

J.R.M. International School

Session 2022-23
Holiday Home Work
Class - XII - A

Mathematics: (041)

Activities: Activities - 1 To verify that the relation 'R' in set 'L' of all lines in a plane defined as $\{(l_1, l_2) : l_1 \perp l_2$ and

$l_1, l_2 \in L\}$ is symmetric but neither reflexive nor transitive.

Activities - 2 To verify that the relation 'R' in the set 'L' of all lines in a plane defined by

$R = \{(l, m) : l \parallel m \text{ and } l, m \in L\}$ is an equivalence relation.

Activities - 3 To demonstrate a function is not one-one but is onto.

"In Samar Activity file (Maths)"

Chemistry: (043)

Investigatory Projects: Project - 1 Study of presence of oxalate ions in guava fruit at different stages of ripening.

Project - 2 Study of quantity of calcium present in different stages of ripening.

Project - 3 Preparation of soyabean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, taste etc.

Project - 4 Study of the effect potassium bisulphate as food preservative under various conditions.

Project - 5 Study of digestion of starch by salivary amylase and effect of pH and temperature on it.

Project - 6 Comparative study of the rate of fermentation of wheat, flour, gram flour, potato juice and carrot juice.

Project - 7 Extraction of essential oils present in Saunf, Ajewain & Illachi.

Project - 8 Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.

English:

Project Details: Project - 1 English Language

Project - 2 Role of Internet in our life.

Project - 3 English Language as a tool in Business Communication.

Project - 4 Sources of learning English Language.

Sr. No.	Student's Name	Chemistry (043) Project topic	English Project topic
1	Abhishek Parmar	Project - 1	Project - 1
2	Aishwarya Singh	Project - 2	Project - 1
3	Alakh Sumbariya	Project - 3	Project - 1
4	Alok Nohwar	Project - 4	Project - 1
5	Aman Kumar Singh	Project - 5	Project - 1
6	Aman Vyas	Project - 6	Project - 1
7	Amit Singh	Project - 7	Project - 1
8	Anuj Kumar Verma	Project - 8	Project - 1
9	Arpit Pippal	Project - 1	Project - 1
10	Bhuva Gera	Project - 2	Project - 1
11	Bobby Sikarwar	Project - 3	Project - 2
12	Charu Singh	Project - 4	Project - 2
13	Devansh Saini	Project - 5	Project - 2
14	Devesh Singh Solanki	Project - 6	Project - 2
15	Dharmveer Kuntal	Project - 7	Project - 2
16	Dhruv Anchora	Project - 8	Project - 2
17	Gaurav	Project - 1	Project - 2
18	Harendra Singh Sikarwar	Project - 2	Project - 2
19	Hemant Kumar	Project - 3	Project - 2
20	Kanha Rajpoot	Project - 4	Project - 2
21	Kirath Kumar Sharma	Project - 5	Project - 3
22	Kirti Chauhan	Project - 6	Project - 3
23	Lalit Kumar	Project - 7	Project - 3
24	Manish Kumar	Project - 8	Project - 3
25	Meenakshi	Project - 1	Project - 3
26	Nakul Gupta	Project - 2	Project - 3
27	Naman Sikarwar	Project - 3	Project - 3
28	Nikhil Singh	Project - 4	Project - 3
29	Nishant Solanki	Project - 5	Project - 3
30	Prachi Pathak	Project - 6	Project - 3
31	Prince Sharma	Project - 7	Project - 4
32	Priya Parihar	Project - 8	Project - 4
33	Rashi Sharma	Project - 1	Project - 4
34	Ronit Chaudhary	Project - 2	Project - 4
35	Rudraksh Pachauri	Project - 3	Project - 4
36	Sachin Sikarwar	Project - 4	Project - 4
37	Sahil Butalia	Project - 5	Project - 4
38	Sejal Chaudhary	Project - 6	Project - 4
39	Shaurya Sisodiya	Project - 7	Project - 4
40	Sourabh Solanki	Project - 8	Project - 4

J.R.M. International School

Session 2022-23

Holiday Home Work

Class - XII - B

Mathematics: (041)

Activities: Activities - 1 To verify that the relation 'R' in set 'L' of all lines in a plane defined as $\{(l_1, l_2) : l_1 \perp l_2$
and

$l_1, l_2 \in L\}$ is symmetric but neither reflexive nor transitive.

