

# 1. TOM WHITEWASHES THE FENCE

## ANSWERS

### Warm Up

1. (c) 2. (b) 3. (a) 4. (e) 5. (d)

### Read and Understand

- A. 1. (c) 2. (b) 3. (c) 4. (c)
- B. 1. Sid 2. Jim 3. Tom's 4. clever 5. spotlessly
- C. 1. Tom was given the task of whitewashing the fence by Aunt Polly.  
2. The clever idea that came to Tom's mind was that he should pretend to enjoy his work.  
3. There was a look of pity on Ben's face because he was going for a swim while Tom was working.  
4. Tom got twelve marbles, a tin soldier, a key, a dog's collar, the handle of a knife and four segments of an orange.  
5. Aunt Polly was delighted because the fence had been painted spotlessly white.
- D. HOTS — Tom was successful in getting others to do the work for him because he pretended to enjoy the work he was doing.
- E. 1. Dhyan Chand was a famous hockey player.  
2. Our school is very old.  
3. Anju loved the scenery.  
4. My grandparents live in Jaipur.
- F. 1. The dodo is an extinct bird.  
2. The kittens were playing in the water.  
3. Anjusha is in Class IA.  
4. Burma is the old name of Myanmar.
- G. 1. in one basket 2. too late 3. for overspeeding 4. at the station 5. in the morning
- H. 1. swimming 2. brilliant 3. delighted 4. pretended 5. delicious 6. holiday
- I. 1. tiny 2. gloomy 3. energetic 4. greed 5. shoddy 6. joy
- J. 1. Mark Twain was born on 30 November 1835.  
2. Mississippi river.  
3. (a) 'Adventures of Tom Sawyer'  
(b) 'The Prince and the Pauper'  
(c) 'Adventures of Huckleberry Finn'
- M. 1. V-46/B, Rajouri Garden,  
New Delhi – 110027

18/03/20XX

Dear Mini

Hope you are fine. How is everybody? We are all well at this end.

My parents were away for a day. They had gone out of town.

In my parents' absence, I did a lot of work at home.

I felt tired but I learnt a lot.

Do reply soon.

Your friend,

Rajesh

## 2. THE MONKEYS GO ON A FAST

### ANSWERS

#### Warm Up

1. Chimpanzee 2. Gorilla 3. Orangutan 4. Langur

#### Read and Understand

- A. 1. (a) 2. (b) 3. (b) 4. (b)
- B. 1. troop 2. bananas 3. chief 4. permission 5. swallowed
- C. 1. The wife of the chief suggested that each of monkey should keep his/her share of bananas with him before the fast began.
2. The young monkey suggested that they should peel a banana and keep it ready to eat.
3. The chief of the monkeys gave them permission to put bananas in their mouths but in no case should they eat them.
4. The monkeys swallowed the bananas kept in their mouth. This way, the fast of the monkeys ended.
- D. HOTS — Yes, it is good for health because it gives rest to our digestive system and helps to throw out toxic matter from the body.
- E. 1. China is a big country and Beijing is its capital.
2. The Ganga flows down the Himalayas and reaches the plains.
3. I went to Jaipur last week.
4. The Red Fort is a beautiful monument.
- F. 1. oil 2. music 3. flour
- G. 1. gold 2. wood 3. silver
- H. 1. herd 2. army 3. gang 4. fleet 5. crowd
- I. happiness, wisdom, beauty, foolishness
- J. 1. assembled 2. gathering 3. delicious
- K. **Across:** 1. CHIMPANZEE 3. OSTRICH  
**Down:** 2. PEACOCK 4. RHINOCEROS
- L. 1. (b) 2. (a) 3. (b) 4. (a) 5. (b) 6. (a)
- O. B-25,

Karol Bagh, New Delhi

4 April 2015

Dear Mukul,

Last Sunday, I kept a fast. I woke up early in the morning. I drank two glasses of water and then went for a walk. The whole day I ate nothing. I drank plenty of water throughout the day. It was a nice experience. I felt very light and active. I think one should fast for one day in a week. It gives rest to our digestive system. It makes us healthier and fitter.

Yours friend,

Mohit

# BEDS (POEM)

## ANSWERS

### Read and Understand

- A. 1. (b) 2. (c) 3. (b)
- B. 1. True 2. True 3. False
- C. 1. (d) 2. (e) 3. (a) 4. (b) 5. (c)
- D. Do it yourself.

### 3. THE GOLD COINS

#### ANSWERS

##### Read and Understand

1. (a) 2. (c) 3. (a)

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

- C. 1. King Krishnadevaraya gave each of his courtiers a bag containing fifty gold coins.  
2. The condition laid down by the king was that while spending gold coins, they had to see his face.  
3. No, the courtiers did not buy anything. They could not fulfil the condition laid down by the king.  
4. Tenaliraman justified his action by explaining to the king that every time he bought something, he saw the imprint of the king's face on the coin.

D. HOTS—The king did not punish Tenaliraman because he was pleased by his clever answer.

- E. 1. This car is mine.  
2. I have read these books.  
3. We are selling this house.  
4. That house belongs to my uncle.

- F. 1. What kind of animals are these?  
2. Which book is yours ?  
3. Which boy needs my help?  
4. What time are you leaving for your home?  
5. Whose pen is lying on my table?

G. 1. brave	braver	bravest
2. great	greater	greatest
3. easy	easier	easiest
4. hot	hotter	hottest
5. intelligent	more intelligent	most intelligent

H. 1. courtiers 2. assembled 3. priest 4. surprised

I.

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

- J. 1. Tenaliraman was a poet and jester.  
2. The king was impressed by Tenaliraman because of his wit and intelligence.  
3. The king encouraged poets and scholars.  
4. Kannada.

M. You : Sir, welcome to class V.

Tenaliraman : Thank you.

You : Sir, why were courtiers jealous of you?

Tenaliraman : They were jealous because the king was very fond of me.

You : Do you enjoy your work?

Tenaliraman : Yes, I enjoy my work a lot.

You : What message would you like to give to the students of our class?

Tenaliraman : Be happy always.

You : Sir, we will always remember that. Thank you for visiting our class.

Tenaliraman : You are welcome. I enjoyed talking to you.

N. Do it yourself.

# I KEEP SIX HONEST MEN (POEM)

## ANSWERS

### Read and Understand

- A. 1. (c) 2. (a) 3. (b)  
B. 1. False 2. True 3. True 4. False  
C. 1. The six honest men.  
2. What, Why, When, Where and How.  
3. We should be curious and ask questions like what, why, etc., to increase our knowledge.

D.

		W	H	A	T
H		W	H	Y	
O		H			
W	H	E	R	E	
		N			

- E. Do it yourself  
F. Do it yourself

## PERIODIC TEST—1

- A. 1. (a) 2. (b) 3. (b) 4. (c) 5. (c)  
B. 1. The frog was fat and green.  
2. The duck came to the pond to see if there was any food there.  
3. The duck was angry because she did not like being laughed at.  
4. The frogs' eggs were tiny black things laid in jelly. The jelly swelled up and rose to the surface of the pond.  
5. The two frogs croaked with laughter watching the duck trying to gobble the eggs. Every time, she gobbled the jelly, it slipped out of her beak.  
C. Do it yourself.  
D. 1. Anjali 2. Dhyan Chand  
E. 1. were playing in the garden 2. is in Class 5 A  
F. 1. (a) pen (b) book 2. (a) cotton (b) milk  
G. 1. Which yours 2. Which my  
B. 1. Aunt Polly gave Tom the task of whitewashing the fence.  
2. The wife of the chief suggested that each monkey should keep his/her share of bananas with him before the fast began.  
3. The condition laid down by the king was that while spending gold coins, they had to see his face.

4. The chief of the monkeys gave them permission to put bananas in their mouths but in no case should they eat them.
5. There was a look of pity on Ben's face because he was going for a swim while Tom was working.



## 4. THE KING AND HIS HAWK

### ANSWERS

#### Warm Up

1. Akbar
2. Ashoka
3. Alexander

#### Read and Understand

A. 1. (a) 2. (b) 3. (b) 4. (a) 5. (a)

B. 1. Genghis Khan 2. thirsty 3. spilled 4. sword 5. mounted

- C. 1. His friends, servants, hounds and his hawk accompanied Genghis Khan to the woods.  
2. Genghis Khan could not drink the water because the hawk knocked his cup from his hands.  
3. The hawk saved Genghis Khan's life by knocking off the cup which contained poisoned water from his hand.  
4. Genghis Khan learnt the lesson that one should never do anything in anger.

D. HOTS—He would have died because the water was poisoned.

E. 1. itself (reflexive) 2. What (interrogative) 3. herself (emphatic)  
4. those (demonstrative) 5. that (relative)

F. 1. mountain 2. swiftly 3. pathway 4. favourite

G. 1. peacock 2. lark 3. coal 4. honey 5. diamond 6. cucumber  
7. gold 8. hills

H. 1. Ashoka 2. Alexander the Great 3. Shah Jahan 4. Razia Sultan

K. One day, I was sleeping very soundly. Suddenly, I was woken up by the constant barking of my pet dog, Sheru.

I was really annoyed with him. I told him to keep quiet and let me sleep. But he kept on barking with his face in the direction of the window. Finally, I could bear him no longer and shut him in the storeroom and went to sleep.

In the morning when I woke up, I came to know that thieves had stolen all the jewellery kept in the cupboard. I was really stunned! I felt very sorry with the way I had treated Sheru. Poor Sheru was trying to stop the thieves from breaking into our house. How foolish it was of me to shut Sheru in the storeroom.

From that day onwards, I always keep my anger in check and think deeply before taking any action.

L. Do it yourself.

## 5. HE CHASED TRUTH

### ANSWERS

#### Warm Up

1. George Washington
2. Martin Luther King Jr.
3. Barack Obama

#### Read and Understand

A. 1. (a) 2. (b) 3. (b)

B. 1. books 2. honest, polite 3. character 4. anti-slavery 5. assassinated

C. 1. As a child, Abraham liked to read books. He preferred learning to working in the fields.

2. As a young man, Abraham did several jobs, including running a store and serving as a postmaster.

3. As a storekeeper, Abraham was honest, polite and patient with his customers.

4. The two incidents which tell us that Abraham Lincoln deserved to be called Honest Abe are as follows:

One night, after closing the store, when he was counting the money, he found that he had overcharged a customer. He immediately locked the store and walked a long distance to return the extra money!

One day, he found that he had used the wrong weight on the scales while selling tea leaves to a woman. As a result, he had given her little tea and charged her a lot. The woman did not realise this. Abraham made a fresh packet with the tea leaves due to her and carried it to the house of the woman!

5. It was important for him because he was an honest man. He was a man of character and could not deceive anyone.

6. The little girl was crying because she was about to miss a long promised visit to Decatur because the wagon has not come for her.

7. Abraham lifted the girl's trunk on his shoulder and taking the little girl by the hand, he went through the streets of Springfield; half a mile to the railway station, put her and her trunk on the train, and sent her away.

D. HOTS—A man of character is honest, loyal, polite and patient. He never makes false promises and is trustworthy. Mahatma Gandhi had all these qualities.

E. 1. goes 2. is playing 3. has left 4. has eaten 5. like

F. 1. has been playing 2. has been working 3. have been learning 4. have been waiting

G. 1. success 2. generous 3. assassinated 4. campaign

H. 1. rate 2. lake 3. silt 4. tool 5. slot 6. raw 7. now 8. made

9. plum (instead of 'a' it should be 'u') 10. lied

I. 1. expert 2. helper 3. one after the other 4. entertained

J. 1. France.

2. On Liberty Island in New York Harbour.

3. Freedom and democracy.
  4. Frederic Bartholdi.
  5. Lady Liberty.
- M.** Martin Luther King, a black American, was born in 1929. Although slavery was banned, still the blacks were treated badly by the whites. He was the leader of the Civil Rights Movement in the 1950s and 1960s. He was awarded the **Noble Peace Prize** in 1964 for leading non-violent movements. The blacks were humiliated by the whites. Martin Luther King came to India in 1959. He wanted to learn about the Satyagraha Movement. He followed the non-violent methods of Gandhiji. In India, he said, "I am not a tourist and I have come on a pilgrimage to pay homage to the land of Mahatma Gandhi." His methods were fully supported by the blacks in America. On August 28, 1963, about 2 lakh people joined him in his march to Washington. USA had to pass a law giving **equality to blacks**. Still in some states, injustice was being done to blacks. In Alabama, whites prevented blacks from voting in elections. Martin Luther King continued his efforts to get equal rights for blacks in USA. Some people did not like him and he was shot dead in 1968.
- N.** Do it yourself.

