

**HOLIDAY HOMEWORK**  
**CLASS IX**

ITBP Public School

# English

- Revise all the chapters completed till 30<sup>th</sup> May.
- Do the following work in the notebook

**Q1. Research the new additions from Indian Languages to the Oxford English Dictionary. Write one such word, its source and meaning.**

**Q2. Fill in the blanks with a verb form that agrees with the subject. (Take a print out of this worksheet and paste in your IA Notebooks)**

1. Bread and butter ..... served for breakfast. (was / were)
2. The horse and carriage ..... at the door. (is / are)
3. My brother ..... to be an astronaut. (want / wants)
4. My parents ..... teachers. (is / are)
5. Politics ..... not something I am interested in. (is / are)
6. The cost of essential commodities ..... gone up. (has / have)
7. Her clothes ..... made of expensive fabrics. (is / are)
8. Either Manu or I ..... to go. (has / have)
9. Neither Mala nor her parents ..... at the party. (was / were)
10. Nobody ..... what happened to her. (know / knows)
11. Ravi as well as his brother ..... cricket well. (play / plays)
12. Everybody ..... a man of integrity. (respect / respects)

**Q3. Directions: Circle the correct verb in the following sentences. If you have a doubt about the correct verb, refer to the clues on the following page.**

1. The rhythm of the pounding waves is / are calming.
2. All of the dogs in the neighborhood were / was barking.
3. A high tax, not to mention unemployment, influence / influences votes.
4. My friends and my mother like / likes each other.
5. The team and the band was / were on the field.
6. Building a good marriage and building a good log fire is / are similar in many ways.

7. John or Doris write / writes to us regularly.
8. Neither Carol nor Ted is / are excluded from the meeting.
9. Either Patty or Tom was / were asked to lead the meeting.
10. Neither the basket nor the apples was / were expensive.
11. Neither the apples nor the basket was / were expensive
12. Either Maria or you was / were late for class.
13. Either you or Maria was / were late for class.
14. Hardest hit by the high temperatures and the drought was / were the farmers.
15. Neither of them like / likes going to the show.
16. Each of them has / have a good seat.
17. Everybody in the class has / have tickets.
18. Every silver knife, fork, and spoon has / have to be counted.
19. Each cat and each dog has / have its own toy.
20. The committee is / are meeting today.
21. Ten million gallons of oil is / are a lot of oil.
22. The jury vote / votes today.
23. The number is / are very small.
24. A number of students was / were absent.
25. Ten million gallons of oil was / were spilled.
26. The majority of us is / are in favor.
27. Statistics is / are an interesting subject. Statistics is / are often misleading.
28. The sheep stray / strays when the gate is left open. Sheep stray / strays when the gate is left open.

**Q3. The following passage has not been edited. There is one error in each line. Identify the error and write it along with the correction. The first one has been done for you as an example.**

	Error	Correction
During a summer holidays I accompanied my	a	the
friend from his village. It was a small place consisting (a)		

of about 200 houses. The villagers are simple people (b)  
and very hospitable. The natural scenery or fresh (c)  
air were very soothing. I stayed here for three days (d)  
and enjoyed myself in the lap of nature.

**Q4. Complete the passage given below by choosing the correct alternatives from the ones that follow:**

As a small boy, I used to play cricket with my mother. She used to bowl (a) ..... me in a small room in our house. There was (b) ..... space so she would kneel and throw the ball gently to (c) ..... Once I hit hard and hit her (d) ..... the nose. It started bleeding and I was frightened.

- |            |            |             |          |
|------------|------------|-------------|----------|
| (a) i) for | ii) at     | iii) over   | iv) to   |
| (b) i) few | ii) little | iii) hardly | iv) any  |
| (c) i) her | ii) me     | iii) us     | iv) them |
| (d) i) in  | ii) for    | iii) on     | iv) into |

**Q5. Rearrange the following words or phrases to form meaningful sentences. The first one has been done for you.**

- a) railway station / my parents / one evening / along with / to the / I went
- b) crowd at / counter / there was / the ticket / a huge
- (c) their voices / at the / the hawkers / top of / were shouting
- (d) arrived / started / compartment / the passengers / from one / running / to another / the train / and

## Social Studies

1. Every student has to compulsorily undertake *one project on Disaster Management*.

2. **Objectives:** The main objectives of giving project work on Disaster Management to the students are to:

- create awareness in them about different disasters, their consequences and management
- prepare them in advance to face such situations
- ensure their participation in disaster mitigation plans
- enable them to create awareness and preparedness among the community.

