

# WINTER VACATION HOLIDAY HW

## Class IX

### ENGLISH

READING: Find/ Write two new words daily during winter Break with meaning and use them in sentence ( make a sentence underline the word). You can take words from English newspaper if it is available.

WRITING: Write a letter to your friend describing him/ her the celebrations in your Vidyalaya namely Annual Sports/KVS Diamond Jubilee and Annual Day 2023 of your Vidyalaya.

Literature Textbook

: Write Poetic Devices of Poem 4-“The Seven Ages” and Poem 5-“Oh! I Wish.....”

MCB: Complete Unit-7 : Sports and Games

Revise all English the lessons completed till date.

Prepare for PT-3.

\*Write in your English Note book\*

\*All the best\*

### HINDI

प्रश्न1. अनुच्छेद लेखन – 1 . स्वास्थ्य और व्यायाम

प्रश्न2 ‘रीढ़ की हड्डी पाठ’ से आपको क्या संदेश मिलता है, विस्तार से लिखिए।

प्रश्न3. संवाद लेखन –1. मोबाइल फोन के दुष्परिणामों को आधार बनाकर दो मित्रों के बीच होने वाले बातचीत का संवाद।

2. डॉक्टर और आपके बीच होने वाली बातचीत का संवाद |

प्रश्न4. आपके आस-पास गंदगी होने पर सफाई के लिए नगरपालिका अध्यक्ष को एक प्रार्थना पत्र लिखिए।

प्रश्न5. अर्थ के आधार पर वाक्यों के भेद तीन-तीन उदाहरण सहित लिखिए।

## MATHS

1) AD is a diameter of a circle and AB is a chord. If AD = 34 cm, AB = 30 cm, the distance of AB from the centre of the circle is:

- (A) 17 cm    (B) 15 cm    (C) 4 cm    (D) 8 cm

2) If AB = 12 cm, BC = 16 cm and AB is perpendicular to BC, then the radius of the circle passing through the points A, B and C is :

- (A) 6 cm    (B) 8 cm    (C) 10 cm    (D) 12 cm

3) ABCD is a rhombus such that  $\angle ACB = 40^\circ$ . Then  $\angle ADB$  is

- (A)  $40^\circ$     (B)  $45^\circ$     (C)  $50^\circ$     (D)  $60^\circ$

4) The diagonals AC and BD of a parallelogram ABCD intersect each other at the point O. If  $\angle DAC = 32^\circ$  and  $\angle AOB = 70^\circ$ , then  $\angle DBC$  is equal to

- (A)  $24^\circ$     (B)  $86^\circ$     (C)  $38^\circ$     (D)  $32^\circ$

5) The area of an isosceles triangle having base 2 cm and the length of one of the equal sides 4 cm, is

- (A)  $\sqrt{15}cm^2$     (B)  $\sqrt{\frac{15}{2}}cm^2$     (C)  $2\sqrt{15}cm^2$     (d)  $4\sqrt{15}cm^2$

6) An isosceles right triangle has area  $8 cm^2$ . The length of its hypotenuse is

- (A)  $\sqrt{32} cm$     (B)  $\sqrt{16} cm$     (C)  $\sqrt{48} cm$     (D)  $\sqrt{24} cm$

7) A cone is 8.4 cm high and the radius of its base is 2.1 cm. It is melted and recast into a sphere. The radius of the sphere is :

- (A) 4.2 cm      (B) 2.1 cm      (C) 2.4 cm      (D) 1.6 cm

8) The total surface area of a cone whose radius is  $\frac{r}{2}$  and slant height  $2l$  is

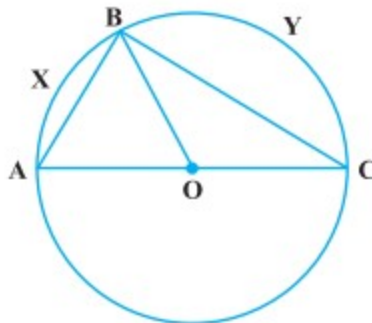
- (A)  $2\pi r(r+l)$       (B)  $\pi r(l+\frac{r}{4})$       (C)  $\pi r(l+r)$       (D)  $2\pi rl$

9) : The surface area of a sphere of radius 5 cm is five times the area of the curved surface of a cone of radius 4 cm. Find the height and the volume of the cone.

