correct answer.

- A. 16,17,18
- B. 18,19,20
- C. 17,18,19
- D. 15,16,17

Which congruence criterion do you use in the following? Given $AC = DF$ $AB = DE$ $BC = EF$ So, $\triangle ABC \cong \triangle DEF$



Please mark (✓) for the correct answer.

- A. ASA
- B. SAS
- C. SSS
- D. RHS

Find the area of a verandah 2.25 m wide constructed outside a room 5.5 m long and 4 m wide.

Please mark (✓) for the correct answer.

- A. 84sq.m B. 64sq.m
- C. 36sq.m D. 63sq.m

The associative property is applicable to:

Please mark (✓) for the correct answer.

- A. Multiplication and division B. Addition and Multiplication
- C. Subtraction and Division D. Addition and subtraction

apela typed 50 pages a book containing 100 pages . meenu typed 25 pages of same book. Who typed more ?

Please mark (✓) for the correct answer.

- A. both (a) and (b) B. meenu
- C. apela D. none of these

Through what angle does the hour hand of a clock turn through ,when it goes on from 2 to 11?

Please mark (✓) for the correct answer.

- A. 270 B. 90
- C. 180 D. 360

The side of a regular pentagon is l . its perimeter is

Please mark (✓) for the correct answer.

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

The Pythagorean triples whose smallest number is 8:

Please mark (✓) for the correct answer.

- A. 8, 16 17 B. 8, 15, 17
- C. 8, 17, 18 D. 8, 15, 16

100 divided by 0= _____.

Please mark (✓) for the correct answer.

- A. 0 B. 100
- C. Undefined D. 10

Prisms and Pyramids are:

Please mark (✓) for the correct answer.

- A. Polygons B. Cubes
- C. Spherical shapes D. Polyhedrons

Indian cricket team won 4 more matches than it lost with New Zealand If it won $\frac{3}{5}$ of its matches how many matches did India play

Please mark (✓) for the correct answer.

- A. 8 B. 20
- C. 16 D. 12

which of the statemenet is true?

Please mark (✓) for the correct answer.

- A. farther a number from zero to the right , smaller is its value B. zero is smaller than every negative integer
- C. zero is greater than every positive integer D. every positive integer is larger than every negative integer

The property represented by $a \times (b+c) = a \times b + a \times c$ is

Please mark (✓) for the correct answer.

- A. Distributive property
- B. Associative property
- C. none of these
- D. Commutative property

6 pipes are required to fill a tank in 80 minutes. How long will it take if only 5 pipes of the same type are used?

Please mark (✓) for the correct answer.

- A. 108 minutes
- B. 102 minutes
- C. 106 minutes
- D. 96 minutes

A Given $AB = 3$ cm, $AC = 5$ cm, and $\angle B = 30^\circ$, ΔABC cannot be uniquely constructed, with AC as base, why?

Please mark (✓) for the correct answer.

- A. Two sides and included angle are given
- B. The other two angles are not given
- C. The vertex A coincides with the vertex C
- D. The vertex B cannot be uniquely located

The letter F has

Please mark (✓) for the correct answer.

- A. no line of symmetry
- B. one vertical line of symmetry
- C. two lines of symmetry
- D. one horizon line of symmetry

What should be divided by 53240 to make it a perfect cube?

Please mark (✓) for the correct answer.

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

If a, b and c are whole numbers, then $a+(b+c) = (a+b)+c$. This property is called

Please mark (✓) for the correct answer.

- A. distributive Property
- B. Closure property
- C. associative property
- D. commutative property

The greatest of the numbers 0.1000,1000.0,1.0,100.000,10.00000

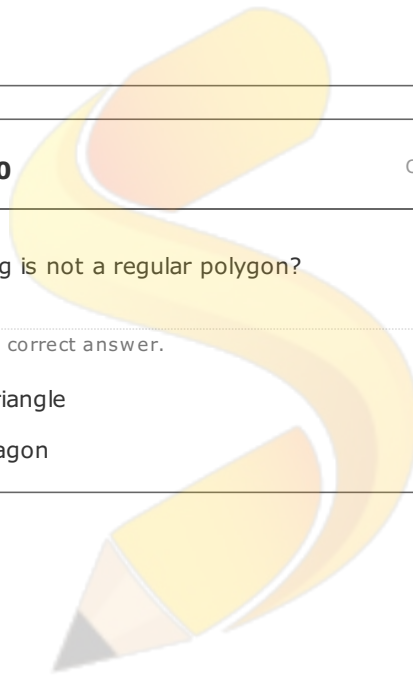
Please mark (✓) for the correct answer.