3. The project work should also help in enhancing the Life Skills of the students.

4. If possible, *different forms of art* may be integrated in the project work.

### **Important Instructions**

While preparing the project, the points to be kept in mind are:

- The project report should be handwritten.
- Use A4 size sheets.
- Compile the work in a folder.
- Page limit- 15-20sheets.
- **Project should have: cover sheet, index, introduction, conclusion.**
- The cover sheet of the project should have the following details:
  - i. **Theme of the Project**
  - ii. **Name**
  - iii. **Class and Section**
  - iv. **Subject**
- Use pictures, diagrams and relevant data for illustration.
- The collected data should have a reliable source and that should be mentioned with it.
- Use eco-friendly products for the project.

### **II. Revise the covered syllabus.**

**Note: This project report is a part of internal assessment.**

## **Hindi**

1. किसी भी एक कवि पर लगभग 8-10 पृष्ठों में एक एलबम तैयार कीजिए जिसमें कवि का जीवन परिचय, चित्र और एक मुख्य कविता भावार्थ सहित (पुस्तक में दी हुई कविता से अलग) हो।

2. 1-20 श्रुतिसम भिन्नार्थक शब्द 1-20, पर्यायवाची शब्द, 1-20 विलोम शब्द कक्षा पुस्तिका में लिखिए। (आठवीं की पुस्तक के आधार पर)

3. कोविड-19 से बचाव हेतु अपने नानजी को पत्र और महामारी में विदेश में रह रहे छोटे भाई को घर पर रहने के सुझाव हेतु पत्र लिखिए।

## Science (Biology)

1. Make a PPT on chapter Cell : The fundamental unit of life.
2. Make a portfolio on the chapter Natural Resources with creativity and innovative ideas by using daily life practical examples.
3. Do the given assignments from chapter 6.
4. Write down the notes provided of chapter Tissues.

## Chemistry

1. Solve assignment of chapter 1 and 2 in fair notebook .
2. Research about the greenhouse gases, their sources and their impact on humans , animals and environment . Also write about the preventive steps we can take to avoid global warming in context to green chemistry.
3. Show the positive aspects of Covid-19 on the following
  - a) Environment
  - b) Pollution
  - c) Marine life
  - d) Flora and fauna
  - e) River
  - f) Eating habits
4. Prepare a chart on any(one) separating technique method of constitute particle of colloidal solution .

## Physics

1. Perform activity 9.5 (NCERT page 124) at home and record at least three observations
2. All solved examples, exercises of chapter 8, and 9 from NCERT book to be done in a separate register.
3. Write three differences between distance and displacement.
4. Define acceleration.
5. A car moving with 54km/h applied brakes and and comes to rest in 3 seconds calculate acceleration.
6. Write three differences between speed and velocity.
7. State Newton's law motion and explain with examples.
8. What do you mean by inertia? Explain its different types.
9. Write two differences between uniform and non uniform motion and also plot a graph between distance V/s time for uniform and non uniform motion.
10. Derive equation of motion using graphical method
11. What do you mean by free fall?

12. What do you mean by acceleration due to gravity?
13. Why is it difficult to hold a schoolbag having a strap made of a thin and strong string?
14. What do you mean by buoyancy?
15. You find your mass to be 42 kg on a weighing machine. Is your mass more or less than 42 kg?
- 16. Why will a sheet of paper fall slower than one that is crumpled into a ball?**
- 17. If the moon attracts the earth, why does the earth not move towards the moon?**
18. A car starts from rest and moves along the  $x$ -axis with constant acceleration  $5 \text{ m/s}^2$  for 8 seconds. If it then continues with constant velocity, what distances will the car cover in 12 seconds since it started from the rest?
19. A motorcyclist drives from A to B with a uniform speed of 30 km/h and returns back with a speed of 20 km/h. Find its average speed.
20. Draw a velocity versus time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.
21. State and prove the law of conservation of momentum?
22. Define inertia. How does it depend on mass of the object? Explain (a) Dusting of a carpet by beating it with a stick. (b) Removal of water from wet cloth?
23. Give reason and give the law related to these statements
  - a. It is easier to push an empty box than a box full of books.
  - b. It is difficult for a fireman to hold a hose which ejects large amount of water with high velocity.