# LIVES OF GREAT MEN (POEM)

## ANSWERS

### Read and Understand

- A.** 1. (a) 2. (c) 3. (b)
- B.** 1. False 2. True 3. True 4. False
- C.** 1. Lives of great men teach us that we can make our lives sublime.  
2. If we make our lives sublime, the person who comes after can learn lessons from our life and make his life sublime too.  
3. This means moving on the unhappy way.  
4. Any fate means whatever problem comes in our life. The poet advises us that whatever the problem, we should face it with fearlessness and patience.
- D.** Mahatma Gandhi has inspired me a lot. He was an honest and truthful man. He believed that God is truth. Though he was weak physically, mentally he was very strong. He believed in simple living and high thinking. People of India loved him and called him 'Bapu'.

## 6. THE SELFISH GIANT

### ANSWERS

#### Warm Up

1. demon 2. elf 3. fairy 4. dragon

#### Read and Understand

- A. 1. (c) 2. (a) 3. (c)
- B. 1. False 2. False 3. True 4. False
- C. 1. The giant saw that the children were playing happily in the garden.  
2. The children did not want to play on the road because it was very dusty and full of stones.  
3. The giant noticed that the trees were covered with blossoms; the birds were flying around, chirping with delight and there were flowers all around.  
4. The little boy was crying because he could not climb a tree.  
5. The giant used to sit on a chair and watch the children playing.
- D. HOTS—Love for children and unselfishness brought happiness in the giant's life.
- E. 1. Past perfect 2. Simple past 3. Past continuous 4. Past perfect continuous tense
- F. 1. Future continuous 2. Simple future 3. Future perfect continuous  
4. Future perfect
- G. 1. castle 2. beautiful 3. trespassers 4. prosecuted
- H. 1. ugly 2. sweet 3. clean 4. inside 5. upstairs
- I. 1. New Delhi 2. Mysuru 3. Kashmir 4. Chandigarh

L.

#### EVERSHINE PUBLIC SCHOOL

#### NOTICE

17 March, 2015

Our school is organising a four-day trip (25.03.2015 to 28.03.2015) to the Jim Corbett National Park. The students of class 5 interested in this trip should give their names and an amount of ₹1500/- to the undersigned latest by 20 March 2015

Tom Bahadur

Head Boy (Class 5)

M. Do it yourself.

## LIFE SKILLS—1

- A. Do it yourself.
- B. Do it yourself.
- C. Do it yourself.
- D. Do it yourself.
- E. Do it yourself.

## PERIODIC TEST—2

- A. 1. (a) 2. (b) 3. (b) 4. (a) 5. (c)
- B. 1. Bina told Seema that her mother had gone to Mrs Verma's house to take her to the doctor.  
2. Seema's mother, Madhu, took Mrs Verma to the doctor because she had fever.  
3. Madhu made *khichdi* and soup for Mrs Verma.  
4. Seema read a story for Mrs Verma. She dusted her house. She put a jug of water with a glass on her bedside table.  
5. Madhu was proud of her daughter because she had taken care of Mrs Verma when she was ill.
- C. Do it yourself.
- D. 1. in one basket 2. for overspeeding
- E. 1. itself (reflexive)  
2. what (interrogative)
- F. 1. has been playing 2. have been learning
- G. 1. Simple future 2. Future continuous
- H. 1. Tom got twelve marbles, a tin soldier, a key, a dog's collar, the handle of a knife and four segments of an orange.  
2. No, the courtiers did not buy anything. They could not fulfil the condition laid down by the king.  
3. Genghis Khan could not drink the water because the hawk knocked his cup from his hands.  
4. As a storekeeper, he was honest, polite and patient with his customers.  
5. The giant saw that the children were playing happily in the garden.

## GRAMMAR WORKSHEETS

### Grammar Worksheet 1

- A. 1. Most shops in the mall (are open on Sunday.)  
2. Children in school uniform (were walking down the road.)  
3. The baby elephant (is missing its mother.)  
4. Rohan (has still not completed his homework.)

5. Beautiful flowers (covered the entire hillside.)
6. Mini and Rini (ran down the hill.)
7. The plains of North India (get very hot during the summer.)
8. The naughty child (kept his mother busy all day.)

- B. 1. the festival of colours. 2. very crowded. 3. better than cure. 4. a file or a folder.  
5. at Granny's house. 6. seven o'clock. 7. for the play.

### Grammar Worksheet 2

A. 1. (Abdul Kalam) delivered a speech.

2. (Rima) is writing with a pencil.

3. (Sonam) is travelling by bus.

4. Many tourists visited the (Qutub Minar.)

B. 1. The tourists saw a (herd) of elephants crossing the river.

2. Thank you for the beautiful (bouquet).

3. In the safari park, we photographed a (pride) of lions.

4. A (gang) of robbers attacked the bank.

5. A (swarm) of bees bit the bear.

- C. 1. Honesty 2. bravery 3. behaviour 4. imagination 5. kindness

### Grammar Worksheet 3

A. 1. I have eaten (these) dishes before.

2. Who brought (those) toys?

3. Mala has joined (that) college.

4. (Those) apartments were built last year.

5. (This) pen writes well.

B. 1. Whose books is Mini holding in (her) hand?

2. Which is (your) laptop?

3. What gift have (you) brought for your friend?

4. What tools does the carpenter need to start (his) work?

5. What time are you leaving for (your) college?

C.	Positive degree	Comparative degree	Superlative degree
	lucky	luckier	luckiest
	bad	worse	worst
	beautiful	more beautiful	most beautiful
	good	better	best
	ugly	uglier	ugliest

#### Grammar Worksheet 4

- A. 1. This 2. That
- B. that; who; What; who; whom
- C. 1. myself 2. herself 3. myself 4. ourselves 5. themselves

#### Grammar Worksheet 5

- A. 1. Present perfect continuous 2. Simple present 3. Present perfect  
4. Present continuous
- B. 1. has written 2. has thrown 3. has drawn 4. has gone
- C. 1. has been barking 2. have been publishing 3. have been waiting  
4. have been working 5. have been living 6. have been playing 7. has been raining

#### Grammar Worksheet 6

- A. 1. reached; rang 2. thanked; had done 3. expected; had
- B. 1. had been learning 2. had been practising 3. had been working
- C. 1. will visit 2. is going to inaugurate 3. will be giving
- D. 1. will have been solving 2. will have been giving 3. will have been dancing  
4. will have been singing



# 1. LARGE NUMBERS

## ANSWERS

### Let Us Recall

- A. 432567
- B. 534261
- C.  $600000 + 20000 + 9000 + 500 + 40 + 7$
- D. 563655
- E. Six lakh twenty eight thousand three hundred fourteen
- F. 2000
- G. 164497
- H. 935300
- I. 745399
- J. 914460, 914461, 914462
- K. 956268, 956269, 956270
- L. 422642, 523902, 725620
- M. 815852, 418764, 213623
- N. Largest Number: 875431; Smallest Number: 134578
- O. Largest Number: 987642; Smallest Number: 102467
- P. 675210
- Q. 542800
- R. 814000
- S. 650000
- T. 900000
- U. 8 hundred thousands, 1 ten thousands, 7 thousands, 4 hundreds, 2 tens and 6 ones
- V. 734926
- W. Five hundred thirty four thousand two hundred eighty one
- X. XCIX
- Y. 47

### EXERCISE 1.1

- A. 1. 2,35,96,740 Two crore thirty-five lakh ninety-six thousand seven hundred forty
- 2. 42,57,80,056 Forty-two crore fifty-seven lakh eighty thousand fifty-six
- 3. 28,53,91,632 Twenty-eight crore fifty-three lakh ninety-one thousand six hundred thirty-two
- 4. 50,50,83,500 Fifty crore fifty lakh eighty-three thousand five hundred
- 5. 9,00,90,099 Nine crore ninety thousand ninety-nine
- 6. 44,44,444 Forty-four lakh forty-four thousand four hundred forty-four

B.	Crores		Lakhs		Thousands		Ones		
	TC	C	TL	L	TTh	Th	H	T	O
1.		2	4	6	8	0	9	5	3
2.	1	3	5	7	9	0	2	8	4
3.			8	3	4	8	5	7	6

C. 1. 7,84,36,912   2. 88,77,69,404   3. 20,80,50,020   4. 64,18,500   5. 1,05,07,008  
6. 36,48,59,000

D. 1. 2000000, 5000   2. 400000, 80   3. 700000000, 0, 30000

E. 1.  $23587083 = 20000000 + 3000000 + 500000 + 80000 + 7000 + 80 + 3$

2.  $354679820 = 3 \times 100000000 + 5 \times 10000000 + 4 \times 1000000 + 6 \times 100000 + 7 \times 10000 + 9 \times 1000 + 8 \times 100 + 2 \times 10 + 0 \times 1$

3.  $315978642 = 3 \times 100000000 + 1 \times 10000000 + 5 \times 1000000 + 9 \times 100000 + 7 \times 10000 + 8 \times 1000 + 6 \times 100 + 4 \times 10 + 2 \times 1$

4.  $35426664 = 30000000 + 5000000 + 400000 + 20000 + 6000 + 600 + 60 + 4$

5.  $2040837 = 2000000 + 40000 + 800 + 30 + 7$

6.  $987004683 = 900000000 + 80000000 + 7000000 + 4000 + 600 + 80 + 3$

F. 1. 28060207   2. 870453060   3. 503240708   4. 980607051

G. 1. 87654320   2. 102345678   3. 11112347   4. 999999876

### EXERCISE 1.2

A.	Millions			Thousands			Ones		
	HM	TM	M	HTh	TTh	Th	H	T	O
1.	1	0	2	3	4	5	6	7	8
2.		9	8	7	4	3	6	5	0
3.	2	4	0	8	3	5	9	6	7

B. 1. 23,456,878   Twenty-three million four hundred fifty-six thousand eight hundred seventy-eight

2. 830,083,572   Eight hundred thirty million eighty-three thousand five hundred seventy-two

3. 20,800,530   Twenty million eight hundred thousand five hundred thirty

4. 103,050,704   One hundred three million fifty thousand seven hundred four

5. 666,600,055   Six hundred sixty-six million six hundred thousand fifty-five

6. 2,387,942   Two million three hundred eighty-seven thousand nine hundred forty-two

C. 1. 41,414,104   2. 770,080,219   3. 500,909,637   4. 211,012,050   5. 180,009,002   6. 16,444,777

D. 1. 10,000,023

2. 60,25,06,015  $\rightarrow$  602,506,015   Six hundred two million five hundred six thousand fifteen

3. 10 millions   4. 100 lakhs

- E. 1. Indian system of numeration 2. International system of numeration  
 3. International system of numeration 4. Indian system of numeration  
 F. 1. 10 2. 5 3. 200 4. 10

### **EXERCISE 1.3**

- A. 1. 235795 2. 83400090 3. 246839516 4. 7435967 5. 99999999 6. 69999887  
 B. 1. 1234570 2. 50000001 3. 987543211 4. 68432972 5. 100000000 6. 100000001  
 C. 1. > 2. < 3. > 4. = 5. > 6. >  
 D. 1. 95348, 468539, 2246852, 100006831 2. 66688, 444444, 555444, 4444444  
 3. 24242424, 24242442, 42422424, 42424242 4. 123456789, 123456798, 123456879, 123456987  
 E. 1. 100000000, 99999999, 999999, 99999 2. 426542514, 42654265, 4265426, 426545  
 3. 323232111, 321321321, 123123123, 112233123 4. 876054321, 87654921, 87654329, 87654321  
 F. 1. 654210; 102456 2. 9875431; 1345789 3. 87643210; 10234678  
 4. 987654321; 123456789 5. 987654320; 203456789  
 G. 1. 10000002 2. 987650432 3. 8888520

