CLASS : V KEY ANSWERS TERM : I

Lesson 1 GEOMETRY

Page No. 6

Just for Practice 1.1

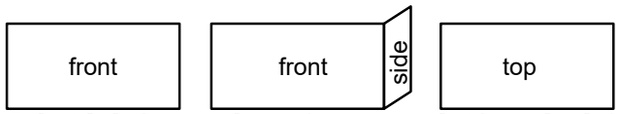
1.

#	Shape	Faces	Vertices	Edges
1.	Cylinder	3	0	2
2.	Square Prism (Cuboid)	12	8	12
3.	Cone	2	0	1
4.	Cube	12	8	12
5.	Sphere	0	0	0

Page No. 7

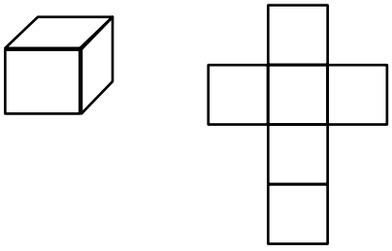
Just for Practice 1.2

1.



Cuboid - left to students (see example if any doubt)

//Use graph paper//

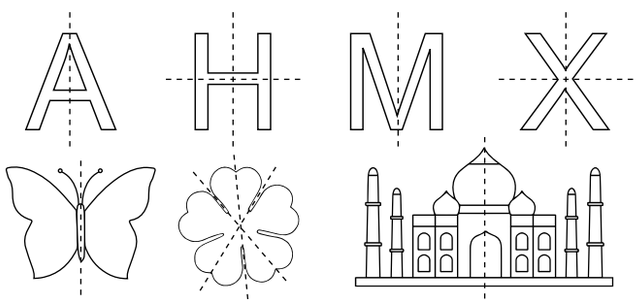


Note: Opposite faces are hatched accordingly.

Page No. 10 and 11

Just for Practice 1.3

1.



Page No. 12

Just for Practice 1.4

1. 1/4 turn → flower, circle, square

1/2 turn → flower, Rectangle, Circle, Square

2. 1 2 3 4 5 9 7 8 6 0

3. S H U L P O X E

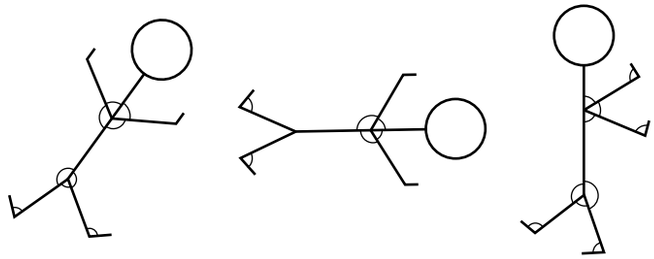
4. 888

5. 10101

6. 110110 (They look different)

Page No. 15

Just for Practice 1.5



11 angles 11 angles 10 angles

Page No. 17

Just for Practice 1.6

1. a. end points b. two c. two, common

d. 180°, 360° e. 180

2. Straight line, reflex angle, full angle.

Lesson 2 NUMBERS

Page No. 23

Just for Practice 2.1

1. 1,01,01,000

2. 20,00,00,020

3. a. 50,00,05,001 -
fifty crore, five thousand and one

b. 1,01,001 -
one lakh, one thousand and one

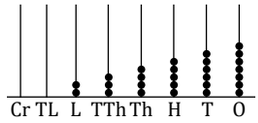
c. 1,51,93,406 -
one crore, fifty one lakh, ninety three thousand four hundred and six

d. 99,99,99,990 -
Ninety nine crore, Ninety nine lakh, Ninety nine thousand, nine hundred and ninety.

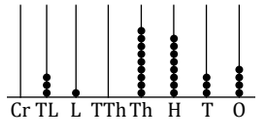
Page No. 24 and 25

Just for Practice 2.2

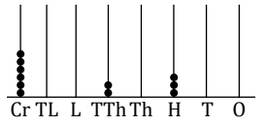
1. a. 2,34,567
Two lakh, thirty four thousand five hundred and sixty seven.



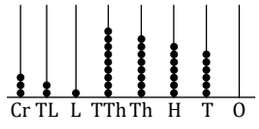
b. 31,09,834
Thirty one lakh, nine thousand eight hundred and thiry four.



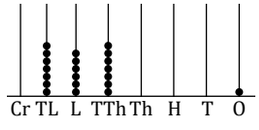
c. 6,02,00,300
Six crore, two lakh and three hundred.



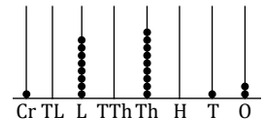
d. 3,21,98,760
Three crore, twenty one lakh, ninety eight thousand, seven hundred and sixty.



e. 76,70,001
Seventy six lakh, seventy thousand and one.



f. 1,08,09,012
One crore, eight lakh, nine thousand, and twelve.



2. a. 1,08,934 b. 3,45,678
c. 1,09,087 d. 62,03,040
e. 61,00,023 f. 71,21,617
g. 32,00,000 h. 11,00,009
i. 35,60,230 j. 76,89,000

3. a. 6,08,954 -
Six lakh eight thousand nine hundred and fifty four.

b. 7,35,678
Seven lakh, thirty five thousand, six hundred and seventy eight.

c. 90,90,978
Ninety lakh, niney thousand, nine hundred and seventy eight.

d. 2,00,09,001
Two crore, nine thousand and one.

e. 10,00,036
Ten lakh and thiry six.

