

WORK SHEET-06**SUBJECT – MATHEMATICS****CLASS – IX****CHAPTER – 01. NUMBER SYSTEM****SESSION - (2020-21)****Instructions to be followed:**

1:- Students do your worksheet in any notebook such as rough notebook, previous year notebook, rough sheets etc. whichever is available at your home. No need to go outside.

2:- All the student must complete their worksheets as Periodic test 1 marks will be given to those who completes it else you will have to go through pen paper test after the school reopens.

3:- See video links in every worksheet as it will help you to understand the topic.

4:- If you have any query related to worksheet, ask your queries in WhatsApp group between 10:00 am to 12:00 pm in the morning and 4:00 to 6:00 pm in the evening.

5:- All the students must download NCERT app in order to read the chapter and also to write answers of the exercise.

1. Find the following products using appropriate identities:

(i) $(x + 3)(x + 3)$

(ii) $(x - 3)(x + 5)$

2. Use suitable identities to find the following products:

(i) $(x + 4)(x + 10)$

(ii) $(x + 8)(x - 10)$

(iii) $(3x + 4)(3x - 5)$

3. Evaluate the following products without multiplying directly.

(i) 103×107

(ii) 95×96

4. Factorize:

(i) $49a^2 + 70ab + 25b^2$

(ii) $\frac{25}{4}x^2 - \frac{y^2}{9}$

(iii) $9x^2 + 6xy + y^2$

5. Write $(3a + 4b + 5c)^2$ in expanded form.

6. Expand each of the following, using suitable identities:

(i) $(x + 2y + 4z)^2$

(ii) $(2x - y + z)^2$

(iii) $(-2x + 3y + 2z)^2$

7. Factorize

(i) $4x^2 + y^2 + z^2 - 4xy - 2yz + 4xz$

(ii) $4x^2 + 9y^2 + 16z^2 + 12xy - 24yz - 16xz$

8. Write the following cubes in the expanded form:

(i) $(3a + 4b)^3$

(ii) $(5p - 3q)^3$

(iii) $(2x + 1)^3$

(iv) $(2a - 3b)^3$

9. Evaluate the following using suitable identities:

(i) $(99)^3$

(ii) $(102)^3$

10. Prepare a chart of algebraic identities. (**Activity**)

WATCH video in given link: <https://www.youtube.com/watch?v=QcekBOd7aqA>

NOTE:

- **For question 1&2:** please refer **NCERT TEXTBOOK** example 16 (page no. 44).
WATCH video on given link: <https://www.youtube.com/watch?v=t7xO3OhRmqY>
- **For question 3:** please refer **NCERT TEXTBOOK** example 17 (page no. 45).
WATCH video on given link: <https://www.youtube.com/watch?v=SS4wwEiojYQ>
- **For question 4:** please refer **NCERT TEXTBOOK** example 18 (page no. 45).
WATCH video on given link: https://www.youtube.com/watch?v=tTDa_2yiNJY
- **For question 5&6:** please refer **NCERT TEXTBOOK** example 19&20 (page no. 46).
- **For question 7:** please refer **NCERT TEXTBOOK** example 21 (page no. 46).
FOLLOW ABOVE LINK
- **For question 8:** please refer **NCERT TEXTBOOK** example 22 (page no. 47).
FOLLOW ABOVE LINK
- **For question 8:** please refer **NCERT TEXTBOOK** example 23 (page no. 47).
- **IMPORTANT:** for above questions use algebraic identities:
Identity I: $(x + y)^2 = x^2 + 2xy + y^2$
Identity II: $(x - y)^2 = x^2 - 2xy + y^2$
Identity III: $x^2 - y^2 = (x + y)(x - y)$
Identity IV: $(x + a)(x + b) = x^2 + (a + b)x + ab$
Identity V: $(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$
Identity VI: $(x + y)^3 = x^3 + y^3 + 3xy(x + y)$
Identity VII: $(x - y)^3 = x^3 - y^3 - 3xy(x - y)$
Identity VIII: $x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$

HARI VIDYA BHAWAN
SUBJECT- SOCIAL SCIENCE
CLASS – IX
SESSION – 2020 – 21
WORK SHEET -6

Date – 09-04-2020

GEOGRAPHY CH-1 (INDIA- SIZE AND LOCATION)

General Instructions: -

- Students do your worksheet in any notebook such as rough notebook, previous year notebook, rough sheets etc. Whichever is available at your home. No need to go outside.
- All the students must complete their worksheet as periodic test 1 marks will be given to those who completes it else you will have to go through pen paper test after the school reopens.
- See videos links in every worksheet as it will help you to understand the topic.
- If you have any query related to worksheet, ask your queries in WhatsApp group between 10:00 am to 12:00 pm in the morning and 4:00 to 6:00 pm in the evening.
- All the students must download NCERT app in order to read the chapter and also to write answers of the exercise.