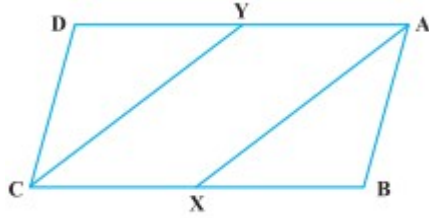
10) A right triangle with sides 6 cm, 8 cm and 10 cm is revolved about the side 8 cm. Find the volume and the curved surface of the solid so formed.

11) A cloth having an area of 165 m<sup>2</sup> is shaped into the form of a conical tent of radius 5 m (i) How many students can sit in the tent if a student, on an average, occupies  $\frac{5}{7}m^2$  on the ground? (ii) Find the volume of the cone.

12) AOC is a diameter of the circle and arc AXB =  $\frac{1}{2}$  arc BYC. Find  $\angle BOC$ .



13) AX and CY are respectively the bisectors of the opposite angles A and C of a parallelogram ABCD. Show that AX || CY



14) Find the cost of laying grass in a triangular field of sides 50 m, 65 m and 65 m at the rate of Rs 7 per  $m^2$ .

15) Prove all theorems from circle.

## SCIENCE

1. WRITE a brief note on OZONE layer depletion and Nitrogen cycle.
2. Question and answers of chapter a) work and energy b) Gravitation from NCERT book

## SST

1. Prepare an Inter Disciplinary Project on the theme:  
“Natural Vegetation and Wildlife” (Chapter 5 of Geography)  
Or,  
“Colonialism and Forest Society” (Chapter 4 of History)
2. MAP SKILLS  
On an outline map of India, show the following.
  - (i) Areas receiving rainfall over 400 cm.
  - (ii) Areas receiving less than 20 cm of rainfall.
  - (iii) The direction of the south-west monsoon over India.
3. Make the Concept Map of the chapter “Poverty as Challenge”.
4. Make the self-Notes and Exercise of the chapter “Poverty as Challenge”

## AI

1. Define the term Neural Network?
2. What do you understand by the term Classification?
3. Describe the basic architecture of a Neural Network in brief?

## Class X

### ENGLISH

1. Solve a reading comprehension passage (Take a sample paper).
2. Letter Writing—Write ONE example of formal Letter (Enquiry, Order, Complaint, Replacement and TWO examples of letter to Editor. Attempt 2 Analytical Paragraph from Sample paper shared already.
3. Revise all English the lessons with focus on theme, Values, characters.

Prepare for Pre-Board.

\* Write in your English notebook\*

\*All the best\*.

### HINDI

- 1 लिंक के माध्यम से प्रतिदर्श प्रश्नपत्र हल करें -

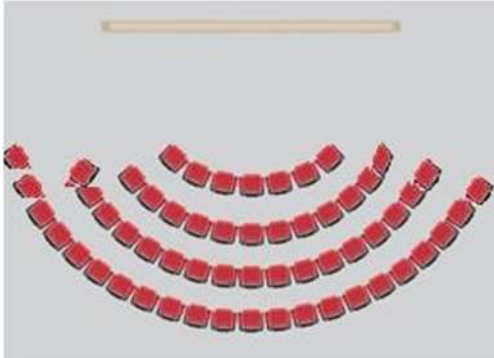
<https://drive.google.com/file/d/1YufxZDDSMGnTL8x1B2NhmY2ZTElsMLHE/view?usp=drivesd>

- 2 द्वितीय प्री बोर्ड परीक्षा हेतु लिखित अभ्यास करें

# MATHS

## SOLVE THESE CASE STUDY QUESTIONS

1. A school auditorium has to be constructed with a capacity of 2000 people. The chairs in the auditorium are arranged in a concave shape facing towards the stage in such a way that each succeeding row has 5 seats more than the previous one.