4. a. 8,60,051
b. 50,00,402
c. 90,99,999
d. 70,00,00,705
e. 3,04,57,061

5. a. 1089347 → 1000000 + 80000 + 9000 + 300 + 40 + 7

b. 3456781 → 3000000 + 400000 + 50000 + 6000 + 700 + 80 + 1

c. 1090878 → 1000000 + 90000 + 800 + 70 + 8

d. 20304089 → 20000000 + 300000 + 4000 + 80 + 9

e. 10002300 → 10000000 + 2000 + 300

f. 12161734 → 10000000 + 2000000 + 100000 + 60000 + 1000 + 700 + 30 + 4

g. 20000000 → 20000000

h. 10000999 → 10000000 + 900+ 90 + 9

i. 56023033 → 50000000 + 6000000 + 20000 + 3000 + 30 + 3

j. 68900011 → 60000000 + 8000000 + 900000 + 10 + 1

6. a. 2,34,567

b. 3,07,007

c. 50,09,854

d. 6,09,00,309

e. 40,07,809

7. a. thousand b. thousand, c. hundred

d. thousand e. lakh f. Lakh

g. Ten lakh h. Crore i. Crore

j. unit

8. a. 1,00,009 1,00,020 b. 2,99,990 3,00,010 c. 16,78,900 16,78,910

d. 59,00,977 59,00,987 e. 9,98,66,999 9,98,67,009

9. a. 100000 b. hundred c. four

Page No. 28 and 29

Just for Practice 2.3

1.

#	Greatest	Smallest
a)	11,04,654	8,661
b)	1,00,000	54,876
c)	1,99,90,900	99,879
d)	6,38,72,000	23,090
e)	11,12,13,144	2,75,876

2.

27,838	makalu
27,940	Lhotse
28,169	Kachenjunga
28,251	K2
29,089	Everest

3.

Jupiter	71,492
Saturn	60,268
Uranus	25,559
Earth	6,378
Venus	6,052

4. a. 8,601; 14,678; 1,32,632; 1,94,754

b. 64,876; 66,689; 68,657; 78,678; 86,000

c. 99,876; 1,05,390; 1,09,567; 1,09,560; 1,90,909

d. 14,298; 20,090; 42,980; 2,30,909; 4,29,800

e, 2,75,876; 3,65,781; 5,76,445; 7,76,329; 7,78,122

5. a. 9,14,678; 8,34,601; 1,94,754; 1,32,632

b. 6,86,000; 6,78,678; 6,68,657; 6,06,689; 6,04,876

c. 1,99,879; 1,90,909; 1,09,567; 1,09,560; 1,05,390

d. 4,42,980; 4,30,909; 4,29,800; 4,20,090; 4,14,298

e. 1,65,78,122; 1,05,76,329; 65,65,781; 15,76,445; 15,75,876

6.

	Greatest	Smallest
a.	9753210	1023579
b.	8653220	2023568
c.	8764210	1024678
d.	5331100	1001335
e.	9865321	1235689
f.	9763210	1023679

7.

a.	97743210	10234779
b.	98876520	20567889
c.	76653210	10235667
d.	98871100	10017889
e.	98543221	12234589
f.	98876210	10267889

8.

a.	977643210	102346779
b.	988765210	102567889
c.	766532110	101235667
d.	988765300	300567889
e.	985432100	100234589
f.	988651100	100156889

Page No. 32

Just for Practice 2.4

1. a. 8,567,123 -
Eight million, five hundred sixty seven thousand one hundred and twenty three.

b. 3,450,923 -
Three million, four hundred and fifty thousand, nine hundred and twenty three.

c. 34,089,234 -
Thirty four million, eighty nine thousand, two hundred and thirty four.

d. 10,003,452 -
Ten million, three thousand, four hundred and fifty two.

e. 45,092,315 -
Fourty five million, ninety two thousand, three hundred and fifteeen.

f. 20,981,457 -
Twenty million, nine hundred and eighty one thousand, four hundred and fifty seven.

g. 20,939,810 -
Twenty million, nine hundred and thirty nine thousand, eight hundred and ten.

h. 40,148,253 -
Forty million, one hundred and forty eight thousand, two hundred and fifty three.

2.

#	Indian system	Internation system
a.	hundred	hundred
b.	unit	unit
c.	———	———
d.	Tens	Tens
e.	Ten crore	Hundred million
f.	Ten thousand	Ten thousand
g.	Ten lakh	Million
h.	Thousand	Thousand
i.	Ten lakh	Million
j.	Ten thousand	Ten thousand

3. a. ten b. ten thousand c. ten thousand
d. one e. one
f. nine hundred ninety nine thousands nine hundred and ninety nine

Page No. 36 to 38

Just for Practice 2.5

1. a. True b. True c. False d. False
e. True

2. a. 80 b. 9 c. 30
d. 3 hundreds + 9 tens + 10 ones
e. Subtraction

3. a. 9 b. 90 c. 900 d. 27

4. a.
carry over
1
45
+ 35
80

b.
99
+ 90
189

c.
8 Borrowing
1
45
+ 35
80

5. a. 45, 40, 35 ....
b) 365 - 189 = 76 days
c) 27 tens

6. a. = b. < c.

7. a. 68,14,474 b. 3991318
c. 7023908 d. 43236987
e. 8157885 f. 723317896

8. a. 44469 b. 551320 c. 7100767
d. 3156529 e. 2054778 f. 2864211

9.

#	Operation	Answer
a.	'+'	82,69,067
b.	'–'	1,20,626
c.	'+'	1,72,840
d.	'+'	43,90,364
e.	'+'	1,02,285
f.	'+'	22,230
g.	'–'	1,55,634
h.	'–'	12,110
i.	'+'	6,64,691
j.	'+'	1,65,055

10. a. Clue: How many illiterate people are there in TN?

b. Clue: How many foreign languages are there?

c. Clue: Which city Cochin or Hyderabad in far from Chennai?

11. a) Venus
b) Mercury and Venus
c) 7,83,40,000 KM
d) Saturn
e) Earth and Mars

Page No. 44 and 45

Just for Practice 2.6

1. a. product b. 1,000 c. 5,62,000
d. 89 × 45 = 4005
e. 0 f. 1001 g. 64 beads
h. 2500 i. 91 × 11 = 1001
j. Total number of slices = 9 × 6 = 54 slices.
Total slices ate = 12 × 3 = 36.
Slices left = 54 – 36 = 18 slices.
k. 0 l. 999 × 10 = 9990

2. a. 6426 b. 28,025 c. 3,84,129
d. 21,21,504 e. 9,80,830
f. 1,10,96,787 g. 1,94,33,180
h. 41,92,500 i. 97,51,92,750
j. 4,74,46,12,050

3.