- A. 10.00
- B. 1000.0
- C. 100.000
- D. 10000.00

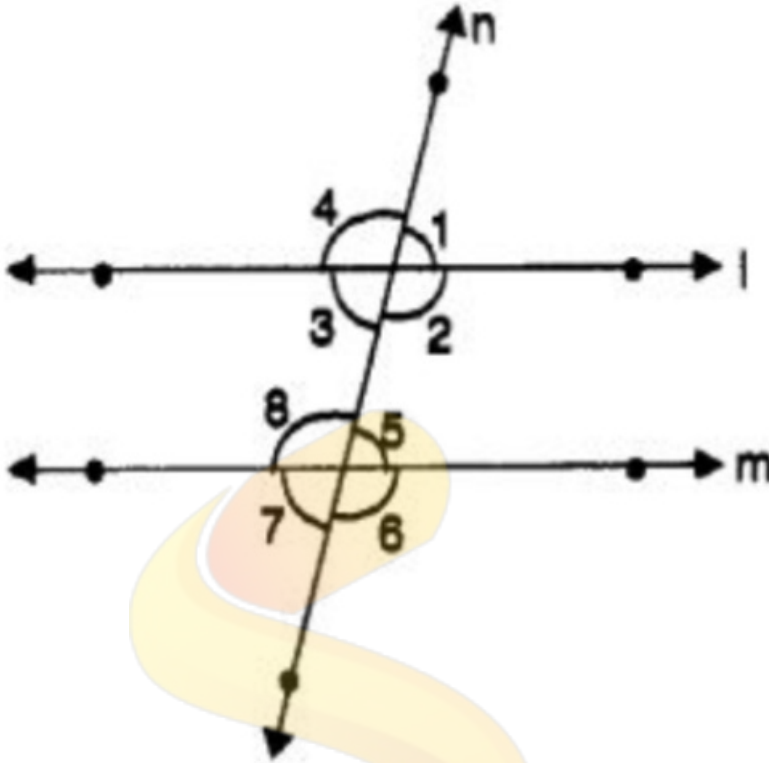
Which of the following is not a regular polygon?

Please mark (✓) for the correct answer.

- A. Equilateral triangle
- B. Rectangle
- C. Regular hexagon
- D. Square



In the following figure, a transversal cuts two parallel lines l and m respectively and the angles thus formed are marked. If $\angle 1$ is an acute angle, then, which of the following statements is false?



Please mark (✓) for the correct answer.

- A. $\angle 2 + \angle 6 = 180^\circ$
 B. $\angle 1 + \angle 2 = 180^\circ$
 C. $\angle 2 + \angle 5 = 180^\circ$
 D. $\angle 3 + \angle 8 = 180^\circ$

3- tenth= ?

Please mark (✓) for the correct answer.

- A. 0.003
 B. 0.0003
 C. 0.3
 D. 0.03

A child has a block in the shape of a cube with one letter written on each face as shown below:



Please mark (✓) for the correct answer.

A. 1/6

B. 1/2

C. 1/4

D. 1/3

--- END OF QUESTION PAPER ---



Answer Key

No	Question Type	QID	Correct Answer
Question - 1	Multiple Choice (Radiobutton)	397	C
Question - 2	Multiple Choice (Radiobutton)	401	C
Question - 3	Multiple Choice (Radiobutton)	431	A
Question - 4	Multiple Choice (Radiobutton)	414	D
Question - 5	Multiple Choice (Radiobutton)	404	B
Question - 6	Multiple Choice (Radiobutton)	408	A
Question - 7	Multiple Choice (Radiobutton)	420	B
Question - 8	Multiple Choice (Radiobutton)	418	A
Question - 9	Multiple Choice (Radiobutton)	403	B
Question - 10	Multiple Choice (Radiobutton)	443	A
Question - 11	Multiple Choice (Radiobutton)	438	D
Question - 12	Multiple Choice (Radiobutton)	400	C
Question - 13	Multiple Choice (Radiobutton)	432	D
Question - 14	Multiple Choice (Radiobutton)	396	C
Question - 15	Multiple Choice (Radiobutton)	437	A
Question - 16	Multiple Choice (Radiobutton)	402	D
Question - 17	Multiple Choice (Radiobutton)	429	D
Question - 18	Multiple Choice (Radiobutton)	424	D
Question - 19	Multiple Choice (Radiobutton)	407	C
Question - 20	Multiple Choice (Radiobutton)	412	B
Question - 21	Multiple Choice (Radiobutton)	416	C
Question - 22	Multiple Choice (Radiobutton)	430	C
Question - 23	Multiple Choice (Radiobutton)	410	A
Question - 24	Multiple Choice (Radiobutton)	442	C
Question - 25	Multiple Choice (Radiobutton)	422	D
Question - 26	Multiple Choice (Radiobutton)	411	B
Question - 27	Multiple Choice (Radiobutton)	425	C
Question - 28	Multiple Choice (Radiobutton)	433	A
Question - 29	Multiple Choice (Radiobutton)	426	D
Question - 30	Multiple Choice (Radiobutton)	436	D
Question - 31	Multiple Choice (Radiobutton)	417	B
Question - 32	Multiple Choice (Radiobutton)	395	D
Question - 33	Multiple Choice (Radiobutton)	439	D
Question - 34	Multiple Choice (Radiobutton)	444	C
Question - 35	Multiple Choice (Radiobutton)	399	B
Question - 36	Multiple Choice (Radiobutton)	398	C
Question - 37	Multiple Choice (Radiobutton)	406	D
Question - 38	Multiple Choice (Radiobutton)	419	B
Question - 39	Multiple Choice (Radiobutton)	435	D
Question - 40	Multiple Choice (Radiobutton)	415	A
Question - 41	Multiple Choice (Radiobutton)	405	D
Question - 42	Multiple Choice (Radiobutton)	423	D
Question - 43	Multiple Choice (Radiobutton)	434	A

No	Question Type	QID	Correct Answer
Question - 44	Multiple Choice (Radiobutton)	409	B
Question - 45	Multiple Choice (Radiobutton)	421	C
Question - 46	Multiple Choice (Radiobutton)	428	B
Question - 47	Multiple Choice (Radiobutton)	413	B
Question - 48	Multiple Choice (Radiobutton)	441	A
Question - 49	Multiple Choice (Radiobutton)	427	C
Question - 50	Multiple Choice (Radiobutton)	440	D

--- END OF ANSWER KEY ---

