

**D.A.V. PUBLIC SCHOOL, KURUKSHETRA**  
**Class : VIII**  
**SUMMER ASSIGNMENT : Maths**  
**CHAPTER : 1 (SQUARES AND SQUARE ROOTS)**

**1. Multiple Choice Questions:**

- (i) The number of digits in the square root of 390625 is  
(a) 3                      (ii) 4                      (iii) 5
- (ii) Which of the following numbers would not have digit 4 at unit place?  
(a)  $64^2$                       (ii)  $72^2$                       (iii)  $78^2$                       (iv)  $102^2$
- (iii) Which of the following numbers cannot be a perfect square?  
(a) 1600                      (ii) 468                      (iii) 961
- (iv) 1875 is not a perfect square. The smallest number by which it should be divided so that the quotient is a perfect square is ?  
(a) 5                      (ii) 2                      (iii) 7                      (iv) 3
2. Estimate the value of  $\sqrt{350}$  to the nearest one decimal place. (Ans. 18.7)
3. What is the value of x if  $\sqrt{1 + \frac{27}{169}} = (1 + \frac{x}{13})$  (Ans. 1)
4. Is 2527 is a perfect square. Give reason. (Ans. No)
5. Find the least number to be added to 306452 to make it perfect square . (Ans. 554)
6. Find the smallest number which 9408 must be divided to obtain a perfect square. Find the square root of the perfect square so obtained. (Ans. 3,5,6)
7. Evaluate:  
(a)  $\sqrt{\frac{80}{405}}$                       (b)  $\sqrt{45} \times \sqrt{20}$                       (Ans. (a)  $\frac{4}{9}$  (b) 30)
8. Find the square root of  
 $\frac{0.081}{0.0064} \times \frac{0.484}{6.25} \times \frac{25}{12.1}$  (Ans. 0.45)
9. Evaluate :  
 $\sqrt{900} + \sqrt{0.09} + \sqrt{0.000009}$  (Ans. 30.303)
10. A decimal fraction is multiplied by itself. If the product is 477.4225. Find the fraction. (Ans. 21.85)
11. There are 600 children in a school, For a PT drill they have to stand in such a way that the number of row is equal to the number of column. How many children would be left out in this arrangement. (Ans. 24 students)

12. Given that  $\sqrt{2} = 1.414$  and  $\sqrt{5} = 2.236$  evaluate each of the following:  
 (a)  $\sqrt{\frac{36}{5}}$  (b)  $\sqrt{\frac{625}{98}}$  (Ans. (a) 2.6832 (b) 2.525)
13. Evaluate  $\sqrt{15625}$  and use it to find  $\sqrt{156.25} + \sqrt{1.5625}$  (Ans. 125, 13.75)
14. The product of two numbers is 1575 and their quotient is  $\frac{9}{7}$ . Find the numbers.  
 (Ans. 45135)
15. Find the smallest square number divisible by each of the numbers 8,9 and 10.  
 (Ans. 3600)
16. A general wishing to arrange his men, who were 355250 in number in the form of a square found that there were 9 men left over. How many were there in each row.  
 (Ans. 579)
17. Find the least number of 4 digits which is a perfect square.
18. Find the least number by which 792 must be multiplied so that the product becomes a square.  
 (Ans. 27)
19. The area of a square playground is 225.6004 m<sup>2</sup>. Find the length of one side of the playground.  
 (Ans. 15.02)
20. Find the length of a side of a square whose area is equal to the area of a rectangle with sides 125m and 45m.  
 (Ans. 75)

**D.A.V. PUBLIC SCHOOL, KURUKSHETRA**  
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**SUMMER ASSIGNMENT : Maths**  
**CHAPTER : 2 (Cubes and Cube roots)**