### **EXERCISE 1.4**

- A. 1. 8 2. 18 3. 29 4. 75 5. 92 6. 149 7. 300 8. 455 9. 816 10. 950  
 B. 1. IX 2. XV 3. XXXVI 4. XLIX 5. LXXXVIII 6. CCLV 7. CD 8. DCCLXX  
 9. DCCCLXXXVIII 10. M  
 C. 1, 2, 4, 7, 8, 9, 10 (these are meaning less)  
 D. 1. C (100) 2. CCCXC (390) 3. VI (6) 4. CX (110)  
 E. 1. (c) 2. (e) 3. (a) 4. (b) 5. (d)

### **HOTS (page 82)**

1. MIX → 1009  
 2. CV → 105                      CM → 900                      CD → 400                      MCD → 1400  
 Curriculum Vitae    Chief Minister    Compact Disc    Municipal Corporation of Delhi

### **Fun Zone (pages 82–83)**

1. Hundred 2. Thousand 3. Billion

## 2. OPERATIONS ON LARGE NUMBERS

### ANSWERS

#### Let Us Recall

- A. 68799      B. 652105      C. 277884      D. 14203      E. 909799 bags  
F. 4166 girls      G. 50750 erasers      H. 12342 trays  
I. 1. 35578    2. 45955    3. 660714  
J. 1. 42782    2. 0    3. 213780    4. 23412  
K. 1. 31235    2. 50853    3. 0    4. 0    5. 16456, 32112  
L. 1. 71620    2. 471900    3. 226000    4. 19280    5. 72000    6. 210000  
M. 1. 1    2. 744143    3. 543241    4. 1  
N. 57710      O. 140900      P. 797000      Q. 590000      R. 73000

#### EXERCISE 2.1

- A. 1. 134470553    2. 51945484    3. 397783620    4. 34590029    5. 364874445    6. 195355783  
B. 1. 9771878    2. 127774354    3. 535864768    4. 137333332  
C. 1. 17311222    2. 15950434    3. 40748098    4. 832553016    5. 30123458    6. 864197532  
D. 1. 817234679    2. 882672261    3. 378119718    4. 34567843  
E. 1. 
$$\begin{array}{r} 4596874 \\ +1248562 \\ \hline 5845436 \end{array}$$
    2. 
$$\begin{array}{r} 8059463 \\ -4016042 \\ \hline 4043421 \end{array}$$
    3. 
$$\begin{array}{r} 12345670 \\ 47594798 \\ +21746853 \\ \hline 81687321 \end{array}$$
    4. 
$$\begin{array}{r} 695748312 \\ -296576418 \\ \hline 399171894 \end{array}$$
  
F. 1. 5640231    2. 70008446    3. 34300561    4. 18218115  
G. 1. 139482466    2. ₹2563050    3. 382683603    4. 202575 copies    5. 89000002    6. 2920583

#### EXERCISE 2.2

- A. 1. 1613268    2. 4069515    3. 97110720  
B. 1. 292215    2. 5085108    3. 2165525    4. 8861248    5. 25689092    6. 99989486  
C. 1. 159125 students    2. 1443980 bolts    3. 527040 minutes    4. 12800 eggs  
5. 6469353    6.  $8520 \times 2058 = 17534160$

#### EXERCISE 2.3

- A. 1. 2500    2. 19340    3. 6174000    4. 214000    5. 987200    6. 2478000  
B. 1. 430    2. 1800    3. 21800    4. 23950    5. 348600    6. 6170  
C. 1. 46728    2. 6974019    3. 639936    4. 5268726    5. 8787    6. 25938    7. 4067063    8. 7975  
D. 1. 1225    2. 5625    3. 3025    4. 9025    5. 11025    6. 21025    7. 722500    8. 13225  
E. 1. 405    2. 5346    3. 67932    4. 825    5. 12423    6. 742742

#### EXERCISE 2.4

- A. 1.  $Q = 205, R = 14$     2.  $Q = 765, R = 33$     3.  $Q = 227, R = 183$     4.  $Q = 1920, R = 244$   
5.  $Q = 6268, R = 9$     6.  $Q = 2318, R = 132$   
B. 1.  $Q = 626, R = 0$     2.  $Q = 18670, R = 21$     3.  $Q = 98309, R = 62$     4.  $Q = 163, R = 208$   
5.  $Q = 2484, R = 236$     6.  $Q = 10791, R = 863$

- C. 1. Each player got ₹63200. 2. 233 3. 160 packets 4. 72 5. 221 6. 100100  
7. 9999224 8. 1000830

**HOTS (page 97)**

1.  $12345679 \times 9 \times 6 = 666666666$ ;  $12345679 \times 9 \times 5 = 555555555$ ;  $12345679 \times 9 \times 4 = 444444444$   
2.  $16 + 17 + 18 + 19 + 20 = 21 + 22 + 23 + 24$   
 $25 + 26 + 27 + 28 + 29 + 30 = 31 + 32 + 33 + 34 + 35$   
 $36 + 37 + 38 + 39 + 40 + 41 + 42 = 43 + 44 + 45 + 46 + 47 + 48$

**Puzzle (page 97)**

Numbers		(A + B)	(A - B)	(A × B)	(A ÷ B)	
A	B	Sum	Difference	Product	Quotient	Remainder
5	2	7	3	10	2	1
10	5	15	5	50	2	0
12	4	16	8	48	3	0
9	5	14	4	45	1	4
24	3	27	21	72	8	0
11	7	18	4	77	1	4

# 3. FACTORS AND MULTIPLES

## ANSWERS

### Let Us Recall

- A. 18, 36, 54, 72, 90, 108  
B. **Even:** 68, 312, 3336, 12304, 9067600  
**Odd:** 273, 5545, 34799, 121917, 1325051  
C. 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144  
D. Yes E. No

### EXERCISE 3.1

- A. 1. 1 2. two 3. infinite 4. multiple 5. 2, 3, 5, factors 6. 77, multiple  
B. 1. 1, 2, 4, 8, 16 2. 1, 2, 3, 4, 6, 8, 12, 24 3. 1, 2, 3, 5, 6, 10, 15, 30 4. 1, 2, 3, 4, 6, 9, 12, 18, 36  
5. 1, 2, 4, 5, 8, 10, 20, 40  
C. 1. 4, 8, 12, 16, 20 2. 6, 12, 18, 24, 30 3. 9, 18, 27, 36, 45 4. 11, 22, 33, 44, 55  
5. 14, 28, 42, 56, 70  
D. 1. 1, 2 2. 1, 5 3. 1, 2, 3, 6 4. 1, 2, 4 5. 1, 2, 4, 8  
E. 1. 6, 12 2. 12, 24 3. 15, 30 4. 8, 16 5. 18, 36  
F. 3. 16  
G. 1. 39 3. 117 5. 221  
H. 1. 96 2. 105

### EXERCISE 3.2

- A. 1. (a) No (b) Yes (c) Yes (d) No (e) Yes  
2. (a) No (b) No (c) Yes (d) Yes (e) Yes  
3. (a) Yes (b) Yes (c) Yes (d) No (e) No  
4. (a) Yes (b) No (c) Yes (d) Yes (e) Yes  
5. (a) No (b) No (c) No (d) Yes (e) Yes  
6. (a) No (b) Yes (c) Yes (d) Yes (e) No  
7. (a) Yes (b) Yes (c) Yes (d) No (e) Yes  
8. (a) No (b) Yes (c) Yes (d) No (e) Yes  
B. 3. 40612  
C. 1. Yes, as 8 itself is divisible by 2 and 4.  
2. No, as 15 is divisible by 3 but not divisible by 9.  
3. No, as 25 is divisible by 5 but not divisible by 10.  
4. No, 12 is a common multiple of 3 and 4.  
5. Yes  
6. Yes  
7. (a) 0 (b) 1 (c) 2 (d) 0 (e) 6 (f) 4 (g) 3

### EXERCISE 3.3

- A. 1. Even 2. Odd 3. Odd 4. Odd 5. Even 6. Odd
- B. 1. E 2. O 3. O 4. E 5. O 6. E 7. O 8. E 9. O 10. E
- C. 1. Composite 2. Composite 3. Composite 4. Composite 5. Composite  
6. Prime 7. Prime 8. Composite 9. Prime 10. Prime
- C. 1. Two pairs: 41, 43 and 59, 61  
2.  $24 = 2 \times 2 \times 2 \times 3$   
 $32 = 2 \times 2 \times 2 \times 2 \times 2$   
 $56 = 2 \times 2 \times 2 \times 7$   
 $72 = 2 \times 2 \times 2 \times 3 \times 3$   
3.  $18 = 2 \times 3 \times 3$   
 $40 = 2 \times 2 \times 2 \times 5$   
 $60 = 2 \times 2 \times 3 \times 5$   
 $96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$   
4. (a) Yes, 9 and 25 have a common factor 1.  
(b) No, two even numbers always have 2 as a common factor.  
5. 2310
- E. 1. False 2. False 3. True 4. False 5. True

### EXERCISE 3.4

- A. 1. 2 2. 5 3. 4 4. 6 5. 5 6. 4 7. 8 8. 14
- B. 1. 4 2. 15 3. 8 4. 12 5. 20 6. 15 7. 8 8. 16
- C. 1. 5 2. 8 3. 18 4. 5 5. 18 6. 3 7. 4 8. 6

### EXERCISE 3.5

- A. 1. 15 2. 8 3. 40 4. 36 5. 30 6. 24 7. 60 8. 60
- B. 1. 48 2. 75 3. 90 4. 72 5. 300 6. 252 7. 1008 8. 900
- C. 1. 54 2. 60 3. 90 4. 288 5. 600 6. 8190 7. 504 8. 4200

### EXERCISE 3.6

A.	S. No.	First Number	Second Number	HCF	LCM
	1.	12	78	6	156
	2.	35	63	7	315
	3.	54	90	18	270
	4.	150	250	50	750
	5.	144	216	72	432

- B. 1. 28 2. 36 3. 105 4. 485 5. 40 squares each of dimension 6 cm  $\times$  6 cm  
6. 11.30 a.m. 7. 195 8. 40 9. No, 120 is not divisible by 9. 10. 960

## PERIODIC TEST—1

- A. 1. (c) 2. (a) 3. (a) 4. (d)
- B. 1. 2 2. 10 3. 99999999 4. 2
- C. 1. False 2. True 3. True 4. True
- D. 1. 100000000, 99999999, 999999, 99999 2. 323232111, 321321321, 123123123, 112233123
- E. 8888520
- F. ₹ 63200
- G. 8
- H. Yes; 28, as  $1 + 2 + 4 + 7 + 14 + 28 = 56$ , i.e.,  $2 \times 28$
- I. Fifteenth station



# 4. FRACTIONS

## ANSWERS

### Let Us Recall

- A.  $\frac{4}{5}$       B. Two-thirds      C.  $\frac{7}{8}$       D.  $\frac{7}{9}$

### EXERCISE 4.1

A. 1. proper 2. improper 3. proper 4. mixed 5. improper

B. 1. (d) 2. (e) 3. (a) 4. (c) 5. (b)

C. 1.  $\frac{2}{7}, \frac{5}{7}, \frac{3}{7}$  2.  $\frac{5}{17}, \frac{16}{17}$  3.  $\frac{5}{40}, \frac{21}{40}, \frac{85}{40}$

D. 1, 2 and 3 are in its simplest forms. 4.  $\frac{5}{8}$  5.  $\frac{1}{4}$

E. 1.  $\frac{4}{6}, \frac{6}{9}, \frac{8}{12}, \frac{10}{15}, \frac{12}{18}$  2.  $\frac{8}{10}, \frac{12}{15}, \frac{16}{20}, \frac{20}{25}, \frac{25}{30}$  3.  $\frac{12}{22}, \frac{18}{33}, \frac{24}{44}, \frac{30}{55}, \frac{42}{66}$

