Guru Amar Dass Public School, Goindwal Road, Kapurthala
Grade :IX
Summer Holidays' Homework
Session 2025-26

Important Instructions

- Neatness and presentation are common parameters for most of the activities assigned. Please maintain the quality of work done.
- Holiday's homework will be assessed on certain parameters and marks/grade will be awarded accordingly.
- To score well in your upcoming exams strike a balance between your leisure time and studies.
- Marks of Holidays Homework will be added in your Mid-Term Examination.

BE A WONDERFUL HUMAN BEING: KEEP IN MIND TO

- Do the homework independently, only ask for assistance from your parents or guardians
- Remember to have a wide mouth container filled with water outside your house for the birds to get respite from the scorching heat.
- Pray to almighty daily and thank for the blissful life that you enjoy.
- Be a helping hand to your parents and learn the skill of shared responsibility.
- Do the work by following the guidelines given with each work or activity
- Spend time with your parents and grandparents, their rich experience will help you overcome challenges with ease.

HEALTHY LIFESTYLE BE YOUR PRIORITY

1. Give prime importance to your health. Eat lots of fruits, do exercise and get into yoga
2. Pledge for "Eat Right -Less Sugar, Less Oil and Less Salt"
3. Wash hands frequently, especially before and after meal.
4. Avoid sharing of towel, handkerchief, brush with others.
5. Drink plenty of water.

REQUEST TO PARENTS

6. Summer vacation time is an opportunity to spend the quality time with your child and make him/her feel special of his unique identity.

So just spare sometime and do the following:

- Talk about Omni presence of **God** and humility being developed with regular prayers and doing good deeds as to offer best prayer to the God. Take them some religious places.
- Let them feed the poor and share things with needy people with love, let them enjoy the **Art of Giving**.
- Talk about the importance of parents and elders.

ENGLISH

Reading:

- Solve First Five "Discursive passages" (Evergreen Practice Paper)
- Solve First Five "Case based passages" (Evergreen Practice Paper)

Literature : Solve extracts (Reference to context for practice) of all PT – I lessons.

Portfolio

Create your Portfolio using the following guidelines:

1. Index should be written in a tabular form along with serial number and content .

2. Describe yourself (built, appearance, etc.) along with the pictures.

3. A complete SWOT analysis should be written. (mention your strengths, weaknesses, goals/aims, threats)

4. Your achievements of last five years/ certificates/ medals/ scholarships

The portfolio will be assessed using the following parameters:

1. Neatness

2. Creativity

3. Visual appeal

4. Inclusion of all relevant work

Writing: 1. You are Rohan Verma of 56, Green Avenue, Lucknow – 226001. Write a letter to M/s Book World, 23, Station Road, Lucknow ordering textbooks for your school library.

2. You are Anjali Sharma of 89, Park Street, Jaipur – 302003. Write a letter to M/s Sports Hub, 45, Market Lane, Jaipur ordering footballs and cricket bats for your school team.

3. You are Mohit Singh of 12, Rose Garden, Delhi – 110034. Write a letter to M/s Stationery Mart, 78, Main Road, Delhi ordering notebooks, pens, and other supplies for your class.

4. You are Neha Kapoor of 34, Model Town, Chandigarh – 160012. Write a letter to M/s Uniforms Co., 56, Industrial Area, Chandigarh ordering new school uniforms for the upcoming session.

5. You are Aditya Gupta of 22, MG Road, Mumbai – 400001. Write a letter to M/s Tech Solutions, 90, Business Street, Mumbai ordering laptops for the computer lab in your school.

MATHEMATICS

Solve the Following Worksheets:
WORKSHEET – 01

SECTION -A

1. Find two rational numbers between $\frac{1}{2}$ and $\frac{1}{3}$

2. Verify whether $x = -\frac{1}{3}$ is a zero of $p(x) = 3x + 1$

3. State the quadrant in which points lie **(-5,6), (-4 ,-3)**

4. Check $x = \frac{2}{\sqrt{3}}$, $\frac{-2}{\sqrt{3}}$ is a zero of $p(x) = 3x^2 - 2$

SECTION-B

5. Express $0.2\overline{25}$ in form of $\frac{p}{q}$, where **p** and **q** are integers and **q≠0**.

6. Evaluate $8(216)^{\frac{1}{3}} - 2(32)^{\frac{1}{5}} + (16)^{\frac{3}{4}}$

7. Plots the points **A (2,3), B (6,3), C (5,0) and D (1,0)** on cartesian system and join these points in order and name the shape thus obtained.