**1. Multiple Choice Questions:**

- (i) Find the cube root of 0.011  
 (i) 1.331                      (ii) 0.001331                      (iii) 0.1331                      (iv) 0.000001331
- (ii) Find the cube root of  $x^{81} \cdot y^{33}$   
 (i)  $x^{29} \cdot y^{11}$                       (ii)  $y^{11} \cdot x^{27}$                       (iii)  $x^{27} \cdot y^{10}$                       (iv)  $x \cdot y$
- (iii) Fill in the blank  $\sqrt[3]{480} = \sqrt[3]{3} \times 2 \times \sqrt[3]{\quad}$   
 (i) 12                      (ii) 6                      (iii) 20                      (iv) 24
- (iv) Evaluate :  $\sqrt[3]{27} + \sqrt[3]{0.008} + \sqrt[3]{0.064}$   
 (i) 3.6                      (ii) 9.7                      (iii) 0.382                      (iv) 3.8
- (v) The cube of an even prime number is  
 (i) Prime                      (ii) Odd                      (iii) Even                      (iv) 0
2. Evaluate :  $\sqrt[3]{1000} + \sqrt[3]{0.729} - \sqrt[3]{0.125}$  (Ans. 11.4)
3. Find cube root of  $\frac{686}{-3456}$  (Ans.  $-\frac{7}{12}$ )
4. Evaluate :  $\sqrt[3]{\frac{24389}{29791}}$  (Ans.  $\frac{29}{31}$ )
5. Evaluate :  $\sqrt[3]{15625 \times 64000}$  (Ans. 1000)
6. Evaluate :
- (i)  $\sqrt[3]{96} \times \sqrt[3]{144}$  (Ans. 24)
- (ii)  $\sqrt[3]{-8 \times 17 \times 17 \times 17}$  (Ans. -34)
- (iii)  $125 \sqrt[3]{a^6} - \sqrt[3]{125a^6}$  (Ans.  $120a^2$ )
7. Is 242 a perfect cube? Why or why not? (Ans. No)
8. Match Column A and Column B (By Estimation Method)

Column A	Column B
a) $\sqrt[3]{13824}$	a) -61
b) $\sqrt[3]{5832}$	b) 18
c) $\sqrt[3]{571787}$	c) 24
d) $\sqrt[3]{-226981}$	d) -56
e) $\sqrt[3]{-175616}$	e) 83

9. Three numbers are in ratio 1:2:3. The sum of their cube is 98784. Find the nos.  
(Ans. 14,28,42)
10. The volume of a cube is 1782000 m<sup>3</sup>. Find the total surface area of the cube.  
(Ans . 86400 m<sup>2</sup>)
11. Find  $\sqrt[3]{1331}$  by estimation method. (Ans. 11)
12. The length of side of a cube is 3.2m. Find its volume. (Ans. 32.768 m<sup>3</sup>)
13. The volume of a cubical box is 175616 m<sup>3</sup>. Find the cost of painting its outer surface at the rate of Rs. 150 per meter square. (Ans. Rs. 28,22,400)
14. What is the weight of a cubical block of ice of length 60cm, if 1 cm<sup>3</sup> of ice weights 9Kg. (Ans. 1944000 kg)
15. Find the surface area of cube whose edge is 11 cm. (Ans. 726 cm<sup>2</sup>)
16. Find the smallest number which when multiplied with 137592 will make the product a perfect cube. Find the cube root of the product. (Ans. 1183,546)

**D.A.V. PUBLIC SCHOOL, KURUKSHETRA**

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**SUMMER ASSIGNMENT : MATHS**