4.  $\frac{9}{15}, \frac{3}{5}, \frac{6}{10}, \frac{12}{20}, \frac{15}{25}$  5.  $\frac{16}{20}, \frac{4}{5}, \frac{8}{10}, \frac{12}{15}, \frac{24}{30}$

F. 1. Yes 2. Yes 3. Yes 4. No 5. No 6. Yes 7. Yes 8. No

### EXERCISE 4.2

A. 1.  $\frac{6}{9}, \frac{3}{9}$  or  $\frac{2}{3}, \frac{1}{3}$  2.  $\frac{1}{16}, \frac{10}{16}$  3.  $\frac{28}{35}, \frac{30}{35}$  4.  $\frac{15}{42}, \frac{16}{42}$

B. 1. < 2. > 3. > 4. > 5. > 6. > 7. = 8. >

C. 1.  $\frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{7}{8}$  2.  $\frac{4}{15}, \frac{6}{15}, \frac{9}{15}, \frac{12}{15}$  3.  $\frac{6}{17}, \frac{6}{11}, 2\frac{5}{9}, 4\frac{1}{7}$  4.  $\frac{5}{15}, \frac{6}{15}, \frac{4}{6}, \frac{9}{12}$

D. 1.  $\frac{25}{17}, \frac{25}{29}, \frac{25}{37}, \frac{25}{43}$  2.  $\frac{11}{18}, \frac{9}{16}, \frac{8}{15}, \frac{4}{11}$  3.  $\frac{5}{16}, \frac{4}{12}, \frac{6}{20}, \frac{8}{32}$  4.  $\frac{19}{27}, \frac{18}{27}, \frac{14}{27}, \frac{11}{27}$

### EXERCISE 4.3

A. 1.  $\frac{3}{7}$  2.  $\frac{7}{8}$  3.  $\frac{5}{6}$  4.  $1\frac{6}{25}$  5.  $6\frac{2}{17}$  6.  $4\frac{2}{9}$

B. 1.  $1\frac{1}{10}$  2.  $1\frac{1}{12}$  3.  $\frac{12}{25}$  4.  $1\frac{1}{4}$  5.  $1\frac{19}{60}$  6.  $4\frac{17}{25}$

C. 1.  $\frac{1}{4}$  2.  $\frac{1}{5}$  3.  $\frac{1}{5}$  4.  $2\frac{1}{10}$  5.  $1\frac{1}{2}$  6.  $\frac{1}{2}$

D. 1.  $\frac{3}{4}$  2.  $\frac{17}{45}$  3.  $\frac{1}{12}$  4.  $1\frac{28}{45}$  5.  $5\frac{19}{21}$  6.  $5\frac{7}{8}$

E. 1. 1 2.  $\frac{1}{3}$  3.  $\frac{43}{60}$  4.  $\frac{1}{2}$  5.  $3\frac{7}{10}$  6.  $\frac{3}{8}$

- F. 1.  $1\frac{2}{9}$  2.  $\frac{2}{7}$  3.  $\frac{1}{16}$  4.  $1\frac{11}{35}$  5.  $3\frac{7}{8}$  6.  $1\frac{7}{8}$  7.  $8\frac{7}{20}$  kg 8.  $\frac{1}{6}$  basket  
 9.  $\frac{1}{16}$  of the pizza 10. Lalita,  $3\frac{3}{20}$  minutes

#### EXERCISE 4.4

- A. 1. 6 2. 16 3.  $5\frac{1}{3}$  4. 6 5. 4 6. 9 7. 14 8. 15  
 B. 1.  $\frac{3}{8}$  2.  $\frac{3}{5}$  3.  $\frac{2}{21}$  4.  $\frac{5}{14}$  5.  $\frac{1}{2}$  6.  $\frac{4}{7}$  7.  $\frac{5}{14}$  8.  $\frac{5}{16}$   
 C. 1. 21 2. 32 3. 48 4.  $\frac{4}{5}$  5.  $\frac{7}{5}$  6.  $11\frac{1}{2}$  7. 60 8. 9  
 D. 1. 6 L milk 2. 45 m 3. ₹85 4. ₹40 5. 8 students 6. 6 m

#### EXERCISE 4.5

- A. 1.  $\frac{1}{2}$  2.  $\frac{1}{7}$  3. 9 4. 4 5.  $\frac{4}{15}$  6.  $1\frac{7}{18}$  7.  $\frac{3}{8}$  8.  $\frac{6}{13}$  9. 20 10.  $\frac{5}{102}$   
 B. 1. 24 2. 20 3. 9 4. 25 5. 36 6. 24 7. 60 8. 20  
 C. 1.  $\frac{2}{27}$  2.  $\frac{3}{22}$  3.  $\frac{1}{68}$  4.  $\frac{1}{12}$  5.  $\frac{1}{6}$  6.  $\frac{2}{9}$  7.  $\frac{1}{4}$  8.  $\frac{2}{25}$   
 D. 1. 3 2. 6 3.  $2\frac{2}{3}$  4.  $1\frac{1}{2}$  5.  $1\frac{3}{4}$  6. 1 7.  $\frac{4}{9}$  8.  $\frac{1}{2}$   
 E. 1.  $1\frac{3}{5}$  m 2. 20 packets 3.  $20\frac{2}{5}$  m 4. ₹36

#### HOTS (page 135)

6th row:

$$\frac{6}{7} + \frac{6}{7} + \frac{6}{7} + \frac{6}{7} + \frac{6}{7} + \frac{6}{7} = 6 \times \frac{6}{7} = 6 - \frac{6}{7} = 5\frac{1}{7}$$

7th row:  $\frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} + \frac{7}{8} = 7 \times \frac{7}{8} = 7 - \frac{7}{8} = 6\frac{1}{8}$

10th row:  $\frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} + \frac{10}{11} = 10 \times \frac{10}{11} = 10 - \frac{10}{11} = 9\frac{1}{11}$

#### Puzzle (page 135)

Do it yourself.

# 5. DECIMALS

## ANSWERS

### Let Us Recall

A. 1.  $0.4, \frac{6}{10}$  2.  $0.55, \frac{45}{100}$  3.  $0.09, \frac{91}{100}$

B.	3.2	Three point two	1.985	One point nine eight five
	0.67	Zero point six seven	8.001	Eight point zero zero one

C. 1. 

6.5 ✓	2.01	3.125	0.999 ✗
-------	------	-------	---------

 2. 

1.1	0.11	0.011 ✗	11 ✓
-----	------	---------	------

D. 1.  $1, 0, \frac{1}{1000}$  2. 0.509

### EXERCISE 5.1

A.	Figure	Word	Figure	Word
	2.6	Two point six	4.005	Four point zero zero five
	3.21	Three point two one	0.2	Zero point two
	81.435	Eight-one point four three five	0.009	Zero point zero zero nine
	106.28	One hundred six point two eight	0.03	Zero point zero three

B. 1. (e) 2. (d) 3. (a) 4. (b) 5. (c)

C. 1.  $\frac{15}{10}$  or  $1\frac{1}{2}$  2.  $\frac{8}{10}$  or  $\frac{4}{5}$  3.  $\frac{25}{100}$  or  $\frac{1}{4}$  4.  $\frac{145}{100}$  or  $1\frac{9}{20}$  5.  $\frac{725}{1000}$  or  $\frac{29}{40}$

6.  $\frac{105}{100}$  or  $1\frac{1}{20}$  7.  $\frac{5}{1000}$  or  $\frac{1}{200}$  8.  $\frac{25625}{1000}$  or  $25\frac{5}{8}$

D. 1. 0.2 2. 2.65 3. 15.625 4. 31.625 5. 0.18 6. 0.009 7. 0.05 8. 1.3

E. 1. 25.183 2. 500.204 3. 8.362 4. 762.09

### EXERCISE 5.2

A. 1. 2.1, 2.10 2. 0.63, 0.630 3. 0.5, 0.500, 0.50

B. 1. Unlike 2. Like 3. Like 4. Unlike 5. Unlike 6. Unlike

C. 1. = 2. > 3. < 4. > 5. > 6. >

D. 1. 8.5, 8.58, 58, 58.5 2. 0.105, 0.150, 0.501, 0.51 3. 0.680, 0.86, 6.080, 6.8

E. 1. 6.51, 5.61, 5.16, 1.56 2. 0.44, 0.4, 0.40, 0.044 3. 91, 9.1, 1.9, 0.91

### EXERCISE 5.3

A. 1. 61.07 2. 70.72 3. 0.475 4. 102.443 5. 55.776 6. 4.753

B. 1. ₹10.40 2. 25.598 L 3. 36.48 kg 4. 21.201 g 5. 10.8 cm 6. 12.9 m 7. 49.775 km  
8. 26.85 kg

- C. 1. 6.3 2. 1.8 3. 34.56 4. 7.81 5. 2.702 6. 448.211  
 D. 1. 1.8 2. 0.333 3. 1.233 4. 1.852 5. 2.013 6. 4.824  
 E. 1. ₹2.95 2. ₹24.75 3. 1.173 km 4. 2.75 m 5. 51.64 L 6. 1.308 kg  
 F. 1. 21.085 kg 2. 228.6 km 3. ₹32.75 4. 27.403 5. 3.366 6. 13.807 7. 1.75 L

#### EXERCISE 5.4

- A. 1. 12.54 2. 35.868 3. 73.08 4. 330 5. 725.5 6. 10.4  
 B. 1. 89.7 2. 6132.5 3. 9835 4. 2160 5. 724300 6. 98.73 7. 4280 8. 921  
 C. 1. 14.72 2. 10.008 3. 26.1032 4. 1.7 5. 3.55355 6. 0.009  
 D. 1. 4.32 2. 7.3920 3. 0.9525 4. 2.24319 5. 0.008 6. 0.01170  
 E. 1. ₹620 2. 9 L 3. 977.67 sq m 4. ₹225 5. 0.676 6. 423.46 g

#### EXERCISE 5.5

- A. 1. 4.06 2. 3.806 3. 8.23 4. 1.672 5. 58.6875 6. 0.211  
 B. 1. 2.4 2. 5.75 3. 0.5 4. 0.75 5. 0.8125 6. 0.6 7. 2.25 8. 7.5  
 C. 1. 84.65 2. 0.725 3. 0.0964 4. 0.426 5. 8.3741 6. 0.0142 7. 5.8376 8. 0.2384  
 D. 1. 18 2. 8 3. 39 4. 40.6 5. 60.7 6. 3130 7. 400 8. 400  
 E. 1. 9.3 2. 1.25 3. 21.625 kg 4. ₹3.75 5. 0.250 L

#### HOTS (page 151)

A.	1.	$6.295 + 0.01$	$7.125 - 0.28$	$6.305 \times 100$	$629.5 \div 10$
	2.	$454.6 \div 1000$	$23.23 + 100$	$100 - 54.54$	$200 \times 2.223$
	3.	$4.5 - 1.952$	$0.213 \times 30$	$64.28 \div 0.4$	$3.534 + 0.619$
	4.	$8.1 \times 0.05$	$6.405 \div 0.021$	$0.423 + 0.012$	$1.123 - 0.678$

- B. 0.375 part

# 6. PERIMETER, AREA AND VOLUME

## ANSWERS

### Let Us Recall

A. 1. 24 cm 2. 52 cm 3. 52 m 4. 52 m 5. 26 cm

B. 1.  $25 \text{ cm}^2$  2.  $50 \text{ m}^2$

### EXERCISE 6.1

A. 1. 190 cm 2. 12 m 3. 24 cm

B. 1. 18 cm 2. 45 m 3. 40 cm 4. 36 m

C. 1. 60 m 2. 24 cm 3. 9.5 cm 4. 25.16 m

D. 1. 16 cm 2. 24 m 3. 14 m 4. 49.2 cm

E. 1. 3 m 20 cm 2. 300 m 3. 25.5 cm 4. 20 m 5. Both walk equal distance 480 m.

6.  $12 \text{ cm} - 2.5 \text{ cm} = 9.5 \text{ cm}$ ,  $20 \text{ cm} - 2.5 \text{ cm} = 17.5 \text{ cm}$ , Perimeter = 64 cm

### EXERCISE 6.2

A. 1. 40 sq cm 2. 180 sq cm 3. 3.75 sq m 4. 377.4 sq cm

B. 1. 36 sq m, 24 m 2. 1600 sq cm, 160 cm 3. 156.25 sq m, 50 m 4. 595.36 sq cm, 97.6 cm

C. 1. 3000 sq m, 230 m 2. 1024 sq cm 3. 96 tiles 4. 1152 sq cm

5. A square of 13 cm each side

6. Length of a rectangle = 16 cm; Perimeter of a square = 48 cm, Perimeter of a rectangle = 50 cm;  
No, the two shapes do not have equal perimeter.