8. Expand $(2x - y + z)^2$ using suitable identities.

<div align="center">

SECTION-C

</div>

9 Rationalize $\dfrac{3+5\sqrt{2}}{3-5\sqrt{2}}$

10. Locate $\sqrt{2}$ on number line and give the steps of construction.

11. Simplify $\dfrac{3}{\sqrt{3}+\sqrt{2}} - \dfrac{2}{2+\sqrt{3}}$

12. Find $(106)^3 - (94)^3$ using suitable identities.

<div align="center">

SECTION-D

</div>

13. Represent $\sqrt{17}$ on number line and give steps of construction.

14. Factorize $(ax + by)^2 (ay - bx)^2$.

15. Factorize $y^3 - 2y^2 - 29y - 42$.

16. Plot the following points **A (2,0), B (4,0) and C (4,6)** on graph paper and join these points in order   also find the area of figure so obtained.

WORKSHEET – 02

<div align="center">

SECTION -A

</div>

1. Find two rational numbers between $\dfrac{2}{3}$ and $\dfrac{3}{4}$

2. Factorize $a^2 + b^2 - 2 (ab - ac + bc)$

3. State the quadrant in which points lie **(-5 ,8.2),(6,1.23)**

4. Find zero of **p(x) = 2x + 5**

<div align="center">

SECTION-B

</div>

5. Express **5.41$\overline{23}$** in form of $\dfrac{p}{q}$, where **p** and **q** are integers and **q≠0**.

6. Evaluate $12(64)^{\frac{3}{2}} - 5(25)^{\frac{5}{2}} - (81)^{\frac{3}{4}}$

7. Plots the points **A (2,0), B (0,-2), C (2,-4)** on cartesian system and join these points in order and name the shape thus obtained.

8. Simplify $(a+b+c)^2 + (a - b +c)^2$.

<div align="center">

SECTION-C

</div>

9 Rationalize $\dfrac{\sqrt{5}+6}{4-5\sqrt{2}}$

10. Locate $\sqrt{3}$ on number line and give the steps of construction.

11. Simplify $\dfrac{3}{3\sqrt{3}+4\sqrt{2}} - \dfrac{2-\sqrt{3}}{2+\sqrt{3}}$

12. Factorize $2n^3 + 7n^2 - 3n - 18$

13. Is $\sqrt{x+5}$ a **polynomial give reasons.**

14. Factorize $4x^2 + 8x + 3.$

15. Plot the following points **A (0,0), B (2,0),C (2,2) and(0,2)** on graph paper and join these points in order and also find the area of figure so obtained.

WORKSHEET – 03

<div align="center">

Section – A   4x1=4
</div>

1. Write a binomial of degree 25.

2. In which axis do the point (3,0) lies?

3. Write the abscissa and ordinate of point (–3, –4).

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Section – B   4x2=8
</div>

4. Factorize: $27a^3\text{-}8b^3+54a^2b\text{-}36ab^2$

5. Find four rational numbers between $\dfrac{7}{8}$ and $\dfrac{5}{7}$

6. In which quadrant, do the points (-5, 8), (1, 2), (-3, -6) and (4, -1) lies?

<div align="center">

Section – C   4x3=12
</div>

7. Plot the points P(1,0), Q(4,0) and S(1,3). Find the coordinates of point R such that PQRS is a square.

8. Factorize: $2\sqrt{2}a^3+8b^3+54a^2b+36ab^2.$

9. Simplify: $\dfrac{(25)^{\frac{3}{2}}\times(243)^{\frac{3}{5}}}{(125)^{\frac{5}{3}}\times(27)^{\frac{4}{3}}}$

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Section – D   4x4=16
</div>

10. If $\dfrac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}} = a + \sqrt{15}\, b,$ find the values of a and b.

11. Find the value of $4\,(216)^{\frac{2}{3}} + (256)^{\frac{3}{4}} - 2\,(243)^{\frac{1}{5}}$

12. Factorize: $2x^3+7x^2\text{-}3x\text{-}18$

- **Revise all the Periodic Test – I Syllabus.**

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MATHEMATICS WORKING MODELS
</div>

Topics
Integers
Algebraic identities
Coordinate geometry
Lines and angles
Congruence of triangles
Mensuration

- Do activity number 2.1, 2.4, 2.5, 2.7, 3.1 from creative kids mathematics lab manuals.