**CHAPTER : DIRECT AND INVERSE VARIATION**

1. A car travels 432km on 48 litres of petrol. How far would it travel on 20 litres of petrol?  
(Ans. 180 km)
2. Reema types 540 words during half an hour. How many words would she type in 6 minutes?  
(Ans. 108 words)
3. A car is travelling at the average speed of 50Km/h. How much distance would it travel in 12 minutes?  
(Ans. 10 km)
4. The cost of 97m of cloth is Rs. 242.50. What length of this can be purchased for Rs. 302.50?  
(Ans. 121 m)
5. A worker is paid Rs. 210 for 6 days work. If his total income of the month is Rs. 875, find how many days did he work?  
(Ans. 25 days)
6. Raman is paid Rs. 200 for 8 days of work. If he works for 20 days, how much will he get?  
(Ans. Rs. 500)
7. If 52 men can do a piece of work in 35 days, in how many days 28 men will do it?  
(Ans. 65 days)
8. Shalu cycles to her school at an average speed of 12 Km/h. It takes her 20 minutes to reach the school. If she wants to reach her school in 15 minutes, what should be her average speed?  
(Ans. 16 Km/h)
9. 1000 soldiers in a fort had enough food for 20 days. But some soldiers were transferred to another fort and the food lasted for 25 days. How many soldiers were transferred? (Ans. 200 soldiers)
10. 120 men had food provision for 200 days. After 5 days, 30 men died due to an epidemic. How long will the remaining food last? (Ans. 260 days)
11. Three spraying machines working together can finish painting a house in 60 minutes. How long will it take for 5 machines of the same capacity to do the same job?  
(Ans. 36 mins.)
12. 55 cows can graze in a field in 16 days. How many cows will graze the same field in 10 days?  
(Ans. 88 cows)
13. Raghu has enough money to buy 75 machines worth Rs. 200 each. How many machines can be buy if he gets a discount of Rs. 50 on each machine?  
(Ans. 100 machines)

14. A work force of 50 men with a contractor can finish a piece of work in 5 months. In how many months the same work can be completed by 125 men?

(Ans. 2 months)

15. 18 men can reap a field in 35 days. For reaping the same field in 15 days, how many more men will be required?

(Ans. 24 men)

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**SUMMER ASSIGNMENT : MATHS**  
**CHAPTER : 7 (ALGEBRAIC IDENTITIES)**

**1. Find the following by using Identities:**

(i)  $(8a + 3b)^2$

(ii)  $(9a + \frac{1}{6})^2$

(iii)  $(3a - 5b)^2$

(iv)  $(\frac{x}{4} - \frac{y}{3})^2$

(v)  $(x + \frac{x^2}{2})^2$

(vi)  $(a^2b - bc^2)^2$

(vii)  $(2x + \frac{3}{y})(2x - \frac{3}{y})$

(viii)  $(2a^3 + b^3)(2a^3 - b^3)$

(ix)  $(703)^2$

(x)  $(1001)^2$

(xi)  $(91)^2$

(xii)  $113 \times 87$

(xiii)  $1.8 \times 2.2$

(xiv)  $(79)^2 - (69)^2$

(xv)  $(467)^2 - (33)^2$

(xvi)  $\frac{58^2 - 42^2}{16}$

(xvii)  $178 \times 178 - 22 \times 22$

(xviii)  $1.73 \times 1.73 - 0.27 \times 0.27$

(xix)  $\frac{198 \times 198 - 102 \times 102}{96}$

(xx)  $(x^4 - \frac{2}{x^2})(x^4 + \frac{2}{x^2})$

**2. Find the value of x, if**

(i)  $4x = (52)^2 - (48)^2$

(ii)  $5x = (50)^2 - (40)^2$

3. If  $x + \frac{1}{x} = 20$ , find the value of  $x^2 + \frac{1}{x^2}$

4. If  $x - \frac{1}{x} = 3$ , find the value of  $x^2 + \frac{1}{x^2}$

5. If  $x + y = 4$ , and  $xy = 2$  find the value of  $x^2 + y^2$ .

6. If  $x - y = 7$ , and  $xy = 9$  find the value of  $x^2 + y^2$ .

7. If  $x^2 + y^2 = 29$  and  $xy = 2$  find  $x + y$ .

**8. Find the product:**

(i)  $(x + 4)(x + 7)$

(ii)  $(y^2 - 4)(y^2 + 3)$

(iii)  $(x - 3)(x - 2)$

(iv)  $(3x - 4y)(3x + 2y)$

**9. Evaluate:**

(i)  $102 \times 106$

(ii)  $34 \times 36$

**10. Find the product :**

(i)  $994 \times 1006$

**D.A.V. PUBLIC SCHOOL, KURUKSHETRA**

**Class : VIII**

**SUMMER ASSIGNMENT : SCIENCE**

**CHAPTER : 2 (MICRO ORGANISMS : FRIENDS AND FOES)**

**Q1. Answer the following questions:**

- (i) Define microbiology.
- (ii) Who discovered the existence of bacteria?
- (iii) Give two examples of :
  - (a) Bacteria
  - (b) Fungi
- (iv) Categorise the following organisms as :
  - (a) bacteria
  - (b) Fungi
  - (c) Algae
  - (d) Protozoans→ Yeast, Cholera, Amoeba, Bread mould, Spirogyra, Staphylococcus.
- (v) Which micro organisms help in formation of alcohol and vinegar?
- (vi) Name the bacteria present in curd.
- (vii) What is rancidity?
- (viii) Name the (i) bacteria (ii) fungi that cause food poisoning.