### EXERCISE 6.3

A. 1. 8 sq units 2. 17 sq units 3. 16 sq units 4. 12 sq units 5. 15 sq units 6. 12 sq units

B. 1. 0.4 sq m 2. 5 sq m 3. 1300 sq cm

C. 1. 3040 sq m 2. 240 sq cm 3. 904 sq m,  $1849\frac{1}{3}$  sq m 4. 600 sq cm, 275 sq cm

5. ₹10,68,000 6. ₹1,25,760

### Test Yourself (page 163)

1. 16 cu cm 2. 12 cu cm 3. 9 cu cm

### EXERCISE 6.4

A. 1. 24 cu cm 2. 192 cu cm 3. 32.4 cu cm 4. 60000 cu cm 5. 230.4 cu cm 6. 0.8 cu m

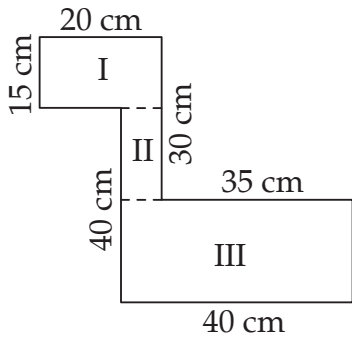
B. 1. 8 cu m 2. 1728 cu cm 3. 42.875 cu m 4. 512000 cu cm

C. 1. 4 cubes 2. 5 cubes 3. 10 cubes 4. 12 cubes

D. 1. 512 cu cm 2. 2880 cu cm 3. 60 cubes 4. 2250 L 5. 2880 bricks

**Puzzle (page 165)**

**A. 1.**



**Hint:**

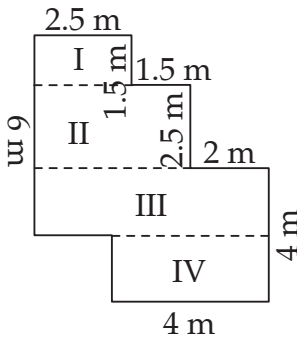
$$\text{Ar I} = 15 \times 20$$

$$\text{Ar II} = 15 \times 5$$

$$\text{Ar III} = 25 \times 40$$

1375 sq cm

**2.**



**Hint:**

$$\text{Ar I} = 2.5 \times 1.5$$

$$\text{Ar II} = 4.0 \times 2.5$$

$$\text{Ar III} = 6.0 \times 2.0$$

$$\text{Ar IV} = 4.0 \times 2.0$$

33.75 sq m

**B. 3 m**

# 7. TIME

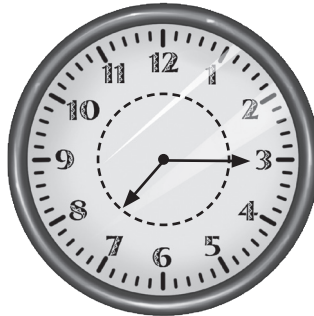
## ANSWERS

### Let Us Recall

A.



5 O' clock  
5 : 00



Quarter past 7  
7 : 15



Half past 10  
10 : 30



Three Quarter past 3  
3 : 45



4 : 05



11 : 10

Quarter to 4

B. 7 O' clock

Quarter past 8

Half past 4



Three quarters past 5



7:35



6:40



- C. 1. 7:30 a.m. 2. 8:15 p.m.  
D. 36 days

### EXERCISE 7.1

- A. 1. 8:40 a.m. 2. 3:15 p.m. 3. 12:00 midnight 4. 6:05 a.m. 5. 8:20 p.m. 6. 12:30 p.m.  
B. 1. 0205 hours 2. 1745 hours 3. 0730 hours 4. 1200 hours 5. 2400 hours or 0000 hours  
6. 2025 hours  
C. 1. 7:20 a.m., 6:55 p.m. 2. 7:15 a.m., Friday 3. Mas Garib Rath, H Nizamuddin  
4. GT Express, Tamil Nadu Express, 1840 hours, 2230 hours 5. Monday, H Nizamuddin

### EXERCISE 7.2

- A. 1. 600 seconds 2. 7200 seconds 3. 15300 seconds 4. 172800 seconds  
5. 19240 seconds  
B. 1. 32 minutes 20 seconds 2. 1 hour 20 minutes 20 seconds  
3. 69 hours 36 minutes 40 seconds 4. 11 hours 53 minutes 45 seconds  
5. 22 hours 20 minutes 20 seconds 6. 200 hours 8 minutes 20 seconds  
C. 1. 30 days 2. 150 days 3. 126 days 4. 270 days 5. 2190 days 6. 1811 days  
D. 1. 1 year 4 months 2 weeks 1 day 2. 5 years 1 week 3 days  
3. 10 years 4 months 2 weeks 6 days 4. 26 years 5 months 2 weeks 4 days  
5. 5 years 4 months 1 week 5 days 6. 24 years 8 months 3 weeks 3 days  
E. 1. (e) 2. (a) 3. (d) 4. (b) 5. (c)  
F. 1. 6 months 14 days or 196 days 2. 49 days 3. 2 years 10 days  
4. 2 years 4 months 12 days 5. Do it yourself.

### EXERCISE 7.3

- A. 1. 7 h 50 min 40 s 2. 35 h 15 min 14 s 3. 11 weeks 2 days 16 hours  
4. 16 years 1 month 4 days  
B. 1. 14 h 5 min 22 s 2. 14 h 54 min 46 s 3. 3 weeks 5 days 22 hours  
4. 2 years 11 months 1 week  
C. 1. 16 h 32 min 40 s 2. 60 h 3 min 3. 19 weeks 4 days 8 hours  
4. 31 years 7 months 18 days  
D. 1. 5 h 4 min 6 s 2. 6 h 11 min 11 s 3. 1 month 3 weeks 2 days 4. 1 year 9 months 3 days

### Fun Zone (page 175)

- A. 1. 2 h 50 min 2. 2 h 45 min 3. 2 h 50 min



- B. Do it yourself.
- C. 9600 seconds
- D. 13 h 45 min
- E. 56 minutes 40 seconds

## PERIODIC TEST—2

- A. 1. (c) 2. (d) 3. (a) 4. (b)
- B. 1. 5 2. odd 3. 20.105 4.  $\frac{3}{4}$  5. 32 6. 23.5
- C. 1. < 2. = 3. < 4. < 5. = 6. <
- D. L.C.M = 195
- E. 21.625 kg
- F. 1. 600 seconds 2. 172800 seconds
- G. Daniel
- H.  $l = 9$  cm,  $b = 4.5$  cm,  $h = 4.5$  cm, volume = 182.25 cu. cm
- I. 2880 bricks

# 1. PLANT REPRODUCTION

## ANSWERS

### Warm Up

A baby plant. These structures come from seed.

### Checkpoint 1

1. Dicot
2. Cotyledons
3. Water

### Checkpoint 2

1. Lotus; Coconut
2. Cotton; Madar
3. Urea; Super phosphate
4. Wheat; Barley

### Check Your Study

- A.** 1. (d) 2. (b) 3. (d) 4. (d)
- B.** 1. True 2. False 3. True 4. False 5. False
- C.** 1. Seed leaves are the structures in the seed that store food for baby plant.  
2. The growing of a seed into a new plant is called germination of a seed.  
3. Animals eat fruits and throw their seeds here and there. Some seeds get hooked to fur, skin of animals, clothes of people and are carried away to far-off places. In this manner, they help in the dispersal of seeds.  
4. The seeds dispersed by wind are light and hairy so that they are easily carried away by the wind.  
5. Rabi crops are grown in winter from November to April whereas Kharif crops are grown in summer from June to October.
- D.** 1. This is because only those seeds which get suitable conditions for growth are able to grow into new plants.  
2. This is because plants give oxygen to breathe and food to eat.  
3. We get wool from sheep and silk from silkworm. Both these animals feed on plants. Without plants, they cannot live and will die.
- F.** **Hint:** Keep the potted plants in shed. If it is summer, keep them in cool, shady area and cover them with a green cloth. Water them just before leaving the house.

## 2. ANIMALS AND THEIR VARYING LIFESTYLES

### ANSWERS

#### Warm Up

A hard shell.

#### Checkpoint 1

1. gills
2. lungs
3. legs
4. flippers
5. flightless

#### Checkpoint 2

1. Small digestive system
2. Lays eggs in river bank
3. Eats grass
4. Hops on land

#### Check Your Study

- A. 1. (a) 2. (a) 3. (a)
- B. 1. spiracles 2. pangolin 3. proboscis 4. strong
- C. 1. Insects breathe through small air holes called spiracles on their body.
2. The fins of fish help them in moving forward and in maintaining balance and changing direction while swimming.
3. Herbivores have large incisors and broad molar teeth that help them cut the grass and leaves, and grind and chew well. They have long alimentary canal to digest the plant material.
4. Frogs have long, sticky tongue folded on the floor of their mouth. It is flipped at the prey. The prey gets stuck and is pulled into the mouth.
5. Camouflage is an adaptation in some animals by which they can change their body colour according to their surroundings and become unnoticeable to their enemies.
6. Octopus and cuttlefish when attacked, release a cloud of black ink-like substance in the water to confuse their predator meanwhile they get the time to escape.
7. Birds migrate to get plenty of food, water and favourable conditions of temperature and breeding.
- D. 1. In water, breathing in cockroach will stop because all the spiracles on its body will get blocked and no exchange of gases would take place.
2. A fish breathes oxygen dissolved in water. Outside water, it cannot breathe and hence dies.
- E. LUNG GILLS SPIRACLES LEG CLAW PADDLE CILIA FANG  
FLIPPER PROBOSCIS

# 3. THE SKELETAL SYSTEM

## ANSWERS

### Warm Up

X-ray

### Checkpoint 1

1. Backbone
2. Ribs
3. Forelimbs
4. Hindlimbs

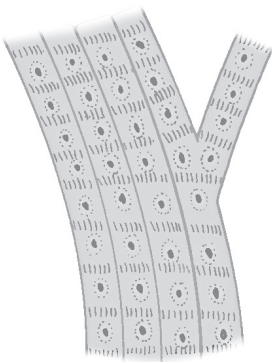
### Checkpoint 2

1. Voluntary; Striated muscles
2. Involuntary; Smooth muscles
3. Involuntary; Smooth muscles
4. Involuntary; Striated muscles

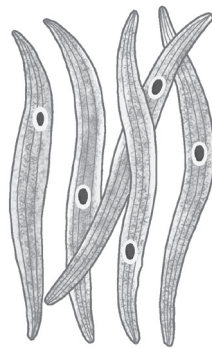
### Check Your Study

- A. 1. (b) 2. (c) 3. (a) 4. (c)
- B. 1. False 2. False 3. True 4. False
- C. 1. ligament 2. bone marrow 3. floating 4. eight 5. Pivot
- D. 1. Skeletal system gives shape and support to the body, protects soft organs and provides movement to the body parts.
2. The joining place of two bones is called a joint. Joints are of two types:  
(a) Immobile joints such as joints of bones of skull and pelvis.  
(b) Movable joints such as ball and socket joints of hips and shoulders, hinge joints of knees and elbows, pivot joints between first and second vertebrae and gliding joints of wrists and ankles.
3. The movable lower jaw enables us to chew and speak.
4. Voluntary muscles work under our control, e.g., muscles of arms, legs, hands, etc. Involuntary muscles do not work at our will, e.g., muscles of heart, stomach, etc.
5. The muscle fibres that are present in the heart are called cardiac muscle fibres. They work continuously without getting tired.