SCIENCE

1. Calculate the acceleration of a body which starts from rest and travels 87.5m 5 sec?
2. Calculate the acceleration and distance of the body moving with 5m/s2 which comes to rest after traveling for 6sec?
3. A body is moving with a velocity of 12m/s and it comes to rest in 18m, what was the acceleration?
4. A body starts from rest and moves with a uniform acceleration of 4m/s2 until it travels a distance of 800m, find the find velocity?
5. The driver of a car traveling along a straight road with a speed of 72KM ph observes a signboard which give the speed limit to be 54KM ph. The signboard is 70m ahead when the driver applies the brakes0 calculate the acceleration of the car which will cause the car to pass the signboard at the stated speed limit?
6. Two cars A and B are moving along in a straight line. Car A is moving at a speed of 80KMph while car B is moving at a speed 50KMph in the same direction, find the magnitude and direction of
   (a) the relative velocity of car A with respect to B
   (b) The relative velocity of car B with respect to A.
7. A car moving with a certain velocity comes to a halt if the retardation was 5m/s2, find the initial velocity of the car?
8. A ball starts from rest and rolls down 16m down an inclined plane in 4 s.
   (a) What is the acceleration of the ball?
   (b) What is the velocity of the ball at the bottom of the incline?
9. Differentiate between distance and displacement.
10. Define uniform velocity and uniform acceleration.
11. Differentiate between scalars and vectors quantities.

Chemistry Worksheet

1. Name the three states of matter. Give one example of each.
2. What are the two ways in which the physical state of matter can be changed?
3. Explain how gases can be liquefied?
4. What is sublimation? Give examples.
5. Define latent heat of fusion.
6. Differentiate between evaporation and boiling.
7. What is full form of CNG and LPG?

8. What is dry ice?

9. Why it is advised to put wet clothes strips on the forehead of a person suffering from high fever?

10. Convert the following thermometer readings into Kelvin:

 (a) - 100°C (b) 200°C

11. Which phenomenon occurs during the following changes?

 (i) Formation of clouds,

 (ii) Drying of wet clothes,

 (iii) Wax melts in the sun,

 (iv) Size of naphthalene balls decreases.

12. Give reason:

 (a) Gases exert pressure on the walls of the container.

 (b) Evaporation causes cooling.

Biology Worksheet

1. Name two structures found in plant cells but not in animal cells.

2. Plasma membrane is made up of which two components?

3. Which organelle is involved in the formation of lysosomes?

4. What is a nucleoid?

5. Which cell organelle controls most of the activities of the cell?

6. What are the functional regions of a cell?

7. Differentiate between diffusion and osmosis.

8. What is plasmolysis?

9. What is the function of vacuoles?

10. When we put raisins in water, why do they swell?

11. What is membrane biogenesis?

12. Name the cell organelle for the following:

(a) Present only in plant cell, provides strength and rigidity to the cell.

(b) It is the site for lipids synthesis and helps in detoxification of drugs.

(c) The inner membrane is folded to form cristae, it has its own DNA and proteins.

(d) It helps in the formation of lysosomes.

(e) It imparts colour to the fruit and flowers.

- **Complete the Lab Manual of Physics, Chemistry and Biology.**

I(A) – To prepare true solutions of common salt, sugar and alum in water.

I(B) – To prepare suspensions of soil, chalk powder and fine sand in water.

(3A) – To study the reaction between iron nails and copper sulphate solution in water and classify it as a physical or chemical change.

4(A) – To prepare stained temporary mount of onion peel and to record observations and draw the labelled diagram.

- **Revise whole Periodic Test- I Syllabus.**

SOCIAL SCIENCE

Geography

o Prepare a project file on Disaster Management Including following Natural Disasters.