	3	4	5	
	0 / 3	0 / 4	0 / 5	1
	0 / 3	0 / 4	0 / 5	2
	1	4	0	

= 4140

4. a. 96,85,126 b. 2,26,55,220
c. 55,83,77,688 d. 4,17,86,28,414
e. 10,38,14,374 f. 1,48,87,27,626
g. 9,86,13,64,245 h. 1,57,37,47,200
i. 41,51,75,53,000 j. 48,10,72,85,204
k. 13,29,73,55,085 l. 718678170

5. a. 33,66,93,26,082
b. 1,25,06,37,240
c. 77,29,42,95,760
d. 33,33,29,66,667
e. 1,34,67,86,532

6. a.

707	
× 68	
5656	
42420	
48076	

b.

435	
× 73	
1305	
30450	
87000	
118755	

Page No. 48

Just for Practice 2.7

1. quotient = *q*, remainder = *r*, divisor = *d*

#	*d*	*q*	*r*	Checking / (*d* × *q*) + *r*
a.	4	931	2	(931 × 4) + 2 = 3,786
b.	6	470	0	(470 × 6) + 0 = 2,820
c.	8	1,015	5	(1,015 × 8) + 5 = 8,125
d.	9	390	0	(390 × 9) + 0 = 3,510
e.	27	249	22	(249 × 27) + 22 = 6,745
f.	35	229	8	(229 × 35) + 8 = 8,023
g.	19	258	6	(258 × 19) + 6 = 4,908
h.	49	161	14	(161 × 49) + 14 = 7,903
i.	63	366	51	(366 × 63) + 51 = 23,109
j.	79	506	35	(506 × 79) + 35 = 40,009
k.	75	3,267	29	(3,267 × 75) + 29 = 2,45,054
l.	86	3,654	23	(3,654 × 86) + 23 = 3,14,267
m.	93	1,181	76	(1,181 × 93) + 76 = 1,09,909

2. ₹48,000 (5,76,000/12 = 48,000)

3. 1,301 plants in each row.

4. 1,304 boxes are needed.

5. 1,302

Lesson 3 PATTERNS

Page No. 53

Just for Practice 3.1

I. 5. 1 + 2 + 3 + 4 + 5 + 4 + 3 + 2 + 1
6. 1 + 2 + 3 + 4 + 5 + 6 + 5 + 4 + 3 + 2 + 1
7. 1 + 2 + 3 + 4 + 5 + 6 + 7 + 6 + 5 + 4 + 3 + 2 + 1

II. 100, 9, 36, 81, 64, 49, 1, 25, 16, 25

III. 1. T 2. F 3. F 4. T 5. T 6. F

Page No. 56

Just for Practice 3.2

1. a. 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 = 64 [perfect square]

b. 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23 = 144 [perfect square]

2. b. 2 zeros

Lesson 4 MEASUREMENT

Page No. 57 and 58

Just for Practice 4.1

I. 1. (b) 15 cm
2. (b) 4 cm
3. (b) 50 cm
4. (b) 30 cm

II. 1. 160 mm
2. 7 cm
3. 2,345 cm
4. 9,065 cm
5. 3 m
6. 56,900 mm
7. 4,000 m
8. 52,000 m
9. 85 km
10. 71 km

Page No. 60 and 61

Just for Practice 4.2

1. 7 m 79 cm
2. 39 m 80 cm
3. 117 m
4. 193 m 16 cm
5. 151 m 79 cm
6. 139 80 cm
7. 417 m
8. 593 m 16 cm
9. 13 m 40 cm
10. 19 m 15 cm
11. 110 m 85 cm
12. 221 m 78 cm
13. 1 m 44 cm
14. 38 cm (addition)
15. Tallest building is 33 m (subtraction)
16. 9 m higher than second tallest building [subtraction]
17. Hari – 2 m
Paul – 4 m (a)Total = 9 m (addition)
Raghar – 3 m (s)
18. Micky – 300 m
Jenny – 290 m (subtraction)
Dev – 287 m (subtraction)

19.

	mm	cm	m
You measure rainfall	✓		
Your uniform measurement		✓	
The distance run by sports people			✓
Height of your house			✓
Length of your finger	✓		
Your height		✓	
Length of a coconut tree			✓
Width of your school play ground			✓
Depth of a well			✓
Width of your little finger	✓		
Thickness of your maths textbook	✓		
Thickness of a sheet of paper	✓		

Page No. 62

Just for Practice 4.3

I. 1. 76 km 885 m
2. 3435 km 24500 mm
3. 1 km 736 m 83 cm

II. 1. 156 km 200 m
2. 177 km 400 m
3. 59000000 mm – 29304 mm = 58 km. 970 m. 696 mm.

Page No. 65

Just for Practice 4.4

I. 1. 80 cm 24 mm
2. 1754 km 375 m
3. 52 m

II. 1. 10 km 10 m
2. 1 m 1 cm
3. 12 cm 1 mm

III. 1. 243 km 520 m
2. 20 km 150 m
3. 6 m each
4. Chennai – Madurai (478 km 800m)
How much? – 178 km 300 m
5. 18 km 340 m
6. 2 km 175 m

Lesson 5 TIME

Page No. 70 and 71

Just for Practice 5.1

1. a. 240 min b. 540 min c. 160 min
d. 205 min e. 530 min

2. a. 168 hrs b. 720 hrs c. 438 hrs
d. 336 hrs

3. a. 70 days b. 161 days c. 238 days
d. 280 days e. 135 days

4. a. 60 b. 204 c. 480 d. 1056
e. 222 f. 323

5. a. 104 b. 260 c. 1068 d. 1256

6. 60480 hrs

7. 604800 s

8. 30432 hrs

9. 3600 cars

Page No. 72

Just for Practice 5.2

1. a. 8:30 pm b. 6:10 am
c. 5:15 pm d. 12:55 pm

2. 6 hrs

3. 45 mins

4. 12:20 pm

5. 40 mins

Page No. 74 and 75

Just for Practice 5.3

1. 90 mins

2. 4:02 pm

3. 6:15 pm

4. 9 hrs 20 mins

5. 11:41 am

6. 10:00 am

7. 3:50 pm

8. 2 hrs 45 min

9. 12:50 pm

10. 5:41 pm

Lesson 6 INFORMATION PROCESSING

Page No. 77

Just for Practice 6.1

1. 47, 74, 27, 72, 24, 42 - Six 2 digits

2.