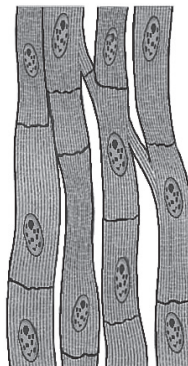
6.



Striated muscle fibres



Smooth muscle fibres



Cardiac muscle fibres

Types of muscle fibres

- E.**
1. This is because the joint found in knees and elbows allows the movement of bones in one direction only.
  2. This is because heart is made of strong cardiac muscles which work continuously without getting tired.
  3. If there were no bones in our body, our body would have been merely a heap of flesh.

# 4. THE NERVOUS SYSTEM

## ANSWERS

### Warm Up

For getting her eyes checked up.

### Checkpoint 1

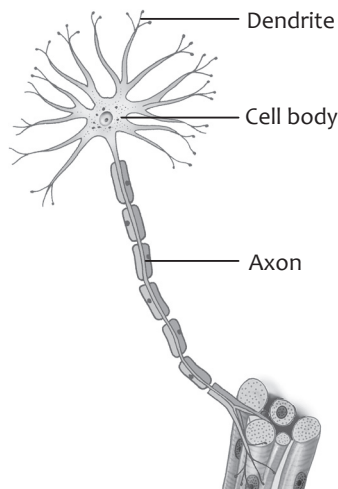
1. Cerebrum
2. Reflex action
3. Sensory nerve
4. Motor nerve

### Checkpoint 2

1. Bone
2. Pupil
3. Hot

### Check Your Study

- A. 1. (c) 2. (c) 3. (b) 4. (c)
- B. 1. False 2. True 3. False 4. False
- C. 1. Cerebrum 2. Cerebellum 3. cell body, dendrites; axon 4. pupil 5. motor
- D. 1. The main parts of nervous system are brain, spinal cord and nerves.
2. Brain is the control centre of our body. It controls all our life processes such as breathing, digestion, etc., and organises our voluntary actions such as walking, running, dancing, etc. It controls our ability to think, learn, feel, etc.
3. A nerve cell has a cell body which gives out many fibre-like extensions called dendrites. The longest extension from one end is called axon.



A nerve cell

4. The three main parts of our ear are external ear, middle ear and internal ear.
5. We can take care of the eyes as follows:
  - (a) Wash the eyes regularly every morning and evening.
  - (b) Do not read in moving vehicles.
  - (c) Do not read in dim or very bright light.
  - (d) Do not watch television for long, and sit at least ten feet away from it. Never lie down while watching the television.

- (e) Do not rub eyes with dirty hands.
- (f) Never wipe the eyes with a dirty handkerchief.
- E. 1. This is because of an automatic reaction takes place in our body without our thinking. It is called reflex action.
- 2. Using hair pin to clean the ears can damage the eardrum. Also, it can lead to infections.

## PERIODIC TEST—1

- A. 1. cotyledons 2. flat 3. femur 4. spiracles 5. cerebrum
- B. 1. True 2. False 3. True 4. False 5. True
- C. 1. (d) 2. (a) 3. (e) 4. (b) 5. (c)
- D. 1. (a) 2. (b) 3. (b) 4. (b) 5. (d)
- E. 1. Birds migrate to get plenty of food, water and favourable conditions of temperature and breeding.
- 2. Tail bone is located at the lower end of vertebral column.
- 3. The main parts of nervous system are brain, spinal cord and nerves.
- 4. The growing of seed into a new plant is called germination of seed.
- 5. The joining place of two bones is called a joint. Joints are of two types:
  - (a) Immovable joints such as joints of bones of skull and pelvis.
  - (b) Movable joints such as ball and socket joints of hips and shoulders, hinge joints of knees and elbows, pivot joints between first and second vertebrae and gliding joints of wrists and ankles.

# 5. FOOD AND HEALTH

## ANSWERS

### Warm Up

Yes, the food is nutritious because it has green vegetables and curd in it.

### Checkpoint 1

1. Glucose
2. Proteins
3. twice
4. B; C

### Checkpoint 2

1. Yes
2. No
3. Yes
4. Yes

### Check Your Study

- A.** 1. (b) 2. (b) 3. (a) 4. (b)
- B.** 1. iron 2. balanced 3. vegetables; fruits 4. instant
- C.** 1. Carbohydrates, fats 2. Vitamins and minerals 3. A, D, E, K 4. B, C
- D.** 1. Nutrients are the substances, found in food, which keep our body healthy. These are carbohydrates, fats, proteins, vitamins and minerals.
2. A diet which contains all the nutrients in right amount is called balanced diet.
- E.** 1. Different nutrients present in our food are carbohydrates, fats, proteins, vitamins and minerals.
2. Carbohydrates provide energy to our body.
3. Fats have twice the amount of energy as compared to carbohydrates. So, they provide more energy to do lots of physical activities.
4. Because proteins help the body grow, build new cells and tissues and repair them when damaged.
5. Vitamins are classified as that dissolve in fats such as vitamins A, D, E and K and that dissolve in water such as vitamins B and C.
6. Roughage is the fibre present in plant food that cannot be digested by our digestive system. Roughage-rich foods are spinach, cabbage, oats, fruits, etc.
- F.** 1. Roughage is an essential part of our diet because it helps in bowel movement and prevents constipation.
2. Proper rest and sleep are important for a good healthy body because during sleep our body repairs its wear and tear.



## 6. HEALTH AND DISEASES

### ANSWERS

#### Warm Up

Heartbeat

#### Checkpoint 1

1. virus
2. Contaminated
3. in
4. polio

#### Checkpoint 2

1. non-infectious
2. night blindness
3. Calcium
4. sodium
5. deficiency

#### Check Your Study

- A.** 1. (a) 2. (b) 3. (c) 4. (a)
- B.** 1. False 2. True 3. True 4. False 5. True
- C.** 1. Disease 2. Communicable; non-communicable 3. germs 4. Infectious  
5. Vaccination
- D.** 1. Communicable diseases spread through direct contact, air, contaminated food and water, animal bite and insects.
2. Diseases caused due to deficiency of nutrients are called deficiency diseases such as anaemia, night blindness, etc.
3. Giving vaccine to the body is called vaccination. It enables the body to fight against diseases.
4. Obesity is having excess fat in the body. It is caused due to overeating of carbohydrates and fats.
5. Some wrong food habits are as follows
- (a) Some people take too much of common salt in their diet. This may lead to high blood pressure or even obesity.
  - (b) Excessive intake of fat-soluble vitamins A, D, E and K in the form of pills can lead to **hypervitaminosis**. It can be very harmful. It affects liver and kidneys.
  - (c) Excessive consumption of fried and fatty foods leads to obesity.
- E.** 1. This is because rickets is caused due to deficiency of vitamin D. Our body prepares vitamin D in the presence of sunlight.
2. Because flu is an infectious disease. Sharing towel and handkerchief with a flu patient would also make us ill.
3. We should change the water of desert cooler every three or four days to prevent the breeding of mosquitoes.

# 7. STAYING SAFE

## ANSWERS

### Warm Up

U-turn

### Checkpoint 1

1. jerks
2. sand
3. roll on the floor

### Checkpoint 2

1. First aid
2. Blisters
3. Splint

### Check Your Study

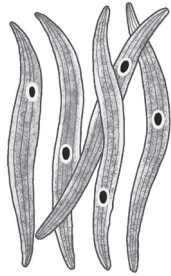
- A. 1. (a) 2. (b) 3. (c) 4. (a)
- B. 1. accident 2. antiseptic 3. first aid 4. traffic
- C. 1. First aid 2. Sprain 3. Poison 4. Splint 5. Blisters
- D. 1. An accident is a sudden, unexpected and harmful incident. Accidents can be prevented by avoiding carelessness and following safety rules.
2. Fire caused due to petrol can be put out by throwing sand over it.
3. In case of sprain, apply an ice pack followed by pain relieving cream on sprained area and tie a crepe bandage or clean cloth giving complete rest to the affected part.  
In case of animal bite, wash the wound with soap and water, apply an antiseptic cream and tie a bandage or clean clothes over the wound.
4. Poisonous substances should be kept with labels on them, tightly closed and out of the reach of children.
5. Tie a tight bandage a little above the bitten area, do not allow the victim to sleep and take him to the doctor.
- E. 1. This is because petrol being lighter, floats on water and continues to burn.
2. Because talking on mobile phones can distract us from driving.
3. Because petrol is a highly inflammable substance. A single drop of petrol can catch fire and become hazardous.

## PERIODIC TEST—2

- A. 1. cerebrum 2. K 3. clayey 4. 12 pairs 5. trachea
- B. 1. Pupil 2. Cell 3. Microscope 4. Vitamin D  
5. Footpath
- C. 1. (d) 2. (e) 3. (a) 4. (b) 5. (f) 6. (c)
- D. 1. Diseases caused due to deficiency of nutrients are called deficiency diseases such as anaemia, night blindness, etc.
2. Proteins are called body-building foods because they help the body grow, build new cells and tissues and repair them when damaged.
3. The three main parts of our ear are external ear, middle ear and internal ear.

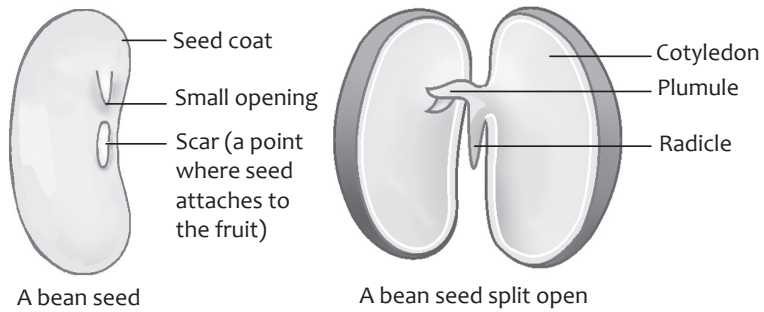
4. In case of snake bite, tie a tight bandage a little above the bitten area, do not allow the victim to sleep and take him to the doctor immediately.
5. The muscle fibres that are present in the heart are called cardiac muscle fibres. They work continuously without getting tired.

E. 1.



Smooth muscle fibres

2.



# 1. GLOBES AND MAPS

## ANSWERS

### Warm Up

More lands have been discovered and mapped.

### Checkpoint

1. Russia
2. Spherical
3. It should have a legend or index.
4. What the map is about

### Check Your Study

- A. 1. (c) 2. (a) 3. (a)

B. 1. Globes show the actual shape of the Earth.

2. Globes cannot be made very large. They cannot be handled easily.

3. A map shows Earth's features in detail whereas a globe does not show details.

4. Maps are easier to carry. They can help in studying the Earth's features in detail. Different types of maps can be used to show a variety of information such as political boundaries, relief features, etc.

5. Scale helps measure distance on the map and the ground.

6. When the distance between two given points on the ground is measured, it is called the ground distance. The distance between the same two points on the map measured along a straight line is called the map distance.

C. **Hint:** To identify the location of a place with respect to parallels and medians.

D. Do it yourself.

E. (b)

## 2. PARALLELS AND MERIDIANS

### ANSWERS

#### Warm Up

0° Meridian, Arctic Circle, Equator, Tropic of Capricorn

#### Checkpoint

1. axis 2. 90°N 3. equator 4. equal 5. 66½° N

#### Check Your Study

- A. 1. (b) 2. (c) 3. (a) 4. (c) 5. (c) 6. (b) 7. (c)

- B. 1. Northern Hemisphere, Southern Hemisphere 2. latitude 3. equator  
4. meridians 5. latitudes, longitudes

- C. 1. Since the Earth is like a sphere, it does not have a top or bottom or side that can be used as a starting point. The Earth rotates around its axis. The axis is an imaginary line joining the North Pole and the South Pole. The end points of the axis are fixed. The Earth is inclined at an angle of 23½°.
2. The equator and the smaller circles drawn parallel to the equator in both the hemispheres are called parallels. The angular distance north or south of the equator is called latitude. It is measured in degrees. Parallels are also called the lines of latitude. The parallels give the north-south direction.
3. The equator is called the great circle. This imaginary line divides the Earth into equal parts called hemispheres.
4. According to an agreement, the meridian passing through Greenwich near London in the UK has been taken as the starting point. This meridian is named as the Prime Meridian. The Prime Meridian is marked as 0°.