(a) Floods	(b) Earthquake	(c) Forest Fire
(d) Landslides	(e) Drought	(f) Cloud burst

o The Project report should cover following points:-

(a) Causes	(b) Impact	(c) Mitigation Strategies
(d) Case study (Recent evidences with pictures)		

Note:- The project report should be presented in the order:-
- Cover page showing project title, student information and year.
- List of contents with page number (Index)

Fill these topics in political map of India:
➢ Dams : Salal, Bhakra Nangal, Tehri, Rana Pratap Sagar, Sardar Sarovar, Hirakund, Nagarjun Sagar, Tungbhadra.
➢ Iron Ore Mines – Mayurbhanj, Durg, Bailadila Bellary, Kudremukh
➢ Coal Mines – Raniganj, Bakaro, Talcher, Neyveli
➢ Software Technology Parks – Noida, Gandhinagar, Mumbai, Pune, Hydrabad, Bengluru, Chennai, Thiruvananthapuram.

Make a flow chart for these topics:-
➢ Greek war of independence.
➢ Unification of Germany.

➢ Types of power sharing.
➢ Farming techniques to check land degradation.
➢ How Belgium solved ethnical problem.
➢ Quality and Quantity aspects of water scarcity.

Revise all chapter's which has been covered till May.

PUNJABI

1. ਪੁਰਾਤਨ ਸੱਭਿਆਚਾਰ ਅਤੇ ਅਜੋਕੇ ਸੱਭਿਆਚਾਰ ਦੇ ਭੇਦ ਨੂੰ ਦਰਸਾਉਂਦੇ ਹੋਏ ਇੱਕ ਪ੍ਰੋਜੈਕਟ ਫਾਇਲ ਤਿਆਰ ਕਰੋ।

2. ਤਿਉਹਾਰ ਨਾਲ ਸੰਬੰਧਿਤ ਤਸਵੀਰਾਂ ਲਗਾ ਕੇ ਉਨ੍ਹਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੰਦੇ ਹੋਏ ਇੱਕ ਸਕ੍ਰੈਪ ਬੁੱਕ ਤਿਆਰ ਕਰੋ।

3. ਪਾਠ ਪੁਸਤਕਾਂ ਵਿੱਚੋਂ ਹੇਠ ਦਿੱਤੇ ਪਾਠਾਂ ਨੂੰ ਪੜ੍ਹੋ ਅਤੇ ਇਹਨਾਂ ਨਾਲ ਸੰਬੰਧਿਤ ਪ੍ਰਸ਼ਨ ਉੱਤਰ ਲਿਖਕੇ ਯਾਦ ਕਰੋ।

ਖੁਸ਼ੀਆਂ ਆਪੇ ਨਹੀਂ ਆਉਂਦੀਆਂ

ਮੁੜ ਵੇਖਿਆ ਪਿੰਡ

ਸਾਂਝੀ ਕੰਧ, ਬੱਸ ਕੰਡਕਟਰ

INFORMATION TECHNOLOGY

Make a practical file of the following topics :-

- ❖ **UNIT – 1 : Digital Documentation (Advanced) using libreoffice Writer.**
  1. Creating a new style.
  2. Load styles (from a template or document).
  3. Inserting image using insert image option.
  4. Positioning image in the text.
  5. Customization of TOC.

- **Learn Unit – I**
- **Read unit – IV Maintain Healthy, Safe and Secure Working Envorinment.**

ART & CRAFT

Make something innovative and attractive by using waste material.

Click on the following link to get an idea for the given Activity :

https://youtu.be/AIRfXJB_bJU?si=AC2-7nJqy75i499I

CELEBRATIONS

World Environment Day Activity

Let's nurture the nature so that we can have a better future. Hurray! its time to celebrate the World Environment Day on 5th June. Even a small change can make a huge difference to our world. Are you up for the change challenge?

Plant trees on the eve of World Environment Day. Click the photographs and send to your Form Educators

FATHERS' DAY CELEBRATION

On the account of Fathers' Day Celebration on 15 June, 2025, Make a favourite dish of your father with the help of your mother and serve it to your father. **Click the photographs and short clips (in landscape mode)** while performing the following activities and send to your Form Educator:-

1. **Helping Father in his work**
2. **Praying with father.**

INTERNATIONAL YOGA DAY

To keep you and your family members fit it's important to do yoga daily.

We celebrate YOGA DAY on 21st June so on that day all the Family members should do yoga and send the photos and videos (in landscape mode) to the Form Educator.