- (i) If the first row has 15 seats, then how many seats will be there in 12th row?
- (ii) If there are 15 rows in the auditorium, then how many seats will be there in the middlerow?
- (iii) If total 1875 guests were there in the auditorium for a particular event, then how many rows will be needed to make all of them sit?

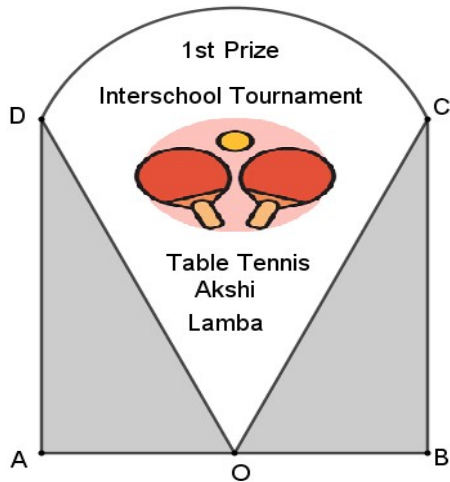
OR

If total 1250 guests were there in the auditorium for a particular event, then how many rows will be left blank out of total 30 rows?

2. Shown below is the trophy shield Akshi received on winning an international Table tennis tournament.

The trophy is made of a glass sector DOC supported by identical wooden right triangles

$\Delta DAO$  and  $\Delta COB$ . Also,  $AO = 7$  cm and  $AO : DA = 1 : \sqrt{3}$  (Use  $\sqrt{3} = 1.73$ )



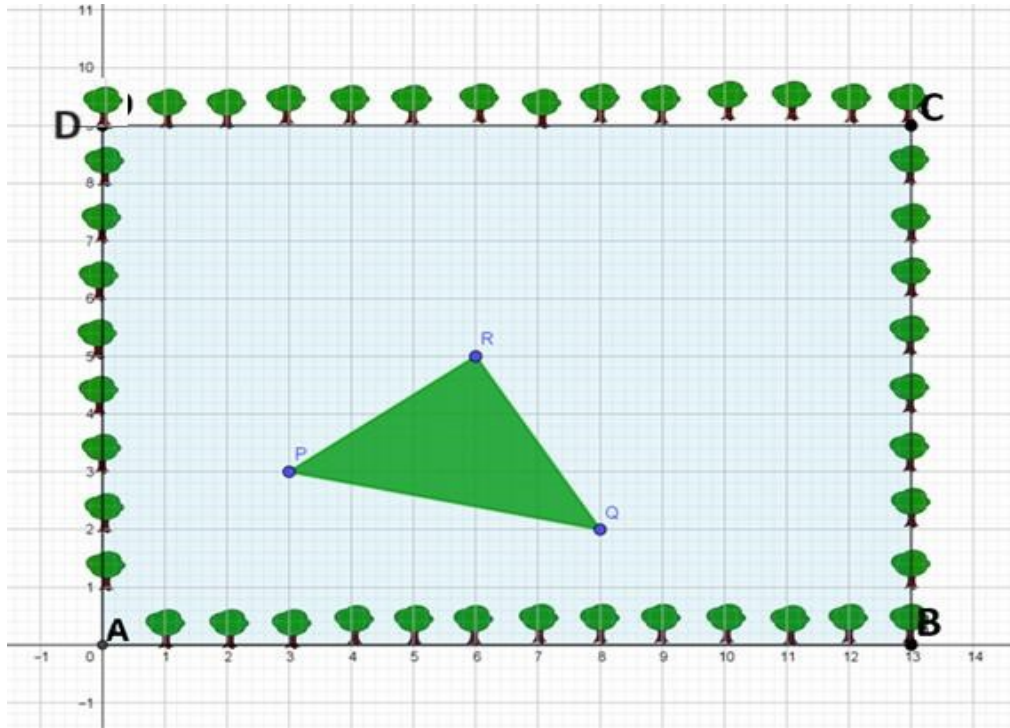
Based on the given information, answer the following questions:

- (i) Find  $\angle DOC$
- (ii) Find the area of the wooden triangles
- (iii) Find the area of the shape formed by the glass portion

OR

If Akshi wants to decorate the boundary of the glass portion with glitter tape, then find the length of the tape she needs.