- D. 1. Axis 2. Equator 3. Prime Meridian

#### E. 1. Parallels

- (i) The equator and the smaller circles drawn parallel to the equator in both the hemispheres are called parallels.
- (ii) The angular distance north or south of the equator is called latitude.
- (iii) Parallels are also called lines of latitude.
- (iv) The parallels give the north-south direction.
- (v) The parallels are drawn at equal distance from each other.
- (vi) The parallels are complete circles, except the poles, which are points.
- (vii) The equator is the longest parallel.
- (viii) The length of other parallels decreases as we move away from the equator towards the poles.
- (ix) The equator is a great circle, while others are small circles.
- (x) The equator is marked as 0° latitude.
- (xi) Thus, the North Pole and the South Pole are 90° N and 90° S, respectively.

- (xii) If one draws parallels at an interval of  $1^\circ$  from North Pole to South Pole, the total number of parallels, including the equator, will be 181.

### Meridians

- (i) The semicircular lines on the globe that join the North Pole and the South Pole are named as meridians.
  - (ii) They are equal in length.
  - (iii) The distance between any two meridians is the maximum at the equator, which is about 111 kilometres for one degree.
  - (iv) The distance decreases towards the north and south of the equator.
  - (v) The meridians cross the parallels at right angles ( $90^\circ$ ).
  - (vi) They help us find the east-west direction.
  - (vii) The meridian which passes through Greenwich near London in the UK, is named as the Prime Meridian.
  - (viii) The angular distance east or west of the Prime Meridian is called longitude.
  - (ix) The meridians are also called lines of longitude.
  - (x) The Prime Meridian is marked as  $0^\circ$ .
  - (xi) The meridian of  $180^\circ$  lies just opposite to the Prime Meridian. Thus, there are 180 meridians towards the east and 180 meridians towards the west of the Prime Meridian (at an interval of  $1^\circ$ ). The total number of meridians is 360, because  $180^\circ$  E and  $180^\circ$  W is the same line.
2. The angular distance north or south of the equator is called latitude. It is measured in degrees. The parallels are also called lines of latitude. The angular distance east or west of the Prime Meridian is called longitude. The meridians are also called lines of longitude.
3. Parallels are drawn at an equal distance towards north and south of equator. Parallels are drawn at  $1^\circ$  intervals. Parallels are numbered  $1^\circ$ N and  $1^\circ$ S above and below the equator, respectively.  
Meridians are drawn at an equal distance towards the east and west of the Prime Meridian. Meridians are drawn at  $1^\circ$  intervals. Meridians are numbered  $1^\circ$ E and  $1^\circ$ W of the Prime Meridian, respectively.
4. Some important latitudes on the globe are as under:
- |                         |                  |                       |                  |
|-------------------------|------------------|-----------------------|------------------|
| (i) North Pole          | – $90^\circ$ N   | (ii) Arctic Circle    | – $66.5^\circ$ N |
| (iii) Tropic of Cancer  | – $23.5^\circ$ N | (iv) Equator          | – $0^\circ$      |
| (v) Tropic of Capricorn | – $23.5^\circ$ S | (vi) Antarctic Circle | – $66.5^\circ$ S |
| (vii) South Pole        | – $90^\circ$ S   |                       |                  |
5. The network of parallels and meridians on the globe is called the grid or the graticule.  
We can locate all places on the Earth's surface with the help of the grid.
- F. Hint:** The position of Mysuru on the globe is  $12.30^\circ$  N latitude and  $76.65^\circ$  E longitude.
- G.** Do it yourself.
- H.** 1.  $25.45^\circ$ N  $81.85^\circ$ E    2.  $28^\circ36'36''$ N  $77^\circ13'48''$ E    3.  $22^\circ34'N$   $88^\circ22'E$   
4.  $18^\circ58'30''$ N  $72^\circ49'33''$ E
- I.** Do it yourself.

# 3. MAJOR LANDFORMS

## ANSWERS

### Warm Up

Mountains.

### Checkpoint

1. (✓) 2. (×) 3. (×) 4. (✓)

### Check Your Study

A. 1. (c) 2. (b) 3. (b) 4. (a)

B. 1. Land and water. 2. 20 per cent 3. An old mountain is low and rounded.  
4. Plateau of Tibet. 5. Plains.

C. 1. **Continents:** Continents are the big landmasses. There are seven continents.

**Relief features:** Variations in the Earth's surface are called its relief features. The main types of relief features or landforms are mountains, plateaus, plains, deserts and river valleys.

2. **Mountains:** Mountains are elevated parts of the Earth's surface. They are about 900 metres higher than the sea level. Mountains have steep slopes, sharp ridges and peaks. These are the highest landforms on the surface of the Earth.

**Plateaus:** Plateaus also rise suddenly from the surrounding areas, but have flat tops. They have steep sides and are deeply cut by rivers and streams. Generally, the plateaus are found near mountains or surrounded by mountains. Most of the plateaus are very large and spread out over hundreds of kilometres.

3. **Deserts:** Deserts are lands covered by sand and rock with almost no vegetation. They receive low rainfall.

**Plains:** Plains are generally low and flat areas on the surface of the Earth. These are also called lowlands. The plain areas are generally less than 200 metres in height, but the slope is very gentle.

4. **Upper course of a river:** In the upper course, the typical features are rapids, waterfalls or canyons. The river flows swiftly, but has less water.

**Lower course of a river:** In the lower course, the river flows slowly and most of the rivers form deltas before joining the sea.

D. 1. (c) 2. (e) 3. (a) 4. (b) 5. (d)

E. 1. Mountain, plateau and plain are main types of relief features.

2. Plateaus are very useful for us. Some of them are as follows.

(i) Some old plateaus are rich in minerals such as iron, copper, silver, gold, mica, coal and precious stones.

(ii) Plateaus in tropical areas are good for growing crops.

(iii) Waterfalls provide suitable sites for producing hydroelectricity.

(iv) Some plateaus have rich grasslands which are used for rearing cattle and sheep.

(v) The natural landscape attracts tourists from all over the world.

3. Deltas.

F. **Hint:** Storehouses of minerals.

G.

Course	From	To	Important cities	Important factories
Upper	Gangotri	Haridwar	Rishikesh, Haridwar	Mining of stone
Middle	Haridwar	Allahabad	Knapur, Varanasi, etc.	Different industries
Lower	Allahabad	Bay of Bengal	Patna, Kolkata, etc.	Different industries

H. Do it yourself.

- I.
1. Physical strength and training.
  2. Mental strength.



# 4. WEATHER AND CLIMATE

## ANSWERS

### Warm Up

Rainy (✓)

### Checkpoint

1. Rainfall. 2. Distance from the sea. 3. As height increases, temperature decreases.
4. The moisture in the air is called humidity.

### Check Your Study

- A. 1. (b) 2. (c) 3. (c) 4. (b) 5. (a)
- B. 1. Frigid zone, Tropical zone, Temperate zone, Frigid zone
- C. 1. Climate is the average weather conditions of a place over a long period of time. The climate of a place remains more or less the same year after year.
2. The moisture in the air is called humidity.
  3. Depending upon the amount of heat received from the sun, the Earth has been divided into three climatic or Heat Zones. These zones are the Tropical, the Temperate and the Polar Zones.
- D. 1. A number of factors determine the climate of a place. It is largely dependent upon the temperature of air and the amount of rainfall. Some of these factors are as under:  
(i) Distance from the equator (ii) Height above the sea level (iii) Distance from the sea  
(iv) Prevailing winds (v) Moisture in the air
2. The main elements of weather are temperature, air pressure, movement of air and moisture in the air.
  3. The area near the equator extends on both sides of equator from the Tropic of Cancer in the north up to the Tropic of Capricorn in the south. This part of the Earth receives the maximum heat and moisture. Thus, the climate throughout the year is hot and humid.
  4. Depending upon the amount of heat received from the sun, the Earth has been divided into three climatic or Heat Zones. These are the Tropical, the Temperate and the Polar Zones.

**The Tropical Zone:** The Tropical Zone is also known as the Torrid Zone. It extends on both sides of equator from the Tropic of Cancer in the north up to the Tropic of Capricorn in the south.

**The Temperate Zone:** The Temperate Zone lies in both the hemispheres. In the Northern Hemisphere, it extends from the Tropic of Cancer to the Arctic Circle, and in the Southern Hemisphere, from the Tropic of Capricorn to the Antarctic Circle.

**The Polar Zone:** The Polar Zone is also known as the Frigid Zone. It also lies in both the hemispheres. In the Northern Hemisphere, it extends from the Arctic Circle to the North Pole and in the Southern Hemisphere, from the Antarctic Circle to the South

Pole.

5. Recently, it has been noticed that the mean temperature of the Earth and of the atmosphere is increasing due to the greenhouse effect, which is causing global warming. The main greenhouse gases are carbon dioxide, methane and CFCs (chlorofluorocarbons). The increase of greenhouse gases in the atmosphere is due to pollution, which is caused by nature and human activity.

Carbon dioxide is added to the atmosphere by burning of wood, coal and petroleum. It is also added by vehicles and industries. Methane gas is added to the atmosphere by the digestive system of herbivores such as cows, horses, goats and sheep. CFCs are released from perfume and deodorant sprays. CFCs are also used in refrigerators.

- E. 1. **Hint:** Industrialised nations have many industries and hence cause pollution.  
2. **Hint:** It is a global problem.
- F. Do it yourself
- G. (a)

## PERIODIC TEST—1

- A. 1. (a) 2. (d) 3. (b) 4. (a) 5. (b)
- B. 1. animals' skins, cloth 2. equator, two 3. sphere 4. 29 per cent 5. climate
- C. 1. False 2. True 3. True 4. False 5. True
- D. 1. (e) 2. (d) 3. (a) 4. (b) 5. (c)
- E. 1. The signs and symbols help us read and understand the information given on the map. We can show physical or cultural features on a map with the help of signs and symbols. We can show features such as temples, mosques, churches, forts, rivers, bridges, lakes, etc., with the help of signs and symbols. Most of these symbols are used by all countries.
2. The globe shows continents and oceans in their true shape and size. But the globe has some limitations, such as
- (a) A large-sized globe cannot be made easily.
  - (b) It is also difficult to handle a large-sized globe.
  - (c) The small globe does not show the details of the Earth's surface.
3. **Parallels**
- (i) The equator and the smaller circles drawn parallel to the equator in both the hemispheres are called parallels.
  - (ii) The angular distance north or south of the equator is called latitude.
  - (iii) Parallels are also called lines of latitude.
  - (iv) The parallels give the north-south direction.
  - (v) The parallels are drawn at equal distance from each other.
  - (vi) The parallels are complete circles, except the poles, which are points.
  - (vii) The equator is the longest parallel.
  - (viii) The length of other parallels decreases as we move away from the equator

towards the poles.

- (ix) The equator is a great circle, while others are small circles.
- (x) The equator is marked as  $0^\circ$  latitude.
- (xi) Thus, the North Pole and the South Pole are  $90^\circ$  N and  $90^\circ$  S, respectively.
- (xii) If one draws parallels at an interval of  $1^\circ$  from North Pole to South Pole, the total number of parallels, including the equator, will be 181.