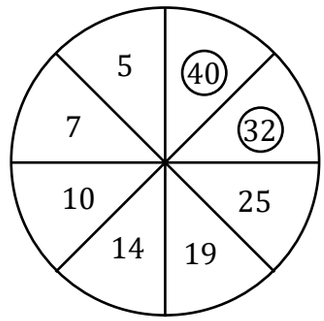
Pots	R	G	Y
	P	W	
		P	
		P	W
		W	P
	P		W
	W		P

P → Pink rosebush
W → White rosebush
R - Red
G - Green
Y - Yellow

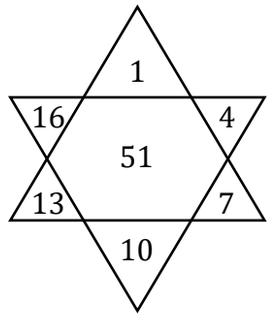
Page No. 78

Just for Practice 6.2

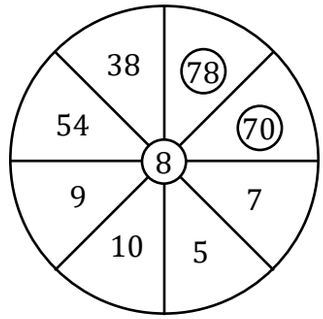
1.



5 + 2 = 7
7 + 3 = 10
10 + 4 = 14
14 + 5 = 19
19+ 6 = 25
25 + 7 = 32
32 + 8 = 40

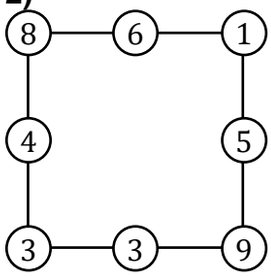


1 + 3 = 4
4 + 3 = 7
7 + 3 = 10
10 + 3 = 13
13 + 3 = 16
1 + 4 + 7 + 10 + 13 + 16 = 51



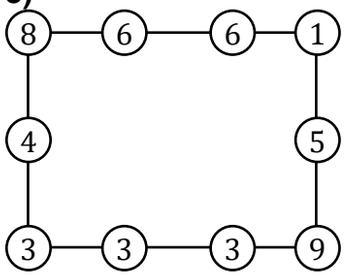
(8 x 5) - 2 = 38
(8 x 7) - 2 = 54
(8 x 9) - 2 = 70
(8 x 10) - 2 = 78

2)



8 + 6 + 1 = 15
8 + 4 + 3 = 15
1 + 5+ 9 = 15
9 + 3 + 3 = 15

3)



3 + 6 + 4 + 5 = 18
2 + 9 + 1 + 6 = 18

3 + 7 + 2 = 12
5 + 1 + 6 = 12

4. a.

3	7	15	31	63	127	255

$(3 \times 2) + 1 = 7$,
$(7 \times 2) + 1 = 15$,
$(15 \times 2) + 1 = 31$,
$(31 \times 2) + 1 = 63$,
$(63 \times 2) + 1 = 127$,
$(127 \times 2) + 1 = 255$

b.

I	G	E	C	A

A B C D E F G H I J K
2 steps 2 steps 2 steps 2 steps

c)

Z	W	T	Q	N

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Page No. 79 and 80

Just for Practice 6.3

1.

2	3	1
1	2	3
3	1	2

2.

4	1	2	3
1	3	4	2
3	2	1	4
2	4	3	1

3.

	5	3		
5	4			3
		5	4	1
1	3		5	4
2	1			5

Page No. 82

Just for Practice 6.4

1.

S.No.	Vehicle	TALLY MARKS	Total
1.	Cars (C)	𝍸 𝍸 𝍸 |	16
2.	Buses (B)	𝍸 |||	8
3.	Auto rickshaws (A)	𝍸 𝍸 ||	12
4.	Cycles (Cy)	|||	3
5.	Bikes	𝍸 𝍸	10
			49

a. Cars
b. This question cannot be answered with this collected data.
c. Nearly 25% (12/49 x 100) of the vehicle passed are Autorickshaws.

2.

Shoe size	Tally marks	Total
1	𝍸 𝍸	10
2	𝍸 𝍸 |||	13
3	𝍸 𝍸 𝍸 𝍸 𝍸 |	26
4	𝍸 𝍸 ||||	14
5	𝍸 |	6
6	|||	3
		72

a. size 3
b. size 4
c. size 6
d. 32% (23/72 × 100) Sale of shoes are of sizes 1, 2 (Kids between aes 3 to 6)
36 % (26/72 × 100) Sale of shoes are of size 3 (Younger children of ages between 7 to 13)
Total 68% sale of shoes are of size 1, 2, 3
Children below age 12 purchased shoes sized 1, 3, 4
(May be school opening, school sports meet, school parade, rainy seasons, immatured handling can be reason or sale of shoes by children below 12)

Page No. 84

Just for Practice 6.5

1.

S. No.	Colour	Number of Children	
1.	Mango	35	☺ ☺ ☺ ☺ ☺ ☺ ☺
2.	Pineapple	25	☺ ☺ ☺ ☺ ☺
3.	Strawberry	20	☺ ☺ ☺ ☺

Each ☺ represent 5 children

2.