Activities - 2 To verify that the relation 'R' in the set 'L' of all lines in a plane defined by

$R = \{(l, m) : l \parallel m \text{ and } l, m \in L\}$ is an equivalence relation.

Activities - 3 To demonstrate a function is not one-one but is onto.

"In Samar Activity file (Maths)"

Chemistry: (043)

Investigatory Projects: Project - 1 Study of presence of oxalate ions in guava fruit at different stages of ripening.

Project - 2 Study of quantity of casein present in different stages of ripening.

Project - 3 Preparation of soyabean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, taste etc.

Project - 4 Study of the effect of potassium bisulphate as food preservative under various conditions.

Project - 5 Study of digestion of starch by salivary amylase and effect of pH and temperature on it.

Project - 6 Comparative study of the rate of fermentation of wheat, flour, gram flour, potato juice and carrot juice.

Project - 7 Extraction of essential oils present in Saunf, Ajewain & Illachi.

Project - 8 Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.

English:

Project Details: Project - 1 Global English A Study.

Project - 2 Life history and achievements of William Shakespeare.

Project - 3 Advancement in science and technology.

Project - 4 Importance of Soft Skills.

Sr. No.	Student's Name	Chemistry Project topic	English Project topic
1	Anjali Solanki	Project - 1	Project - 1
2	Ankul Chandra	Project - 2	Project - 1
3	Anuj Chauhan	Project - 3	Project - 1
4	Ayush Bhardwaj	Project - 4	Project - 1
5	Dilawar	Project - 5	Project - 1
6	Disha Bhardwaj	Project - 6	Project - 1
7	Divyanshi Raj Singh	Project - 7	Project - 1
8	Harsh Yadav	Project - 8	Project - 1
9	Niharika Gupta	Project - 1	Project - 1
10	Nisha Parihar	Project - 2	Project - 1
11	Paridhi Singh	Project - 3	Project - 2
12	Pragati Singh	Project - 4	Project - 2
13	Priyanka Goyal	Project - 5	Project - 2
14	Priyanshi Parmar	Project - 6	Project - 2
15	Ritik Dixit	Project - 7	Project - 2
16	Sabhyata Gupta	Project - 8	Project - 2
17	Shivani Solanki	Project - 1	Project - 2
18	Somya Agarwal	Project - 2	Project - 2
19	Suyash Singh	Project - 3	Project - 2
20	Vaishnavi Gautam	Project - 4	Project - 2
21	Tejshwani Singh	Project - 5	Project - 3
22	Shikha Singh Chaudhary	Project - 6	Project - 3
23	Shivani Charag	Project - 7	Project - 3
24	Shobhit Verma	Project - 8	Project - 3
25	Shrestha Verma	Project - 1	Project - 3
26	Shubhigya Sharma	Project - 2	Project - 3
27	Sumit Singh	Project - 3	Project - 3
28	Tunupriya Agarwal	Project - 4	Project - 3
29	Tushar	Project - 5	Project - 3
30	Uma Indoliya	Project - 6	Project - 3
31	Vishkha Mohanta	Project - 7	Project - 4
32	Vishal Singh	Project - 8	Project - 4
33	Vivek Charag	Project - 1	Project - 4
34	Vivek Sharma	Project - 2	Project - 4
35	Yash Kashyap	Project - 3	Project - 4
36	Yogendra Singh	Project - 4	Project - 4

Biology: (044)

Sr. No.	Student's Name	Biology (044) Investigatory Project Work
1	Anjali Solanki	To study the impact of Global Warming on the environment.
2	Ankul Chandra	To study the human, Reproductive cloning and biotechnology.
3	Anuj Chauhan	To study the classification of Drug addiction.
4	Ayush Bhardwaj	To study the Development of the Human Embryo generic.
5	Dilawar	To study DNA finger Printing Principles, methods and Applications
6	Disha Bhardwaj	To study the Agricultural water-water treatment.
7	Divyanshi Raj Singh	To study the Transgenic Animal, Production and Applications.
8	Harsh Yadav	To study the effect of Antibiotics on the Micro Organism.
9	Niharika Gupta	To study the methods to Improvement of the Biogas Production.
10	Nisha Parihar	To study on the Infertility and its causes and treatment.
11	Paridhi Singh	To study the Harmful effect of the mobile Radiation on Human Body.
12	Pragati Singh	To study the Adaptive Radiation in Aquatic Vertebrates.
13	Priyanka Goyal	To study the Methods to Improvement of the Bio-gas Production.
14	Priyanshi Parmar	To study of wild-life Sanctuaries in the India.
15	Ritik Dixit	To study of any two Genetic diseases in Human.
16	Sabhyata Gupta	To study the Impact of Global Warming on the Environment.
17	Shivani Solanki	To study the Human Reproductive cloning and Biotechnology.
18	Somya Agarwal	To study the classification of Drug Addiction.
19	Suyash Singh	To study the Development of the Human Embryo generic
20	Vaishnavi Gautam	To study the Transgenic Animals Production and Applications.
21	Tejshwani Singh	To study DNA finger Printing Principles, methods and Applications