**Q2. Choose the correct option from the following:**

- (i) What temperature is used in pasteurisation?
  - (a) below 70°C
  - (b) below 100°C
  - (c) at 72°C
  - (d) above 100°C
- 3. Vacuum packed potato chips do not get spoiled because
  - (a) bacteria do not get water to grow
  - (b) bacteria do not get air to grow
  - (c) bacteria do not get salt to grow
  - (d) bacteria do not get sunlight to grow
- 4. Female Anopheles mosquito spread
  - (a) malaria
  - (b) dengue
  - (c) cholera
  - (d) swineflu
- 5. Red rot of sugarcane is caused due to
  - (a) bacteria
  - (b) virus
  - (c) fungus
  - (d) protozoa



**SUMMER ASSIGNMENT : SCIENCE**  
**CHAPTER : 19 (POLLUTION OF AIR)**

**Answer the following questions:**

1. Name the gas depleted by chlorofluorocarbons.
2. Name the gas in air that causes leaf drop.
3. Vanmahotsava is celebrated every year in the month of \_\_\_\_\_.
4. Name the air pollutant (a gas) \_\_\_\_\_.
5. Out of the following, the option that can help to check global warming is \_\_\_\_\_.  
(a) Fossil fuels/ Solar energy      (b) Deforestation/Afforestation
6. What do you mean by a green house?
7. (a) Name any two acids that make the rain water acidic.  
(b) How does acid rain affect the soil?
8. (a) State the consequences of green house effect. ( any two)  
(b) Name the green house gas that increases in atmosphere when large scale deforestation is done.
9. How is marble cancer caused?
10. At your level how can you decrease the pollution caused by vehicles. (any two)
11. Excessive amount of this pollutant in air affects growth of green plants. Name it.
12. (a) Name the gas produced due to incomplete burning of fuels.  
(b) How does it harmful to human beings?
13. Carbon dioxide is a green house gas. It is true/false? Give the reason to support your answer.
14. What do you mean by air pollution?
15. One should prefer to live near a garden/Industrial area and why?
16. What is global warming? What are the likely consequences of global warming?

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**SUMMER ASSIGNMENT : SCIENCE  
CHAPTER : 6 (SOURCES OF ENERGY)**

**Multiple Choice Questions:**

1. Which one of the following is a non-renewable source of energy?  
(a) wood                      (b) wind                      (c) petroleum                      (d) biomass
2. From the following sources of energy the only one which is likely to get exhausted is:  
(a) sun                      (b) hydropower                      (c) biomass                      (d) petroleum
3. Out of the following , the fuel that is an ideal fuel for generating electricity is:  
(a) hydropower                      (b) coal                      (c) a battery                      (d) biomass
4. From the following fuel, which produces least pollution when used in automobiles is :  
(a) Petrol                      (b) CNG                      (c) Diesel                      (d) LPG
5. Why does petroleum float over saline water?
6. How coal is formed?
7. Write the names of any three places in India where coal is found?
8. Write the names of the different products of the destructive distillation of coal which are used:  
(a) in extraction of metals  
(b) for making dyes/paints  
(c) as a domestic fuel
9. Name the fossil fuel known as black rock. Mention its any two types. Write the factors on which they are classified. (two points)
10. What is destructive distillation. Name its products.
11. Write (i) the composition of water gas (ii) full form of CNG
12. What is the advantage of heating coal strongly in absence of air rather than burning it straight way.
13. (i) Define fuel.  
(ii) How were the fossil fuels formed?  
(iii) Name the fossil fuel which is largest source of energy for generating electricity worldwide.