S. No.	Colour	Number of people	
1.	Purple	10	⊕ ⊕ ◠
2.	Pink	15	⊕ ⊕ ⊕ ◔
3.	Yellow	13	⊕ ⊕ ⊕ ◺
4.	Orange	17	⊕ ⊕ ⊕ ⊕ ◺
		55	

⊕ Each represent 4 people

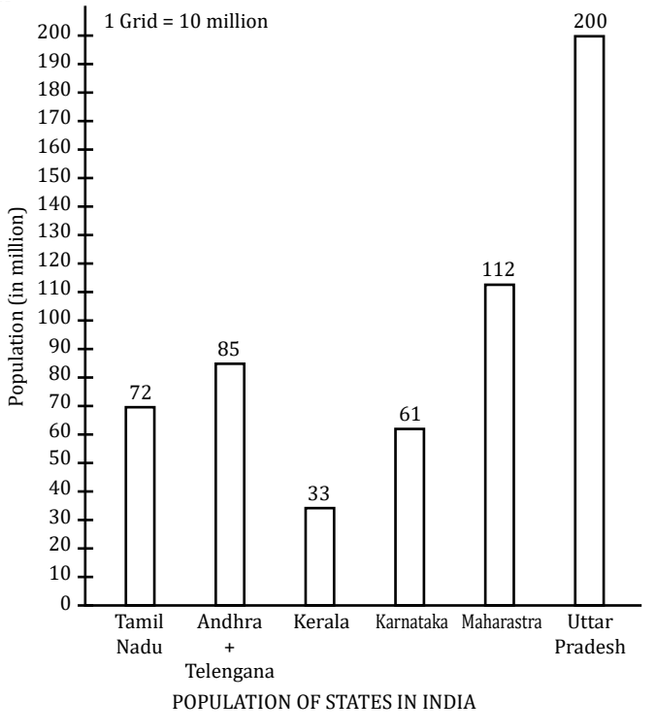
Total people asked for their favourite colour in 55.

Page No. 87 and 88

Just for Practice 6.6

//Use graph paper//

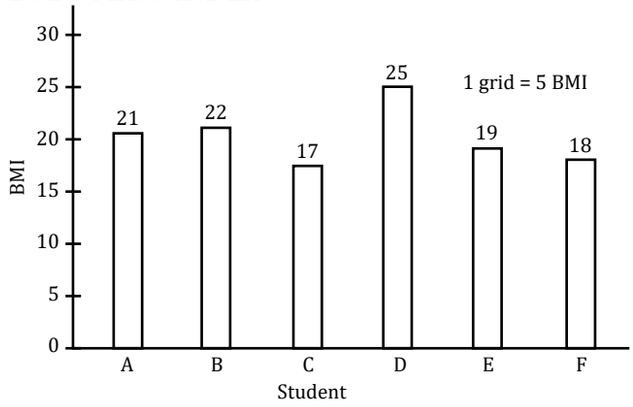
1.



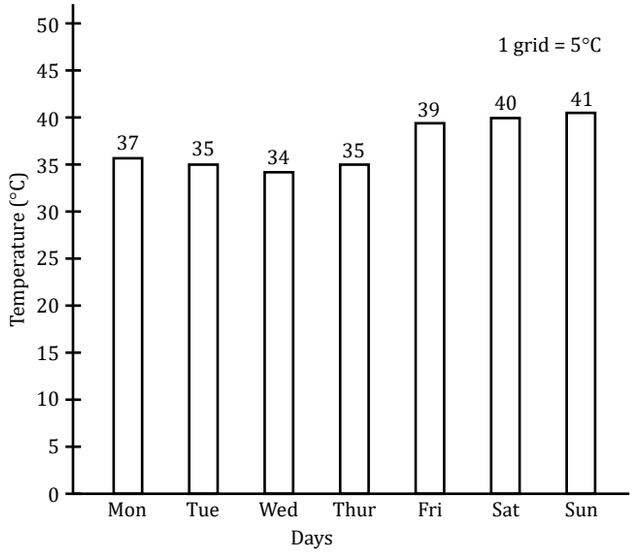
POPULATION OF STATES IN INDIA

2.

BODY MASS INDEX



3.

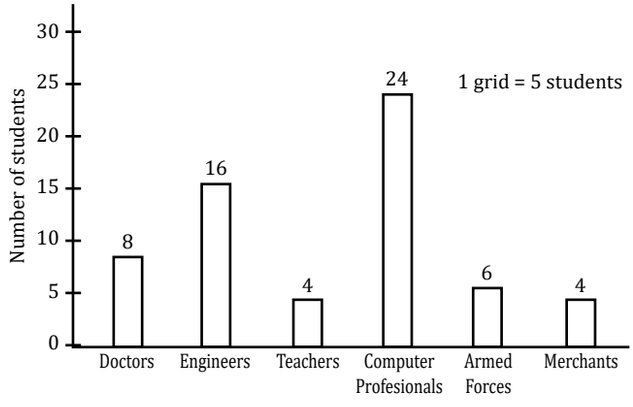


a. Sunday

b. 41 - 34 = 7°C

c. Tuesday and Thursday

4. PROFFESSION CHOICEOF CLASS XII STUDENTS



5. Data handlings means gathering and recording unformation and then presenting it in a way that is meaningful to others.

CLASS : V KEY ANSWERS TERM : I

LESSON - 1 OUR ORGAN SYSTEMS

Page No. 91

Let us discuss...

1. Digestive system
2. Excretory System
3. Respiratory System
4. Skeletal system
5. Circulatory system

Page No. 106 to 107

Let us solve…

A. Complete the analogy.

1. Tongue
2. Balance
3. Vertebral column

B. Choose the correct answer.

1. Nerves
2. Spinal cord
3. Spinal cord
4. 2
5. Lungs

C. Fill in the blanks.

1. Cerebrum
2. Excretion
3. Cerebellum
4. Spinal cord

D. Answer the following.

1. Cerebrum controls our memory, thoughts, intelligence and learning.

   It also controls the sense organs.