3. The students of Class X of a secondary school have been allotted a rectangular plot of land for their gardening activity. Saplings are being planted on the boundary at a distance of 1 m from each other. There is a triangular grassy lawn in the plot as shown in the figure. The students are to row seeds of the flowering plant on the remaining area of the plot



(i) If a tree is to be planted exactly in the middle of the triangle PQR i.e. at the centroid of  $\Delta PQR$  to give shade to the people sitting in the lawn, then find the coordinates of the point where the tree should be planted .

(ii) What type of triangle is formed by the grassy lawn?

(iii) Find the area of the plot in which the students have to row the seeds.

OR

If a special flowering plant has to be planted at a point which divides the line joining the points C and Q in the ratio 2:3, then find the coordinates of the point where this plant will be planted .

4. Answer the questions based on the given information.

An interior designer, Sana, hired two painters, Manan and Bhima to make paintings for her buildings. Both painters were asked to make 50 different paintings each.

The prices quoted by both the painters are given below:

- ◆ Manan asked for Rs 6000 for the first painting, and an increment of Rs 200 for each following painting.
- ◆ Bhima asked for Rs 4000 for the first painting, and an increment of Rs 400 for each following painting.



(i) How much money did Manan get for his 25th painting? Show your work.

(ii) How much money did Bhima get in all? Show your work.

(iii) If both Manan and Bhima make paintings at the same pace, find the first painting for which Bhima will get more money than Manan. Show your steps.

OR

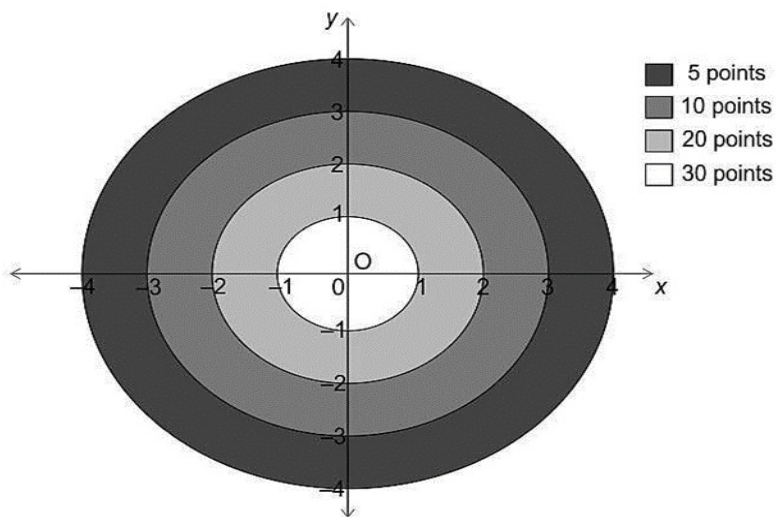
(iii) Sana's friend, Aarti hired Manan and Bhima to make paintings for her at the same rates as for Sana. Aarti had both painters make the same number of paintings, and paid them the exact same amount in total.

How many paintings did Aarti get each painter to make? Show your work.

5. Answer the questions based on the given information.

In the game of archery, a bow is used to shoot arrows at a target board. The player stands far away from the board and aims the arrow so that it hits the board.

One such board, which is divided into 4 concentric circular sections, is drawn on a coordinate grid as shown. Each section carries different points as shown in the figure. If an arrow lands on the boundary, the inner section points are awarded.



(i) After shooting two arrows, Rohan scored 25 points.

Write one set of coordinates for each arrow that landed on the target.

(ii) If one player's arrow lands on  $(2, 2.5)$ , how many points will be awarded to the player? Show your work.