## Computer

- Design Networking model for Pan, Lan, Man, Wan with all Networking Component.
2. Make A4 sheet file on Transmission media with advantage and disadvantage.
  3. Design Animation and Multimedia on any topic. Explain difference between Animation and Multimedia.
  4. What do you understand by Cloud Computing?
  5. Make list of 20 Social Networking sites.
  6. Design model on Internet, Intranet and Interspace.
  7. What do you understand by CPU, Explain CPU functions with the help of Diagram?
  8. What do you understand by Mother Board, Explain function of Mother Board in detail with the help of Diagram?
  9. Make A4 sheet file on Input and Output devices.
  10. Make list of 10 Application, System and Utility software.

11. Learn how to Assemble Computer.
12. Explain all types of Operating system in detail.

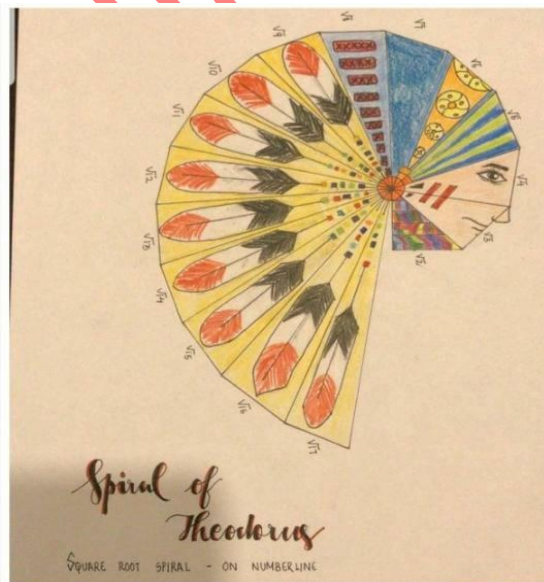
## Maths

### Activity: The Wheel of Theodorus

**The Wheel of Theodorus** is named after the Greek Philosopher **Theodorus of Cyrene** who is known for his contribution in understanding of irrational numbers.

Construct the wheel of Theodorus, start by locating the centre of an A4 size sheet. This will be the starting point for the construction of your wheel. Take a line segment of length 1 inch from the starting point parallel to the bottom of sheet. Construct a square root spiral starting from the line. (refer to NCERT, exercise 1.2, activity given in question 4)

Decorate it in the way you want (examples given below). Your work will be assessed on the basis of punctuality, accuracy and creativity.



**Activity: Make a power point presentation of following with example of each identity or formula**

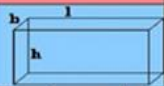

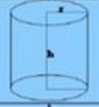




1. Algebraic Identities (Roll No. 1 to 17)
2. Formulae related to Surface areas and volumes (Roll No. 18 to 35)



# Algebraic Identities Of Polynomials

1.  $(a + b)^2 = a^2 + 2ab + b^2 = (-a - b)^2$
2.  $(a - b)^2 = a^2 - 2ab + b^2$
3.  $(a - b)(a + b) = a^2 - b^2$
4.  $(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$
5.  $(a + b - c)^2 = a^2 + b^2 + c^2 + 2ab - 2bc - 2ca$
6.  $(a - b + c)^2 = a^2 + b^2 + c^2 - 2ab - 2bc + 2ca$
7.  $(-a + b + c)^2 = a^2 + b^2 + c^2 - 2ab + 2bc - 2ca$
8.  $(a - b - c)^2 = a^2 + b^2 + c^2 - 2ab + 2bc - 2ca$
9.  $(a + b)^3 = a^3 + b^3 + 3ab(a + b)$
10.  $(a - b)^3 = a^3 - b^3 - 3ab(a - b)$
11.  $a^3 + b^3 = (a + b)^3 - 3ab(a + b)$   
 $= (a + b)(a^2 - ab + b^2)$
12.  $a^3 - b^3 = (a - b)^3 + 3ab(a - b)$   
 $= (a - b)(a^2 + ab + b^2)$
13.  $a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$   
 if  $a + b + c = 0$  then  $a^3 + b^3 + c^3 = 3abc$