2. Cerebellum co ordinates the actions of the muscles and make them work together.

   It helps to balance the body and keeps us in an upright posture.

3. Respiration is the process by which we get energy from the food we eat.

4. The automatic response to an event is called a reflex action.

   Eg: If we accidently touch a hot object we withdraw our hand immediately without thinking.

5.

Sensory Nerves	Motor Nerves
They carry messages from the sense organs to the spinal cord and then to the brain.	They carry messages from the brain to the muscles.

E. Answer in detail.

1. The frame work of the body is made up of the skeletal system.
   - It is made up of 206 bones.
   - The skeleton protects the internal organs of the body.
   - It provides strength ,support and shapes to the body.
   - The joints in our bones help us to move freely.

2. i. **Sensory Nerves**

   They carry messages from different parts of the body to the brain.

   ii. **Motor Nerves**

   They carry messages from the brain to the muscles.

   iii. **Mixed Nerves**

   They carry messages from the sense organs to the brain and carry back instructions from the brain or the spinal cord to the body.

3. **Functions of the digestive system**:

Mouth:

The food is softened with the help of saliva.

Food pipe:

- It connect the mouth to the stomach.
- The food passes through the food pipe to the stomach.

Stomach:

The food is broken down, mixed with digestive juices and became paste.

Small intestine:

Food is completely digested in the small intestine, the nutrients are absorbed by blood.

Large intestine:

Holds the undigested food and forms waste products called faces.

4. **Three major parts of human brain:**

Cerebrum:

- It is the largest part of the brain.
- It is the centre of intelligence.
- It controls the working of our eyes, ears nose and tongue.

Cerebellum:

- It is smaller than the cerebrum.
- It co ordinates the actions of the muscles.
- It helps us balance our body and keeps us in an upright posture.

Medulla oblongata:

- It connect the rest of the brain to the spinal cord.
- It is in charge of breathing ,digestion and circulation.
- It controls all involuntary actions such as heart beat and breathing.

LESSON - 2 MATTER AND MATERIALS

Page No. 108

Let us Recall!

1. Oxygen, carbon dioxide
2. Cotton, wet clay
3. Milk, water
4. Petrol, diesel
5. Nitrogen, oxygen
6. LPG, helium
7. Wood, coal
8. Ice cube, book

Page No. 111

Let us discuss...

Solid	Liquid	Gas
Definite shape	No definite shape	No definite shape
Yes	Yes	Yes
Yes	Yes	Yes
Closely packed	Loosely packed	Very loosely packed
Very strong	Moderate	Very weak

Page No. 121 and 122

Let us solve...

A. Here are some solids/liquids and gases with property. Give an example for each case.

Solid:

1. Paper
2. Coal
3. Ice cube
4. Glass
5. Wood

Liquid:

1. Milk
2. Petrol
3. Fruit juice
4. Oil
5. Water

Gas:

1. Oxygen
2. Carbondioxide
3. Helium
4. Atmosphere
5. LPG

B. Fill in the blanks.

1. molecules, atom
2. Atom
3. hydrogen, oxygen
4. quantity
5. Density

C. Here are a list of changes. Are these physical or chemical changes? Write P for physical change and C for Chemical change.

1. heating wax (P)
2. melting of butter (P)
3. cutting a pineapple (P)
4. water heated in a vessel (P)
5. baking a cake (C)
6. digestion of food in stomach (C)
7. ripening of a fruit (C)
8. preparation of sambar (C)

D. Write whether the following are physical or chemical change.

1. Physical
2. Chemical
3. Physical
4. Physical
5. Chemical

E. Write one line answers to explain the following with regard to paddy.

1. Paddy plants are thrushed on the ground to separate the grains from the plant.
2. Rice is milled out of paddy in factories.
3. When the outer layer alone is removed, we get nutritive rich brown rice.
4. White rice is less nutritive than brown rice because next layer also removed.
5. Boiled rice are boiled and dried with the husk or outer layer.

F. Answer the following.

1. **Atomic arrangement in solids, liquids and gases:**

Solids:

In solids the molecules are arranged very close to each another. The molecules have a strong force of attraction between them.

Ex: chairs, books

Liquid:

In liquids the molecules are not closely packed. The attraction between molecules is less.

Ex: water

Gases:

In gases the molecules are very loosely packed as compared to solids and liquids. Negligible Force of attraction between the molecules.

Ex: oxygen , nitrogen

2.

Element	Compound
Atoms of same kind form an element.	Atoms of different kind, form a compound.
Example: Iron is an element made of atoms of iron.	Example: water is made of two different atoms.

3. Boiled rice are boiled and dried with the husk or outer layer. Its nutritive value is retained.

4. **Different uses of husk:**
   - Husk can be used to produce electricity using a device called biomass gasifier.
   - Rice husk ash is mixed with cement to produce bricks.
   - It can form very good organic manure and can be vermicompost.
   - Rice bran oil extracted from the inner layer of husk used for cooking.
   - Husks also can be used to make air purifiers.

LESSON - 3 ENERGY

Page No. 131 and 132

Let us solve…

A. In the table given below. List the different forms of energy involved in each case.

1. Muscular energy
2. Kinetic energy
3. Sound energy

B. Fill in the blanks by choosing the correct answer.

1. Energy
2. Less
3. Chemical
4. Kinetic
5. Solar cell

C. The following statements have errors which are highlighted. Correct and rewrite them.

1. Sailing ships and yachts have wind mast to sail.
2. The photo voltaic cell converts solar energy into electrical energy.
3. A toy car has a battery which has stored chemical energy for the toy to move.
4. Heat from the sun reach us through the process of radiation.
5. Running river water has kinetic energy.

D. Answer the following.

1.

Kinetic energy	Potential energy
Kinetic energy is energy in an moving object.	Potential energy is stored in an object.
Example: : Teacher writing on a board .	Example: Water at a closed dam.

2. Chemical energy is stored in the food we eat, the battery or cell that we use to run a toy car and the fuels like wood, petrol, biogas etc..