(iii) One of Rohan's arrow landed on  $(1.2, 1.6)$ . He wants his second arrow to land on the line joining the origin and first arrow such that he gets 10 points for it.

Find one possible pair of coordinates of the second arrow's landing mark.

Show your work.

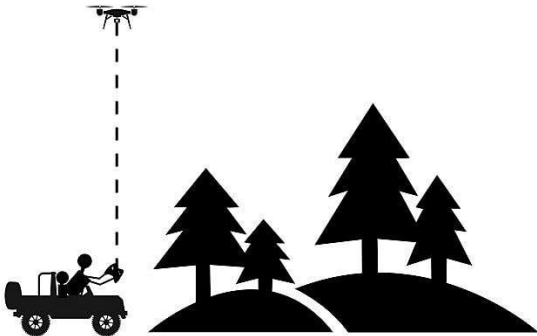
OR

(iii) An arrow landed on the boundary and is worth 20 points. The coordinates of the landing mark were of the form  $(m, -m)$ . Find all such coordinates. Show your steps.

Answer the questions based on the given information.

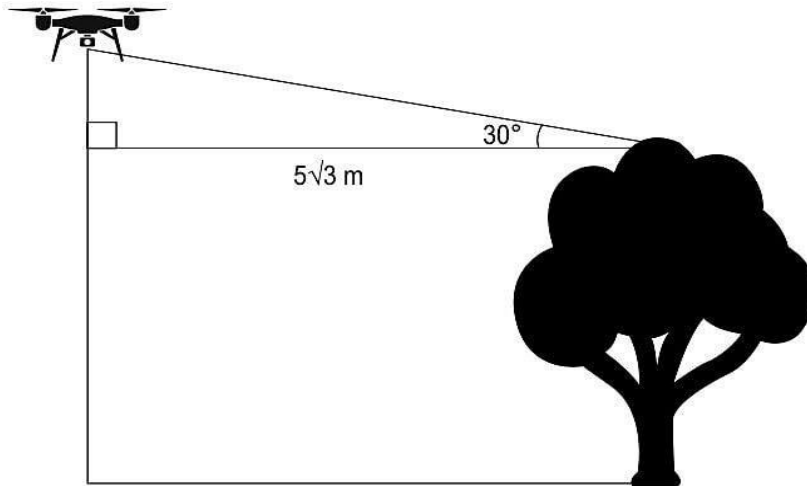
**6.** A drone, is an aircraft without any human pilot and is controlled by a remotecontrol device. Its various applications include policing, surveillance, photography, precision agriculture, forest fire monitoring, river monitoring and so on.

David used an advanced drone with high resolution camera during an expedition in a forest region which could fly upto 100 m height above the ground level. David rode on an open jeep to go deeper into the forest. The initial position of drone with respect to the open jeep on which David was riding is shown below.



David's jeep started moving to enter the forest at an average speed of 10 m/s. He Simultaneously started flying the drone in the same direction as that of the jeep.

- (i) David reached near one of the tallest trees in the forest. He stopped the drone at a horizontal distance of  $5\sqrt{3}$  m from the top of the tree and at a vertical distance of 65 m below its maximum vertical range.



Note: The figure is not to scale.)

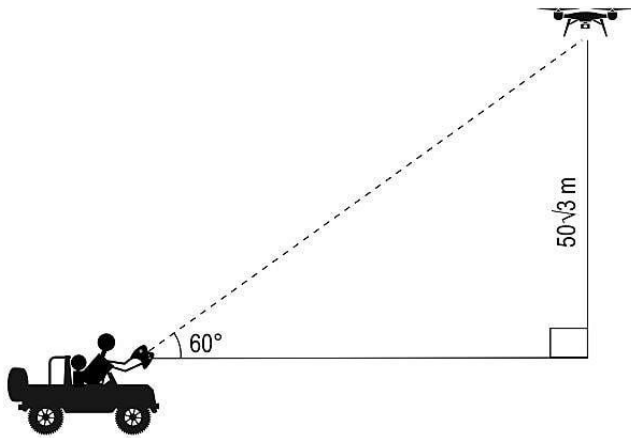
If the angle of elevation of the drone from the top of the tree was  $30^\circ$ , find the height of the tree. Show your work.

ii) The drone was flying at a height of  $30\sqrt{3}$  metres at a constant speed in the horizontal direction when it spotted a zebra near a pond, right below the drone.