TOPIC- 1 INDIA AND THE WORLD

- India is located in the centre of the world between East and the West Asia.
- The routes across the Indian ocean which connect the countries of Europe in the west and the countries of East Asia provide a strategic central location to India.
- The Deccan Peninsula helps India to establish close contact with West Asia. Africa and Europe from the Western coast and with Southeast and East Asia from the eastern coast.
- The ocean which is south of India given name Indian Ocean as no other country has a long coastline on the Indian ocean as India has.

TOPIC – 2 INDIA’S NEIGHBOURS

- India is comprised of 28 states and 9 union territories and share its land boundary with:
- Northwest: -Pakistan and Afghanistan

- North: - China, Nepal, Bhutan
- East: -Myanmar and Bangladesh
- South: - Sri Lanka and Maldives
- India has had strong geographical and historical links with her neighbours

More important points to remember

1. Tropic of Cancer – An imaginary line parallel to latitude and is drawn parallel to equator, 23°30' North. It divides the country into almost two equal parts.
2. Indian Mainland – It is a continuous stretch of landmass from Jammu and Kashmir to Kanyakumari and from Gujarat to Arunachal Pradesh.
3. Standard Time – It is the local time of 82°30' east taken as the Standard Time for the whole country.

NCERT Text Book Questions

- Q1. Name the group of islands lying in the Arabian Sea.
- Q2. Name the countries which are larger than India.
- Q3. Which island group of India lies to its south-east?
- Q4. Which island countries are our southern neighbours?

Long Questions

- Q5. What do you know about India and her neighbours?
- Q6. India occupies an important strategic position in South Asia.

ACTIVITY: - Map Skills (NCERT Question)

Identify the following with the help of map reading (NCERT BOOK, page no-5, fig 1.5)

- The island groups of India lying in the Arabian Sea and the Bay of Bengal.
- The countries constituting Indian subcontinent.
- The states through which the Tropic of Cancer passes.
- The northernmost latitude in degrees.
- The southernmost latitude of the Indian mainland in degrees.

- The eastern and the westernmost longitudes in degrees.
- The place situated on the three seas.
- The strait separating Sri Lanka from India.
- The Union Territories of India.

Note-

- **To understand the topic no 1 “India and the World” watch the video via link: <https://youtu.be/rQapkQQ-wS4>**
- **To understand the topic no 2 “India’s Neighbours” watch the video via link : <https://youtu.be/FHEXTXXX3pQ>**
- Above questions are given from NCERT Book (Q1 to 4) For answer refer provided NCERT application via link:
<http://play.google.com/store/apps/details?id=latest.ncertbooks>
- For the answers of the Q.no 5 see the topic no 2 and Q.no 6 see the topic no 1 in above notes.
- Activity given from NCERT book (page no 5,fig 1.5) do answers from NCERT app :
<http://play.google.com/store/apps/details?id=latest.ncertbooks>
- **Click over the link to get more knowledge about map :- https://youtu.be/qyuU9L9_pTI**

HARI VIDYA BHAWAN Date-09/03/2020

WORK SHEET-07

SUBJECT- MATHEMATICS

CLASS- X

SESSION - (2020-21)

PRACTICE QUESTIONS

Instructions to be followed:

1:- Students do your worksheet in any notebook such as rough notebook, previous year notebook, rough sheets etc. whichever is available at your home. No need to go outside.

2:- All the student must complete their worksheets as Periodic test 1 marks will be given to those who completes it else you will have to go through pen paper test after the school reopens.

3:- See video links in every worksheet as it will help you to understand the topic.

4:- If you have any query related to worksheet, ask your queries in WhatsApp group between 10:00 am to 12:00 pm in the morning and 4:00 to 6:00 pm in the evening.

5:- All the students must download NCERT app in order to read the chapter and also to write answers of the exercise.

- Use Euclid's division algorithm to find the HCF of:
(i) 135 and 225 (ii) 196 and 38220 (iii) 867 and 255
- Show that any positive odd integer is of the form $6q + 1$, or $6q + 3$, or $6q + 5$, where q is some integer.
- Express each number as a product of its prime factors:
(i) 140 (ii) 156 (iii) 3825 (iv) 5005
- Find the LCM and HCF of the following integers by applying the prime factorization method.
(i) 12, 15 and 21 (ii) 17, 23 and 29 (iii) 8, 9 and 25
- Given that $\text{HCF}(306, 657) = 9$, find $\text{LCM}(306, 657)$.
- Prove that $\sqrt{5}$ is irrational.
- Prove that $3 + 2\sqrt{5}$ is irrational.
- Check whether $6n$ can end with the digit 0 for any natural number n .
- Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients.
(i) $x^2 - 2x - 8$ (ii) $4x^2 - 4x + 1$
(iii) $6x^2 - 3 - 7x$ (iv) $4u^2 + 8$
- Find a quadratic polynomial each with the given numbers as the sum and product of its zeroes respectively.
i) 1, 1 (ii) $\sqrt{2}$, 2 (iii) $\sqrt{5}$, 5
- Find out zeroes of polynomial $x^2 + 7x + 12$
- Check whether the first polynomial is a factor of the second polynomial by dividing the second polynomial by the first polynomial:
(i) $xx^2 + 3xx + 1$, $3xx^4 + 5xx^3 - 7xx^2 + 2xx + 2$
(ii) $xx^3 - 3xx + 1$, $xx^5 - 4xx^3 + xx^2 + 3xx + 1$