3. The methods of propagation of heat energy are
   - Conduction
   - Convection and
   - Radiation

4. **Solar energy:**
   - To generate electricity with solar cells.

   Chemical energy:
   - Chemical energy stored in battery used in watch , toys etc..

LESSON - 4 SCIENCE IN EVERYDAY LIFE

Page No. 142 to 144

Let us solve…

A. Answer the questions given under various heads in one word.

1. Sathyendra Nath Bose
   a. working men ‘s institute
   b. bose statistics
   c. theory of relativity
   d. S.N. Bose national centre for basic sciences

2. Dr. A.P.J. Abdul Kalam
   a. missile
   b. Rohini
   c. AGNI and PRITHVI
   d. Bharat ratna

B. Here are few actions of the scientists. Read those and mention what great quality the scientist exhibit by this action, in the table given below:

1. Dr. A.P.J. Abdul Kalam

QUALITY	ACTION
Interest to learn	Get up at four in the morning and go to learn with his teacher
Have a vision	Not just the understanding of bird flight but his vision of the future
Work for a cause	Transform India into developed nation by 2020
A responsible son	Distribute newspaper to support his family
Bring about a change through writing	Written many books

2. Sathyendra Nath Bose

QUALITY	ACTION
Love for fine arts	He was good at playing esraj
Patriotism	He came back to india after a brief stay in europe
Humility	I have got all the recognition i deserve
Social responsibility	He started the working men's institute
Good teacher	He insisted that students should design their own equipment with available local materials

C. Expand the following.

1. AEC - Atomic energy commission
2. MIT - Madras institute of technology
3. SLV - Satellite launch vehicle
4. DRDO - Defence research and development organisation.

D. Answer the following.

1. • S.N.Bose worked on a statistical method to solve certain problems in physics called as Bose statistics.
   • He acted as the advisor to the council of scientific and industrial research

2. • As project director he develop india's first indigenous Satellite Launch Vehicle.
   • He took up the responsibility of developing Indigenous Guided missiles at DRDO.

3. i. Padma Bhushan
   ii. Padma Vibhushan
   iii. Bharat Ratna

CLASS : V KEY ANSWERS TERM : I

LESSON - 1 THE CELESTIAL BODIES

Page No. 147

Think and answer the following:

1. The sun
2. Because of the bright light of the sun.
3. a. The sun is brighter than the moon.
   d. We are not able to see the moon during the day because of the bright light of the sun.

Page No. 150

Let us think...

When its orbital position changes, cause it to appear bright in the morning before sunrise and appear bright in the evening after sunset.

Page No.154 and 155

A. 1. Ursa Major
2. Nitrogen and oxygen
3. Venus
4. Meteor
5. Comets

B. 1. Constellation
2. Jupiter
3. Craters
4. Asteroid
5. Meteors

C. 1. UNIVERSE: All the stars, planets, galaxies and other forms of matter and energy that are in the space are collectively called the universe.

2. SATELLITES: They are heavenly bodies that revolve around the planets.

3. CONSTELLATIONS: A group of stars which appear to form a pattern in the sky.

4. METEORS: A small piece of rock that falls from space with great speed, producing a bright light as it enters the earth's atmosphere.

D. 1. The family of the sun is known as the solar system. It include the stars, planets, satellites, asteroids, comets and meteors.

2. • Planets are heavenly bodies that revolve around the sun.
   • They are formed from the dust and gas within a large cloud called a nebula.
   • There are 8 planets in the solar system.

3. i. It is the only planet where life exists.
   ii. Earth's atmosphere helps in maintaining a suitable range of temperature.
   iii. It has an adequate amount of oxygen.
   iv. About 3/4th of the Earth's surface is covered with water.

Page No. 155

Let us do...

A. Read the clues and complete the crossword.

ACROSS: 1. Neptune,
2. Craters,
3. Moon,
4. Meteors,
5. Mars

DOWN:
6. Jupiter,
7. Ganymede,
8. Sun,
9. Comets,
10. Saturn

Lesson - 2 OUR PLANET, EARTH

Page No. 158

1. Mercury
2. Jupiter
3. Uranus, Neptune
4. Venus
5. Orbit

Page No. 161

A. 1. Write a short note on earth.
- Earth is huge spinning ball of rock.
- It is one of the eight planets that moves around the sun.
- It is the only planet where life exists.
- Its surface is made up of oceans and continents.

2.
- The seven continents are North America, South America, Europe, Asia, Australia, Africa and Antarctica.
- The five oceans are Pacific Ocean, Atlantic Ocean, Indian Ocean, Arctic Ocean and Antarctic Ocean.

B. 1. Oceans,
2. Continents,
3. Antarctica,
4. Geology, Geography

Page No. 170 and 171

A. 1. Equator
2. Key
3. Scale
4. Map
5. Equator

B. 1. Physical map – shape of features on the surface.

2. Political map – boundaries and location of countries, states and capitals.

3. World map – showing the whole surface of the earth.

4. Wall map – can be hung on the wall

5. Locality map – Directions of a particular locality

6. Thematic map – based on a particular subject.

C. Answer the following:

1.

GLOBE	MAP
Model of the earth	Flat drawing of the earth
Shows the continents, oceans, countries	Shows all the political and physical features of the earth.
Three dimensional	Two dimensional

2.
- A network of lines formed by latitudes and longitudes is called grid.
- They help us to locate any places on the globe or map.

3. Difference between latitudes and longitudes.

Latitudes	Longitudes
These lines are parallel line	They are semi-circle lines
Never meet each other	Meet at poles
They run from west to east	They run from north to south
Measures up to 180° (90°N – 0 – 90°S)	Measures upto 360° (180°W – 180°E)
The length of the parallels keeps decreasing as we move towards the pole.	The length of the meridians is the same.

4.
- The size and distance between places on a map is shown by a scale.
- Maps are drawn to scale.
- Scale is important in order to give the map reader a sense of size.

5. Post office, Police box, Temple, Hospital, Church, Hotel

Page No. 172

Let us do...