The drone travelled for 30 metres from there and it could see the zebra, at the same place, at an angle of depression of  $\theta$  from it.

Draw a diagram to represent this situation and find  $\theta$ . Show your work.

(iii) After 2 minutes of starting the expedition both the drone and the jeep stopped at the same moment so that the drone can capture some images. The position of the drone and the jeep when they stopped is as shown below.

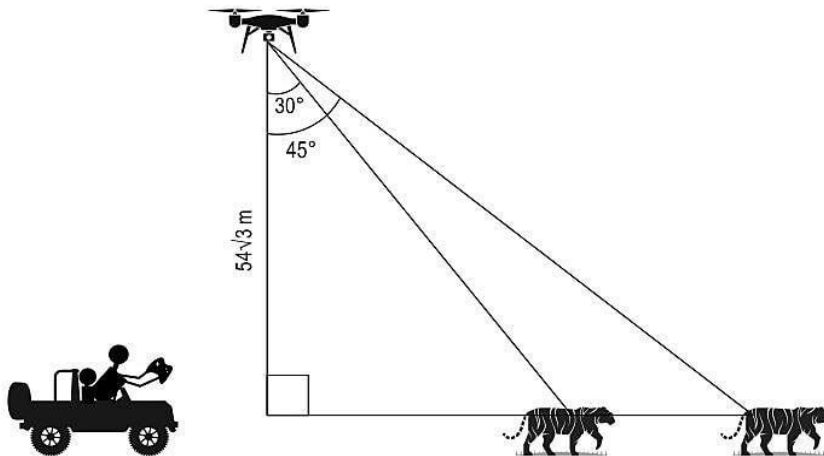


(Note: The figure is not to scale.)

Find the average speed of the drone in m/s rounded off upto 2 decimal places. Show your work.

OR

- (iii) At some point during the expedition, David kept the drone stationary for some time to capture the images of a tiger. The angle of depression from the drone to the tiger changed from  $30^\circ$  to  $45^\circ$  in 3 seconds as shown below.



(Note: The figure is not to scale.)

What was the average speed of the tiger during that time? Show your work.

(Note: Take  $\sqrt{3}$  as 1.73.)

(i) After shooting two arrows, Rohan scored 25 points.

Write one set of coordinates for each arrow that landed on the target. 1

(ii) If one player's arrow lands on (2, 2.5), how many points will be awarded to the player? Show your work.

1

(iii) One of Rohan's arrow landed on (1.2, 1.6). He wants his second arrow to land on the line joining the origin and first arrow such that he gets 10 points for it.

Find one possible pair of coordinates of the second arrow's landing mark.

Show your work.

OR 2

(iii) An arrow landed on the boundary and is worth 20 points. The coordinates of the landing mark were of the form (m, -m).

Find all such coordinates. Show your steps.

2

## SCIENCE - --

### SST

. Make a Interdisciplinary project on the topic

Topic- TRANSFORMATION OF WORLD INTO A  
GLOBAL VILLAGE

POINTS TO BE INCLUDED

- Impact of world war II on the global Economy.

- The Great Depression its causes and consequences on world Economy
- India and the Great Depression
- Role of MNC's and the Liberalisation policy in the International trade & its Impact on World Economy.
- How means of transport and Communication contributes in the world Economy.

The project must include : cover page,  
acknowledgement, index, bibliography.

Supporting images, graph, data etc should be included.

#### COVER PAGE MUST INCLUDE

- Name of the student( leader)
- Members of the team
- Class & sec
- Topic of IDP

2.Solve at least 10 sample papers for upcoming pre-board exam.