13. Verify the $\frac{1}{2}$, 1, -2 are zeroes of cubic polynomial $2x^3+x^2-5x+2$.
14. On dividing x^3-3x^2+x+2 by a polynomial $g(x)$, the quotient and remainder were $x-2$ and $-2x+4$, respectively. Find $g(x)$.
15. Divide the polynomial $p(x)$ by the polynomial $g(x)$ and find the quotient and remainder

$$p(x) = x^3 - 3x^2 + 5x - 3, \quad g(x) = x^2 - 2$$

$$p(x) = x^4 - 3x^2 + 4x + 5, \quad g(x) = x^2 + 1 - x$$

Note :-

For any query

Question 1 to 9 ,..... 1st link

Question 10 to 16.....2 nd link

Watch video: <https://www.youtube.com/watch?v=AjEs4Om7hs4&feature=youtu.be>

Watch video: <https://www.youtube.com/watch?v=o9jCeqR6xqc&feature=youtu.be>

HARI VIDYA BHAWAN
SUBJECT- SOCIAL SCIENCE
CLASS – X
SESSION – 2020 – 21
WORK SHEET -7

Date- 09-04-2020

POL.SCIENCE (CH-1) POWER SHARING

General Instructions: -

- Students do your worksheet in any notebook such as rough notebook, previous year notebook, rough sheets etc. Whichever is available at your home. No need to go outside.
- All the students must complete their worksheet as periodic test 1 marks will be given to those who completes it else you will have to go through pen paper test after the school reopens.
- See videos links in every worksheet as it will help you to understand the topic.
- If you have any query related to worksheet, ask your queries in WhatsApp group between 10:00 am to 12:00 pm in the morning and 4:00 to 6:00 pm in the evening.
- All the students must download NCERT app in order to read the chapter and also to write answers of the exercise.

- TOPICS:-**
- 1. Ethnic Composition Of Belgium**
 - 2. Ethnic Composition of Sri Lanka**
 - 3. Power Sharing in Belgium**
 - 4. Power Sharing in Sri Lanka**
 - 5. Why Power Sharing Is Desirable?**
 - 6. Forms of Power Sharing**

We start with two stories from Belgium and Sri Lanka.

Both these stories are about how democracies handle demands for power sharing.

ETHNIC COMPOSITION OF BELGIUM AND SRI LANKA

- Belgium is a small country in Europe.
 - It has borders with Netherlands, France and Germany.
 - 59% in the Flemish region speaks Dutch.
 - Another 40% people live in Wallonia region and speaks French.
 - Remaining 1% of the Belgians speak German.
-
- The capital city Brussels, 80% people speak French while 20% are Dutch – speaking.
 - The minority French – speaking community was relatively rich and powerful.
 - This was resented by the Dutch-speaking community who got the benefit of the economic development and education much later.
 - The tension between two communities was acuter in Brussels.
 - Like other nations in the south Asia region, Sri Lanka has a diverse population.
 - The Sinhala speakers are 74% and Tamil speakers are 18%
 - Among Tamils, there are two sub groups, Tamil natives of the country are called “Sri Lankan Tamils”; the rest 13% whose forefathers came from India as a population workers during the colonial period, is called ‘Indian Tamils’.
 - Most of the Sinhala speaking people are Buddhists.
 - Most of the Tamils are Hindus or Muslims.

IMPORTANT TERMS

1. **Ethnic** - A set of moral principles, especially ones relating to or affirming a specified group, field or form of conduct.
2. **Minority** – The smaller number or part, especially a number or part representing less than half of the whole.

Very Short Questions

1. In Belgium, the percentage of French community is
 - a) 54%
 - b) 40%
 - c) 30%
 - d) 20%
2. The capital city of Belgium is

Short Questions

3. What was the ethnic composition of Belgium?
4. What was the ethnic composition of Sri Lanka?

Note-

- To understand the topic “Ethnic composition of Belgium and Sri Lanka” watch the video <http://youtu.be/wLPBvAMQ5Xg>
<https://youtu.be/BUaJmvhFEuc>
- From Q1 to Q4 see topic “Ethnic Composition of Belgium and Srilanka” <https://youtu.be/BUaJmvhFEuc>