

Takshila Academy
Summer Vacation Homework: 2023-24
Class 11th
Science Group

English

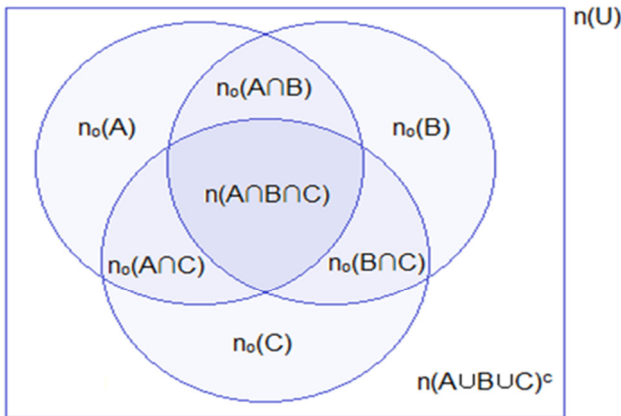
1. Failures and setbacks are a normal part of life. They make us aware of our shortcomings and encourage us to conquer them. Write an article in 150-200 words on: 'Failure is a Stepping Stone to Success'. You are Gopal/Gopika.
2. Write a report in 150-200 words for your school magazine on the cleanliness drive that was held in your school on 2 October.

Hindi

- 1- देश में ऑनलाइन व्यापार तेजी से बढ़ रहा है। गली-मोहल्ले एवं फेरीवाले खुदरा दुकानदारों पर इसका व्यापक असर पड़ा है, इनकी समस्याओं पर एक आलेख लिखिए।
- 2- ग्रीष्मकालीन अवकाश में अपने द्वारा की गई किसी यात्रा का यात्रा-वृत्तांत अधिकतम 200 शब्दों में लिखिए।

Maths

Note: Look at the following Venn diagram and learn the cardinal representation for the different portions.



$n(A)$ = Number of elements in set A

$n(B)$ = Number of elements in set B

$n(C)$ = Number of elements in set C

$n_o(A)$ = Number of elements in set A only

$n_o(B)$ = Number of elements in set B only

$n_o(C)$ = Number of elements in set C only

$n(A \cap B)$ = Number of elements common in set A and B

$n(A \cap C)$ = Number of elements common in set A and C

$n(B \cap C)$ = Number of elements common in set B and C

$n_o(A \cap B)$ = Number of elements common in set A and B only

$n_o(A \cap C)$ = Number of elements common in set A and C only

$n_o(B \cap C)$ = Number of elements common in set B and C only

$n(A \cap B \cap C)$ = Number of elements common to A, B and C

$n(A \cup B \cup C)$ = Number of elements belongs to at least one set A, B or C.

$n((A \cup B \cup C)^c)$ = Number of elements does not belong to the set A, B or C.

By using above concept of cardinal representation solve following

Physical Education

- 1- Level Diagram of 400 M track and field with calculation.

Biology

1. Describe cardiac cycle.
2. Make a list of people from your surrounding, who are suffering from cardiac disorders like hypertension, Angina, CAD and Heart failure.
And aware them to overcome such problems, like avoid fats rich diet, do regular exercise, take plenty of water, sprouts and salads and regular visits with cardiologist.
3. Describe respiratory volumes and capacities.

Chemistry

1. How many moles of NaOH are contained in 27 ml of 0.15 M?
2. Calculate the number of atoms in each of the following:
a - 52 moles of He
b - 52 u of He
3. Calculate the molarity of 1 L of solution of ethanol in water in which the mole fraction of ethanol is 0.040.
4. If ten volumes of dihydrogen gas react with five volumes of dioxygen gas, how many volumes of water vapour could be produced?
5. Calculate the molarity of NaOH in the solution prepared by dissolving its 4gms in enough water to form 250mL of the solution.
6. The density of 2 molal solution of NaOH is 1.10 g per ml. Calculate the molarity of the solution.
7. How many atoms and molecules of phosphorous are present in 124gms of phosphorous (P 4)?
8. A 6.9M solution of KOH in water contains 20% by weight of KOH. Calculate the density of solution.
9. Calculate the molality and molarity of 1 L solution of 93% H₂SO₄ (Wt. /Vol). The density of solution is 1.84g/ml.
10. Chlorophyll the green coloring matter of plants responsible for photosynthesis contains 2.68% of magnesium by weight. Calculate the number of magnesium atoms in 2.0 g of chlorophyll.
11. Calculate molality, Molarity and mole fraction of KI if the density of 20% aqueous KI solution is 1.202 g/ml.
12. What volume of O₂ at N.T.P is needed to cause the complete combustion of 200 ml of acetylene?
Also calculate the volume of CO₂ formed.
13. Butyric acid contains only C, H and O. A 4.24 mg sample of butyric acid is completely burned. It gives 8.45mg of CO₂ and 3.46 mg of H₂O. The molecular mass of butyric acid was determined by experiment to be 88amu. What is its molecular formula?
14. The density of water at room temperature is 1.0 g/ml. How many molecules are there in a drop of water if its volume is 0.05 ml?
15. Potassium Bromide contains 32.9% by mass of potassium. If 6.40 gm of bromine reacts with 3.60 gm of Potassium. Calculate the no. of moles of potassium which combines with bromine to form KBr.

Takshila Academy
Summer Vacation Homework
Class 11th
Humanities Group

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Physical Education

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History

History The students should make a project file on Evolution of Humans or Roman Empire (any one aspect). The project should consist of the following:

1. Title page
2. Acknowledgment
3. Table of contents
4. Introduction
5. The body of the project should have description of the selected topic, pictures, data and other relevant information
6. Conclusion should have students' observations on the topic

7. Bibliography and references

Political Science

As we know that some person's group tried to subvert constitution as per their interest. This is one of the allegation is on present union government. Is this allegation correct as per you? If yes or no give proper argument.

Geography

- 1- Prepare a map of India showing the distribution of different types of forest
- 2- Prepare a historical account of conservation of forest of India with focus on **chipko**.
- 3- Write about the economic importance of forest for the country.

Takshila Academy
Summer Vacation Homework
Class 11th
Commerce Group

English

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Economics

1. Sumit was running a hotel 'Anandi' in the heart of the city. He was earning a monthly profit of rupees 2 lakh. During COVID-19 pandemic situation government offered Sumit a sum of rupees 3 lakh per month only if he converts his entire hotel as hospital for the treatment of COVID patients. Sumit agreed and accepted the offer without any hesitation. Find the opportunity cost in the above case study. Explain the meaning of opportunity cost.
2. Throw some light on the consequences of lockdown on the productivity of our nation.

Accounts

Students will visit their nearest small scale industry (eg. Loom, clay glass factory, Aata mill etc.) or shop & they will acquire knowledge about capital invested, cost of good, profit margin, turnover etc. On basis of acquired knowledge students will prepare report.

Business Studies

Prepare a collage on one of the following topics:

- A) Indian MNC's and their CEO's with their Brand name, Brand Mark and Taglines
- B) Non Indian MNC's and their CEO's with their Brand name, Brand Mark and Taglines
- C) Various quality marks and their issuing agencies India.
- D) World wide various scams that took place in India after independence with their volume and reasons.