Class XII

Section A (Math's)

Note: For Activity Work Refer Samar CBSE Physics Practical Manual of class XII

S.No.	Name of student	Activity
1	AbhishekParwar	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
2	Aishwarya Singh	To assemble the components of a given electrical circuit.
3	Alakh	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
4	AlokNohwar	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
5	Aman Kumar singh	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
6	Amanvyas	To observe diffraction of light due to a thin slit.
7	Amit Singh	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
8	Anuj Kumar verma	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
9	Arpitpipal	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
10	Bhuvan Gera	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
11	Bobby Sikarwar	To assemble the components of a given electrical circuit.
12	Charusingh	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
13	Devansh	To identify a diode, an LED, a resistor and a capacitor

		from a mixed collection of such items.
14	DeveshsinghSolanki	To observe diffraction of light due to a thin slit.
15	DharamveerKuntal	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
16	Dhruv	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
17	Gaurav	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
18	Harendrasingh	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
19	Hemantkumar	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
20	KanhaRajpoot	To assemble the components of a given electrical circuit.
21	Kirath Kumar	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
22	KirtiChauhan	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
23	Lalitkumar	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
24	Manish kumar	To observe diffraction of light due to a thin slit.
25	Meenakshi	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
26	Nakul Gupta	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
27	NamanSikarwar	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
28	Nikhil singh	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.

29	Nishantsolanki	To assemble the components of a given electrical circuit.
30	Prachipathak	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
31	Prince sharma	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
32	PriyaParihar	To observe diffraction of light due to a thin slit.
33	Rouhi Sharma	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
34	RonitChaudhary	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
35	RudrakshPachauri	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
36	SachinSikarwar	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
37	Sahil	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
38	SejalChaudhary	To assemble the components of a given electrical circuit.
39	ShauryaSisodia	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
40	SaurabhSolanki	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.

Class XII

Section B (Biology and Math's)

Note: For Activity Work Refer Samar CBSE Physics Practical Manual of class XII

S.No.	Name of student	Activity
1	Anjali Solanki	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
2	Ankul Chandra	To assemble the components of a given electrical circuit.
3	AnujChauhan	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
4	AyushBhardwaj	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
5	Dilawar Singh	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
6	DishaBhardwaj	To observe diffraction of light due to a thin slit.
7	Diyanshi Raj	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
8	Harsh Yadav	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
9	Neharika Gupta	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
10	NishaParihar	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
11	Paridhi Singh	To assemble the components of a given electrical circuit.
12	Pragati Singh	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit

		diagram
13	PriyankaGoyal	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
14	PriyanshiParmar	To observe diffraction of light due to a thin slit.
15	Ritik Dixit	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
16	Sabhyata	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
17	ShivaniSolanki	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
18	SomyaAgarwal	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
19	Suryansh	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
20	VaishnaviGautam	To assemble the components of a given electrical circuit.
21	Tejshwani Singh	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
22	Shikha Singh	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
23	ShivaniCharag	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
24	ShobhitVerma	To observe diffraction of light due to a thin slit.
25	ShrethaVerma	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
26	Shubhigya Sharma	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).

27	Sumit Singh	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
28	Tanupriya	To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
29	Tushar	To assemble the components of a given electrical circuit.
30	Uma Indolia	To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram
31	VishakhaMohanta	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
32	Vishal Singh	To observe diffraction of light due to a thin slit.
33	VivekCharag	Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order
34	VivekSharam	To study the nature and size of the image formed by a convex lens on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
35	YashKashyap	To study the nature and size of the image formed by a concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
36	Yogendra Singh	To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.