### Meridians

- (i) The semicircular lines on the globe that join the North Pole and the South Pole are named as meridians.
  - (ii) They are equal in length.
  - (iii) The distance between any two meridians is the maximum at the equator, which is about 111 kilometres for one degree.
  - (iv) The distance decreases towards the north and south of the equator.
  - (v) The meridians cross the parallels at right angles ( $90^\circ$ ).
  - (vi) They help us find the east-west direction.
  - (vii) The meridian which passes through Greenwich near London in the UK, is named as the Prime Meridian.
  - (viii) The angular distance east or west of the Prime Meridian is called longitude.
  - (ix) The meridians are also called lines of longitude.
  - (x) The Prime Meridian is marked as  $0^\circ$ .
  - (xi) The meridian of  $180^\circ$  lies just opposite to the Prime Meridian. Thus, there are 180 meridians towards the east and 180 meridians towards the west of the Prime Meridian (at an interval of  $1^\circ$ ). The total number of meridians is 360, because  $180^\circ$  E and  $180^\circ$  W is the same line.
4. Recently, it has been noticed that the mean temperature of the Earth and of the atmosphere is increasing due to the greenhouse effect, which is causing global warming. The main greenhouse gases are carbon dioxide, methane and CFCs (chlorofluorocarbons). The increase of greenhouse gases in the atmosphere is due to pollution, which is caused by nature and human activity.
- Carbon dioxide is added in the atmosphere by burning of wood, coal and petroleum. It is also added by vehicles and industries. Methane gas is added in the atmosphere by the digestive system of herbivores such as cows, horses, goats and sheep. CFCs are released from perfume and deodorant sprays. CFCs are also used in refrigerators.
5. **Weather** is the condition of the atmosphere at a particular place and time. The **climate** is the average weather conditions of a place over a long period of time. The climate of a place remains more or less the same year after year.

# 5. LIFE IN THE EVERGREEN FORESTS (THE DEMOCRATIC REPUBLIC OF THE CONGO)

## ANSWERS

### Warm Up

The first image.

### Checkpoint

1. equator 2. Zaire 3. third largest 4. Kinshasa 5. tse-tse

### Check Your Study

- A. 1. (c) 2. (a) 3. (c)
- B. 1. (✓) 2. (✓) 3. (X)
- C. 1. Angola, Zambia 2. Coffee, rubber 3. Cobalt, Copper 4. Leopards, zebras
- D. 1. The Democratic Republic of the Congo is surrounded by Sudan and the Central African Republic in the north, Republic of Congo in the west, Angola and Zambia in the south, and Tanzania, Burundi, Rwanda and Uganda in the east. There are many lakes along the eastern boundary of the DRC.
2. 200 cm.
3. The climate is hot and humid almost throughout the year due to its location near the equator. The sun shines brightly and the heat is unbearable during the daytime. The hilly regions experience comparatively low temperature. In the afternoon, the sky is full of dark clouds, which provides heavy rainfall almost every day. The total rainfall is about 200 cm per year.
4. The country has a poor system of transport. Roads and railways are difficult to construct due to thick forests and many rivers. Water transport along some of the rivers is now easily available. Air transport is now becoming popular.
5. The Democratic Republic of the Congo is sparsely populated. Most of the people live in villages. Most of the people are Bantu Negroes, who are tall and have curly hair. They speak Bantu language and are fond of music and dance. They follow traditional lifestyles and wear colourful dresses.
- The original tribals are Pygmies, who are short in height. They live mostly in Ituri forests in the north-east. They still lead a primitive life and move about in search of food.
- After independence, the government is developing the resources. The progress is slow but the lifestyle and standard of living is improving.
- E. **Hint:** Because of the nearly same amount of rainfall.
- F. **Hint:** Visit site [www.classicafrica-com/content/bantu Tribes of Southern Africa-asp](http://www.classicafrica-com/content/bantu Tribes of Southern Africa-asp)
- G. Do it yourself.
- H. 1. (b)

## 6. THE LAND OF ICE AND SNOW (GREENLAND)

### ANSWERS

#### Warm Up

#### Sledge

#### Checkpoint

1. At South Pole. 2. Eric the Red. 3. Eric the Red. 4. Ice-cap.
5. A large boat used by Eskimos.

#### Check Your Study

A. 1. (b) 2. (c) 3. (c) 4. (c) 5. (c)

B. 1. Nuuk 2. Rifle and harpoon 3. 10th 4. 0°C 5. Inuits

C. 1. Hunting 2. Polar bear, reindeer, musk, ox, etc. 3. Mosses, lichens, etc.

- D. 1. Greenland is located towards the North-East of Canada in North America. Greenland lies mostly within the Arctic Circle. The total area of Greenland is about 22 lakh square kilometres. About seventy per cent area of Greenland is towards the north of the Arctic Circle. The island is surrounded by the Greenland Sea in the north-east, Denmark Strait in the south-east, Davis Strait in the south-west, Baffin Bay in the north-west and the Arctic Ocean in the north.
2. Due to the cold climate and frozen land, the vegetation in this region is limited. Plants with deep roots do not grow. The main types of vegetation are shrubs, mosses, lichens and grasses. Some flowering plants grow during the summer months. There are no trees or crops.
  3. In Greenland, the climate is very cold throughout the year. The winter season is for about nine months. Very cold and chilly winds blow during this season. The sun is also not visible for many weeks. There is heavy snowfall and the temperature is generally below freezing point (0°C). This type of climate is not suitable for living. No vegetation can grow. All these factors make life almost impossible.
  4. In Greenland, the climate is very cold throughout the year. The winter season is for about nine months. Very cold and chilly winds blow during this season. The sun is also not visible for many weeks. There is heavy snowfall and the temperature is generally below freezing point (0°C). During the summer season, there is bright sunshine for many weeks and the sun never sets. We also call this area the Land of the Midnight Sun. The general weather is bright and sunny. However, rainfall is scanty. At many places, the ice melts in this season, but the temperature is near the freezing point (0°C).
  5. Nowadays, the lifestyle of the Eskimos is changing fast. Today, Greenland is not an isolated place. These days Eskimos use rifles in place of harpoons for hunting. People use radios and televisions. They buy goods made in other countries to meet their daily needs. Many of them are now working in mines and oilfields.

- E. **Hint:** Tourist industry.
- F. Do it yourself.
- G. Do it yourself.
- H. **Hint:** Banning the killing of animal by outsiders.
- I. Second image.

## 7. THE LAND OF HOT SAND (SAUDI ARABIA)

### ANSWERS

#### Warm Up

Third image.

#### Checkpoint

1. Africa
2. Saudi Arabia
3. Empty area
4. liquid gold

#### Check Your Study

- A.** 1. (c) 2. (b) 3. (a) 4. (a)
- B.** 1. western 2. October; April 3. Cancer 4. Mecca 5. smock
- C.** 1. Bedouin 2. Oasis 3. Sand dune
- D.** 1. The neighbouring countries of Saudi Arabia are Jordan, Iraq, Kuwait, Qatar, Oman, UAE and Yemen.
2. There are limited economic activities in the sparsely populated Saudi Arabia. Saudi Arabia is very rich in petroleum. It is known as the liquid gold due to its economic value in the world. After refining, the crude petroleum gives us petrol, diesel, kerosene, lubricants and gas. Today, Saudi Arabia is the largest producer and exporter of petroleum in the world. The discovery of petroleum has completely changed the life of people in Saudi Arabia.
3. The climate of Saudi Arabia is hot and dry almost throughout the year. During the daytime, the sun shines very brightly. During the summer season (from May to September), the days are very hot and the nights are cool. The temperature during the daytime can be more than 50°C. During the winter season (from October to April), the days are warm and the nights are very cold. There is a great difference between the day and night temperatures. There is hardly any rainfall. The most common feature in all seasons are the dust storms. The coastal areas have mild climate. Abha, a hill station, is cool in the summer.
4. At some places in the hot and dry desert, underground water reaches the surface through a permanent spring. These are called oases. These are the fertile areas in the desert where farming can be done. Date-palms are grown in and around the oasis. Other crops are wheat and barley. Small villages develop around oases.
5. Some people in the villages of Saudi Arabia still enjoy the traditional lifestyle. Most of them are nomads, who travel from one place to another in search of water, food and shelter for their animals. They are the Bedouins. They move in groups, forming long rows of camels, called caravans. The Bedouins breed camels, which give them, milk, meat, skin and hair. The Bedouins exchange their goods for dates, foodgrains and other useful things. Now the lifestyle of Bedouins is also changing. Many of them use jeeps and cars for moving in the desert.
- E. Hint:** Lack of mineral resources and water.
- F.** Do it yourself.
- G.** Do it yourself.

## 8. THE TEMPERATE GRASSLANDS (PRAIRIES IN NORTH AMERICA)

### ANSWERS

#### Warm Up

Prairie dog

#### Checkpoint

1. Between  $23\frac{1}{2}^{\circ}$  and  $66\frac{1}{2}^{\circ}$  latitudes in both the hemispheres. 2. Summer season.
3. Mississippi river.

#### Check Your Study

- A. 1. (b) 2. (b) 3. (c) 4. (a)
- B. 1. 50 2. Corn 3. banks of rivers 4. Beef 5. machines
- C. 1. Prairie 2. Silos 3. Ranch
- D. 1. The entire Prairie region or the temperate grassland is an endless plain area with no obstruction in sight. The average climatic conditions are hot in the summer season and very cold during the winter season. The total annual rainfall is about 50 centimetres. Most of it is during the summer season. There are mild showers during the winter season. Due to its location in the interior of North America, the climate is not affected by the sea. The amount of rainfall also varies greatly from year to year. The northern parts remain under snow during the winter season.
2. The Prairies are situated wholly in the Northern Hemisphere. They are surrounded by the Rocky Mountains in the west and the Great Lakes in the east. The Prairies stretch from Canada in the North, up to Mexico in the south. Thus, the Prairies are almost midway between the equator and the North Pole.
3. The fertile plains of Prairies are extensively cultivated. The main cereal crops grown in the Prairies are corn (maize), wheat, barley, rye, soyabeans, etc. This region is known as the 'Wheat Basket of the World'. Corn is mostly grown in the eastern part and cotton is the main crop in the southern part of Prairies. A large part of the total production is exported.
4. The western part of the Prairie grasslands is hilly and less fertile. Cattle are reared in the open grasslands. Cattle are reared mostly for meat. Large cattle grazing areas are called ranches. Near the cities, dairy farming is more popular. The milking of cows is done by machines. Beef is the staple diet of Americans. Thus, most of the beef produced is consumed locally. Chicago is an important centre for slaughtering cattle.
- E. **Hint:** Europeans; economic development but environmental degradation.
- F. Do it yourself.
- G. **Hint:** Through sustainable development.



## PERIODIC TEST—2

- A. 1. (a) 2. (d) 3. (b) 4. (c) 5. (a)
- B. 1. maximum 2. bisons 3. tropical rainforests 4. coldest 5. Saudi Arabia
- C. 1. True 2. False 3. True 4. True 5. False
- D. 1. (e) 2. (d) 3. (b) 4. (a) 5. (c)
- E. 1. Unlike a map, a globe can show us the whole Earth at a glance.
2. Saudi Arabia is very rich in petroleum. It is known as the liquid gold due to its economic value in the world. After refining, the crude petroleum gives us petrol, diesel, kerosene, lubricants and gas. Today, Saudi Arabia is the largest producer and exporter of petroleum in the world. The discovery of petroleum has completely changed the life of people in Saudi Arabia.
3. Recently, it has been noticed that the mean temperature of the Earth and of the atmosphere is increasing due to **Greenhouse Effect**, which is causing **Global Warming**. The average increase of the temperature on the Earth and also in the atmosphere is one degree in the last 100 years.
- The main greenhouse gases are **carbon dioxide, methane** and **CFCs** (Chlorofluorocarbons). The increase of the greenhouse gases in the atmosphere is due to pollution, which is caused by nature and the activities of human beings. These gases can easily trap the heat of the sun, and this is called the **Greenhouse Effect**.
4. The European settlers converted these grasslands into farmlands. Now these fertile plains are **extensively** cultivated. The main cereal crops grown in the prairies are corn (maize), wheat barley, rye, soyabeans, etc. This region is known as the **Wheat Basket of the World**. Corn is mostly grown in the eastern part and cotton is the main crop in the southern part of Prairies. A large part of the total production is exported.
5. A **plateau** also rises suddenly from the surrounding areas, but has a flat top. It has steep sides and they are deeply cut by rivers and streams.
- The plateaus are very useful for us.
- (i) Some old plateaus are rich in minerals, such as iron, copper, silver, gold, mica, coal and precious stones.
  - (ii) Plateaus in tropical areas are good for growing crops.
  - (iii) The waterfalls provide suitable sites for producing hydroelectricity.
  - (iv) Some plateaus have rich grasslands which are used for rearing cattle and sheep.
  - (ii) The natural landscape attracts tourists from all over the world.