## Frequently used important Mensuration Formulas:

Name	Figure	Curved Surface Area	Total Surface Area	Volume
Cuboid		$2(l + b)h$	$2(lb + bh + hl)$	$lbh$
Cube		$4a^2$	$6a^2$	$a^3$
Right Circular Cylinder		$2\pi rh$	$2\pi r(h + r)$	$\pi r^2 h$
Right Circular Cone		$\pi rl$	$\pi r(l + r)$	$\frac{1}{3}\pi r^2 h$
Sphere		$4\pi r^2$	$4\pi r^2$	$\frac{4}{3}\pi r^3$
Solid Hemisphere		$2\pi r^2$	$3\pi r^2$	$\frac{2}{3}\pi r^3$
Hollow Hemisphere		$2\pi r^2$	$2\pi r^2$	$\frac{2}{3}\pi r^3$

### Assignment (Chapter: 1, 2, 3 and 12)

1. If  $8^{x-1} = 64$ , what is the value of  $3^{2x+1}$ ?  
 (i) 1                      (ii) 3                      (iii) 9                      (iv) 27
2. Which of the following is irrational?  
 (i) 0.14                      (ii) 0.1416                      (iii) 0.1416                      (iv) 0.1014001400014.....
3. Which of the following is rational?  
 (i)  $\sqrt{3}$                       (ii)  $\pi$                       (iii)  $4/0$                       (iv)  $0/4$
4.  $\sqrt{2}$  is a polynomial of degree  
 (i) 1                      (ii) 2                      (iii) 0                      (iv) 3
5. Every rational number is a  
 (i) natural number                      (ii) real number                      (iii) integer                      (iv) whole number
6. Express 0.6666..... in p/q form.
7. If the perimeter of an equilateral triangle is 60 cm, then what is its area?
8. The sides of a triangle are 15 cm, 17 cm and 8 cm. What is its area? The sides of a triangle are in the ratio of 3 : 4 : 5. If its perimeter is 36 cm, then what is its area?
9. the zero of the polynomial  $p(x) = 4x^2 - 25$ .
10. What is the remainder when p(x) is divided by  $ax + b$
11. If  $x^{15} - 199$  is divided by  $x - 1$ , find the remainder.

12. Find the remainder obtained on dividing  $x^6 + x^4 - x^2 + 1$  by  $x - 2$ .
13. Find the degree of the following polynomial : (i) 15 (ii)  $x$  (iii)  $x + x^2$  (iv)  $y$
14. Represent  $\sqrt{6}$ ,  $\sqrt{7}$  &  $\sqrt{8}$  on the number line.
15. Check whether the polynomial  $g(x)$  is a factor of  $f(x)$  or not in each of the following:-
- (i)  $f(x) = x^3 - 3x^2 + 5x - 2$  ;  $g(x) = \frac{x}{2} + \frac{1}{3}$
- (ii)  $f(x) = -5x^3 - 3x^2 + 7x - 2$  ;  $g(x) = 2 - 5x$
- (iii)  $f(x) = x^3 - 3x^2 + 4x - 4$  ;  $g(x) = x - 2$
16. Plot the following points on the graph and write in which quadrant or on which axis they lie.  
 $(2,3), (3,-4), (7,-2), (3,0), (4,7), (5,-5), (2,0), (0,5), (0,-2), (0,0), (1,4), (3,4), (-5,4)$
17. Plot the following points and write the name of the figure obtained by joining them in order P(-3,2) , Q(-7,-3) R(6,-3) S(2,3) .
18. Find perpendicular distance of the point P(3,4) from the Y-axis.
19. Find the value of  $a$  and  $b$  if  $\frac{\sqrt{7}-1}{\sqrt{7}+1} + \frac{\sqrt{7}+1}{\sqrt{7}-1} = a + b\sqrt{7}$
20. Prove that  $\frac{1}{2+\sqrt{3}} + \frac{2}{\sqrt{5}-\sqrt{3}} + \frac{1}{2-\sqrt{5}} = 0$
21.  $0.6 + 0.\bar{7} + 0.\overline{47}$  in the form of  $\frac{p}{q}$ , where  $p$  and  $q$  are integers and  $q \neq 0$ .
22. Plot the points  $(-3, 0)$ ,  $(5,0)$  and  $(0,4)$  on Cartesian plane. Name the figure formed by joining these points and find its area.
23. Find the area of a triangle two sides of which are 18 cm and 10 cm and the perimeter is 42 cm.
24. A field is in the shape of a trapezium whose parallel sides are 25 m and 10 m. The non-parallel sides are 14 m and 13 m. Find the area of the field.
25. 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  $m^2$ .

❖ Note :Home work assignment should be done in practice notebook.

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