14. Write any two uses of coal gas.
15. "We should encourage the use of renewable sources of energy." State any two reasons in support of this statement.
16. What do you understand by a synthetic source of energy? Give one example.
17. What is the other name of petroleum and why?
18. Differentiate between peat and anthracite.
19. Explain how different varieties of coal have been formed?
20. (i) What is crude oil?  
(ii) What do you mean by refining of petroleum?  
(iii) Why do we need to refine petroleum?

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**SUMMER ASSIGNMENT : SCIENCE**  
**CHAPTER : 7 (COMBUSTION)**

**Answer the following questions:**

1. Define fuel. Give example.
2. Define kindling temperature.
3. Differentiate between :
  - (i) Slow Combustion and Rapid Combustion
  - (ii) Spontaneous combination and Explosive combustion.
4. Give reasons:
  - (i) We can boil water in a paper cup, on spirit lamp.
  - (ii) White phosphorus catches fire spontaneously
  - (iii) Flame of candle goes off, when we blow over it strongly.
5. Which principle is used in fire fighting?
6. What precautions should be taken at LPG godowns, fire cracker factories and ammunition depots?
7. What happens when there is incomplete combustion?
8.
  - (i) Which fuel is said to have high calorific value.
  - (ii) What is the SI unit of calorific value.
9. The use of diesel and petrol as fuels in automobiles is being replaced by CNG why?
10. Describe an activity to show that wax vapors are present in the innermost zone of candle flame.
11. Describe an activity to show that air is necessary for combustion.
12. Describe an activity to show that luminous zone of the flame contains unburnt particles of carbon.
13.
  - (i) Define flame.
  - (ii) Describe an activity to prove that non-luminous zone of the flame is the hottest zone.

**D.A.V. PUBLIC SCHOOL, KURUKSHETRA**

**Class : VIII**

**SUMMER ASSIGNMENT : SCIENCE**

**CHAPTER : 4 (FORCE AND PRESSURE)**

1. We prefer to use a sharp knife to cut vegetables. This is because it results in a
  - (i) decrease in the pressure exerted on them.
  - (ii) Decrease in the effect of force exerted on them.
  - (iii) an increase in the force exerted on them.
  - (iv) an increase in the effect of the force exerted on them.
  
2. In a game of a tug of war, the team "A" is pulling the rope with a force  $F_1$  and Team "B" is pulling it with a force  $F_2$ . Team 'A' won the game. The resultant force is :
  - (i) Zero
  - (ii)  $\vec{F}_2 - \vec{F}_1$  and force is exerted in the direction of A
  - (iii)  $\vec{F}_1 - \vec{F}_2$  and force is exerted in the direction of B
  - (iv)  $\vec{F}_1 - \vec{F}_2$  and force is exerted in the direction of A
  
3. Give reason.
  - (i) How does a force, acting along the direction of motion of an object, affect its motion?
  - (ii) For a given applied force, which of the two- a car or a truck – gains in speed at a faster rate? Why?
  
4. Name the important parameters that determine the magnitude of the force needed.
  
5. Try to squeeze a rubber ball between your palm by applying nearly same force from both sides. What is the magnitude of the net force acting?

**D.A.V. Public School, Kurukshetra**  
**Class – VIII**  
**Social Science Assignment**  
**Chapter -1 (Resources: Utilization and Development)**

1. What are resources?
2. What is the meaning of multifarious needs?
3. What is responsible for water logging?
4. What is the effect of water logging?
5. Name two recyclable metals.
6. Name abiotic resources, which is renewable.
7. How much oil might lie beneath the Arctic sea-bed?
8. What is essential for the development of country?
9. Name two developed countries.
10. What is included in human resources of a country?
11. List any five ways to reduce the wastage of resources.