B. 1. 82°30' East longitude, Mizarpur, in Uttar Pradesh

2. Indian Standard time (IST) is 5 hours and 30 minutes ahead of Greenwich Mean Time (GMT).

Lesson - 3 ATMOSPHERE, WEATHER, CLIMATE

Page No. 173

Let us start...

3. To get a temporary relief from the scorching heat of sun.

Page No. 179

Let us think...

Earth has moved to a position in its orbit where its axis is more or less perpendicular to the incoming rays of the sun.

Page No. 181

Let us think...

1. a. Extremely long hot summer season
   b. Sun would be nearly overhead and daylight hours very long.
2. Long and very cold dark winters with long nights.

Page No. 184

A. 1. Weather,

2. Climate,

3. Seven,

4. Hotter,

5. 1°C

B. 1. True

2. False

3. False

4. True

5. True

C. Answer the following.

1. Distinguish between weather and climate.

Weather	Climate
The change that happens every day in the atmosphere of a smaller area.	Average weather condition of a larger area spread over a longer period of time.
They are temporary and changes quickly.	It remains the same more or less for years.

2. Chennai is near the sea and winds blow from the sea to land makes climate moderate.
3. a. Winds blowing into the land influence the climate.
   b. Wind blowing from a hot region increases the temperature and that blowing a cooler region lowers the temperature of the land.
4. a. The amount of water vapour in the air is called humidity.
   b. Winds blowing from the sea bring lot of moisture with it which influence the climate.

Page No. 184

Let us do...

B. Bhopal and Kolkata are located at 23oN latitude.

C. We would like to visit hill station in summer to get a temporary relief from the heat of sun. In hilly areas the temperature remains favorable and can enjoy the scenic beauty of nature.

D. a. The green house effect is caused by the increased quantity of gases such as carbon dioxide in the air.
   b. These gases trap the heat from the sun and increase the temperature of the Earth's atmosphere.

Page No.185

Life Skills...

B. 1. Barometer: A device that measures air pressure and shows when the weather is likely to change.

2. Anemometer: An instrument is used for measuring the speed of the wind and is also a common weather station instrument.
3. Wind vane: A wind vane or weathervane is an instrument used for showing the direction of the wind.
4. Rain gauge: It is a meteorological instrument for collecting and measuring the amount of rainfall.

Lesson - 4 EARLY MAN

Page No. 186

a. It is of stone age period, lasted roughly 3.4 million years and ended between 8700 BCE and 2000 BCE.
b. It is the past or prehistoric period because no written record for this period.
c. Because humans used tools and weapons made out of stones.

Page No. 190

Let us think...

- To document their hunting expeditions.
- To decorate the cave.
- They painted animals because they were important to their existence.

Page no: 192

Let us find out...

Work of ASI: Explore, excavate, conserve, preserve and protect the monuments and the sites national and international importance.

Achievements:

- E-ticketing of all ticketed monuments
- World heritage
- Conservation portal for ASI works
- Satellite mapping of ASI Monuments
- Retrieval of stolen antiquities from abroad

Page No.193

Let us solve:

A. 1. Jungles
2. Stones
3. Wooden club
4. River
5. Copper

B. 1. Food gatherer
2. Stone, bone and wood
3. Softer and tastier
4. cattle and oxen
5. Sledge

C. 1. True
2. True
3. True
4. False
5. True

D. 1. The early man was called food gatherer because they were nomads in search of food.

2. Early man used sharp tools such as axes, sickles, and arrow heads because they realize that it was easier to hunt animals and dig out roots of plants.
3. Early man discovered fire by rubbing two stones together.
4. Farming made people to settle down near rivers. They started living in groups. This made people to build villages.
5. a. Early man tamed animals like horses, donkeys, cows, bullocks and dogs.
   b. They used these animals to carry loads, plough the land and for hunting.
6. The fertile soil in the river valleys were best suited for agriculture. Hence people first settled near river valleys.
7. Early man saw a small log of wood rolling down a slope. They made a hole in the centre of a log and fitted below their carts to make the first wheel.
8. a. Copper was the first metal to be discovered. Later iron was discovered.

b. They used these metals to make strong weapons and tools.

Page No. 194

Let us do...

D. 1. Early man produced fire by rubbing stones together.
2. Sow seeds to grow crops.

Lesson - 5 GOOD CITIZENSHIP

Page No. 199

Let us think...

- All religions are equal before the state and no religion shall be given preference over the other.
- Indian citizens are free to preach, practice and propagate any religion of their choice.

Page No. 200 to 202

Let us solve...

A. 1. 26th January
2. Constitution
3. Preamble
4. Fundamental duty
5. Directive principles

B. 1. True
2. True
3. False
4. True
5. False

C. 1. Right to live and travel in our country
2. Choosing a profession
3. Protect public property
4. Respect the National anthem.
5. Freedom of speech and expression

D. 1. Social
2. Constitutional
3. Disciplinary
4. Cultural
5. Personal
6. Constitutional
7. Disciplinary
8. Cultural
9. Disciplinary
10. Personal

E. 1. The set of rules drafted, according to which our country is being ruled is called constitution.

2. a. The Constitution of India is the lengthiest written constitution in the world.
b. It is the supreme law of the land.
c. Every law passed by the parliament must be in accordance with the principles laid down by the constitution.

3. The constitution of India gives certain rights which cannot be denied to any citizen. Our country is secular because if anyone feels denied of the fundamental rights, he/she can go for court of justice.

4. a. The directive principles are the guidelines given to the central and state governments while framing laws. They are
- providing proper living condition for all citizens.
- The rich don't exploit the poor.
- Free and compulsory education for children up to the age of 14.

5. Fundamental Rights:
- Right to Equality
- Right to freedom of speech and expression
- Right to choose any profession
- Right to follow any religion

Page No. 202

Let us do...

B. Right to education will decide the future of India:

By introducing compulsory and free education for all till age 14 several students are benefitted and encouraged to obtain greater knowledge for their future.