**D.A.V. Public School, Kurukshetra**  
**Class – VIII**  
**Social Science Assignment**  
**Chapter -2 (Natural Resources: Land,Soil and Water)**

1. Describe the composition of soil.
2. What is soil erosion?
3. What is soil conservation?
4. Which area of the world are densely populated and why?
5. How soil is formed?
6. Distinguish between Terrace farming and Contour ploughing.
7. What is the mean of surface water?
8. Define Millimeter.
9. Name the areas where we get high rainfall.
10. Name the areas where we get low rainfall.
11. Read the stanza carefully and answer the questions given below:

**Ganga – A Living Entity**

The honourable court of Uttarakhand has given 'living entity' status to River Ganga. It means that now onwards Ganga has to be treated as a 'living person' with all corresponding rights, duties of a living person in order to conserve Ganga river system. In spite of initiatives by various governmental and non-governmental agencies, Ganga and its tributaries are still abused by the people. The river is polluted by domestic, agricultural and industrial effluents. This river system is a lifeline of northern India. That is why, its health has to be restored for the benefit of people.

- 1) Why has River Ganga called the lifeline of the people?
- 2) Suggest any three immediate steps to restore the health of River Ganga – A living Entity.

**D.A.V. Public School, Kurukshetra**  
**Class – VIII**  
**Social Science Assignment**  
**Chapter -8 (The Modern Period)**

1. When did the modern period of Indian history begin?
2. How did India exploited by Europeans?
3. How did East India Company establish their rule in India?
4. What changes took place in nineteenth century?
5. What changes took place in twentieth century?
6. When did Indian National congress establish?
7. Define digital library.
8. Which act was passed by the British and why?
9. Name the different by which British government were worried.
10. Define imperialism.
11.

Books	Writers
a. Anandmath	_____
b. My Experiment with Truth	_____
c. Unhappy India	_____
12. How would you suggest to protect old buildings/ monuments of your country?

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**Class – VIII**  
**Social Science Assignment**  
**Ch-9 (Establishment of Company Rule in India)**

1. Which year has been marked as the beginning of the European era in Indian history?
2. Who was the last powerful Mughal ruler?
3. When was French East India Company dissolved?
4. During the Battle of Plassey, Siraj-ud-Daulah the Nawab of Bengal captured which English Factory?
5. At which place did the Portuguese establish their center?
6. Define the term factory.
7. Which policy was introduced by British to take advantage of weak Indian political system?
8. Give the name of three strong rulers of Bengal.
9. Give the name of the commodities on which European companies competed among themselves to buy?
10. Who did become the Nawab after death of Siraj-ud-Daulah?
11. How did Nawab Siraj-ud-Daulah easily defeated by the British?
12. Give the name of three Indian rulers who fought the Battle of Buxar.
13. What was the basic aim of East India Company in India?
14. Which war was the result of trading competitions?
15. What attracted European trading companies to India? Give reasons.
16. Give the names of trading set ups of East India Company in India.
17. Write down three benefits which were given by British government to East India Company.
18. Why did the triple alliance against Hyder Ali jealous from him?
19. How did Hyder Ali break the triple alliance of British?
20. When did Hyder Ali become the ruler of Mysore?
21. What were the reasons of Anglo Maratha wars?
22. Why did the Britishers force the Indian farmers to grow Indigo?
23. What circumstances compelled the Sikhs to sign the Treaty of Lahore?
24. How did the East India Company get benefitted by setting up trading posts in Surat and three presidency settlements at Bengal, Madras and Bombay?
25. "The Third Carnatic war ended the dreams of French Company in India". Give any three arguments in support of the statement.

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**Social Science Assignment**  
**Chapter – 16 (Our Constitution)**

1. Mention any two demands of Rule of Law.
2. What is constitution?
3. Write the name of female members of constituent assembly.
4. Which part of the constitution is called the soul of the India Constitution?
5. Who was the chairman of drafting committee of Indian constitution?
6. If a bill is approved by a majority of the members present and voting in both the houses of the parliament, which procedure of amendment is being followed?
7. Give any reasons to support that India is socialist state.
8. Mention any two provisions of British and American constitution each borrowed by Indian constitution.
9. Which amendment of Indian constitution gave right to vote to every Indian who is 18 years old?
10. Which type of judicial system United States has?
11. What is Privy Purse?
12. Why is it important to follow rules and laws?
13. Why was there a need to make Indian constitution a rigid constitution?
14. When was the final draft of Indian constitution completed?
15. Mention the role of the head of the state in India?