

# 1. BRAVE RANI LAKSHMIBAI

## ANSWERS

### Warm Up

1. National Bravery Awards.
2. The President of India.
3. The children are chosen from all over India by committees in the States and at the Centre for their selfless acts of bravery.

### Read and Understand

- A. 1. (c) 2. (c) 3. (b) 4. (c)
- B. 1. Principal 2. Mala's 3. Tanya Tope 4. annual 5. Kalpi
- C. 1. Mala fought the two men on the motorcycle because they snatched her teacher's purse and tried to escape.
2. Lakshmibai was born on 19 November 1835 at Poona.
  3. Lakshmibai's father encouraged her to learn to ride elephants and horses and to use weapons.
  4. Women fought the British with weapons in support of Rani Lakshmibai.
  5. Rani Lakshmibai did not follow the orders of the British because she refused to give up Jhansi and wanted its freedom.
  6. Rani Lakshmibai went to Kalpi and then to Gwalior on her horse, Badal, with her son Damodar Rao tied securely on her back.

**HOTS:** Any positive and relevant answer is acceptable.

- D. 1. Honesty; bravery 2. joy 3. courageous 4. beauty 5. weakness
- E. 1. FAILURE 2. HATRED 3. PAIN 4. SORROW
- F. 1. father's 2. children's 3. babies' 4. mother's 5. dancer's
- G. 1. amazingly 2. snatched 3. seriously 4. advisor 5. scholarly 6. weapons
- H. NEEM; EUCALYPTUS; BANYAN; GULMOHAR
- I. 1. About twenty-four children are given the National Bravery Award every year.
2. The names of award winners are usually announced on 14 November (Children's Day).
  3. The awardees receive a medal, a certificate and a cash award as the National Bravery Award.
  4. The awards were first given in 1958 by Jawaharlal Nehru, the then Prime Minister of India.
  5. In 2008, a twelve-year-old balloon seller who was called 'Rahul' to hide his real name was given the award. He helped the police to identify the men who planted bombs on Barakhamba Road in Delhi before the bombings in September 2008.
- L. Do it yourself.
- M. Do it yourself.

## 2. TRIPLE PUNISHMENT

### ANSWERS

#### Warm Up

Cheese (M) Butter (M)

#### Read and Understand

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

B.	The King	Avik	The Youth
	Just	Greedy	Brave
	Noble	Miser	
		Fool	

C. 1. Avik.

2. Because he wanted to make more and more money.

3. The king punished Avik because he was selling adulterated ghee.

4. Avik had to take all the three punishments because of his greed. He tried to save his gold by taking up the punishment of hundred lashes but in the end had to take all the three punishments.

D. HOTS—It is a very serious crime because adulterated food is bad for the health of people. Adulterated food causes many diseases and may even kill people.

E. 1. deep 2. clever 3. curly 4. new

F. 1. N 2. N 3. Q 4. Q

G. 1. adulterated 2. argument 3. immediately 4. scared

H. 1. hood 2. less/ful 3. ful/less 4. able/ly 5. ly 6. ful/less

I. 1. King Midas wished that whatever he touched should turn into gold.

2. Because everything he touched turned into gold.

3. He was punished because of his greed.

L. Do it yourself.

M. Do it yourself.

N. A consumer court is a special court that deals with cases regarding consumer disputes and complaints. It is set up to protect consumer rights. Its main function is to see that a customer is not exploited by the seller. If a consumer feels he is cheated, he can file a complaint against the seller.

### 3. CELEBRATING EARTH DAY

#### ANSWERS

##### Warm Up

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

##### Read and Understand

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

B. 1. Earth 2. plants 3. trees 4. polluting 5. pollution

C. 1. The people were killing Soil. The plastic bags and chemicals they used were harming it.

2. Air was unable to keep itself clean because trees have been cut down.

3. Water was being polluted by waste thrown into it.

4. Tarun thought that he could not help the three boys because he was only a small boy. No, he wasn't right, as his teacher explained to him.

5. Tarun felt that celebrating Earth Day was of no use because he could not do anything to save the Earth.

6. The teacher suggested Reduce, Reuse and Recycle to stop pollution.

7. The three R's mean Reduce, Reuse and Recycle.

D. 1. RECYCLE 2. REUSE 3. REUSE 4. REDUCE

E. 1. you 2. me 3. She 4. We

F. 1. his 2. hers 3. theirs 4. ours

G. 1. pollution 2. environment 3. factory

H. 1. PAPER 2. TOYS 3. CLOTHES 4. PLASTIC

I. 1. No 2. Yes 3. Yes 4. No 5. Yes

L. Three steps we should take to keep our environment pollution-free are:

- Growing more trees
- Using public transport
- Using manure instead of fertilisers.

M. Do it yourself.

# TREES ARE THE KINDEST THINGS I KNOW (POEM)

## ANSWERS

### Read and Understand

- A. 1. (c) 2. (b) 3. (c) 4. (a)
- B. Birds are sitting in the tree. Children are playing under the tree. A man is resting under the tree. A dog is running around. There is greenery all around and it is a beautiful scene.

## PERIODIC TEST—1

- A. 1. (c) 2. (a) 3. (b) 4. (c) 5. (a)
- B. new; tall; sweet; friendly; helpful; chilled; sturdy; happy.
- C. Do it yourself.
- D. 1. bravery 2. beauty
- E. 1. sister's 2. woman's 3. babies' 4. singer's
- F. 1. deep 2. intelligent 3. curly 4. new
- G. 1. Mala threw her schoolbag at the men and they fell from their bike. She immediately shouted for help and people gathered there and caught the two men who had attacked her teacher.
2. The British did not accept Damodar Rao as the legal heir and wanted to take Jhansi. Lakshmibai refused to give up Jhansi to the British, so, she and her soldiers fought the British when they attacked Jhansi. She fought for the freedom of Jhansi.
3. Avik sold impure things because he wanted to make more and more money.
4. The people of Earth were killing soil. They were throwing plastic bags which would sink into the soil. Because of this, soil couldn't breathe.
5. Reduce, Reuse and Recycle.

## 4. WHOSE JACKET IS IT?

### ANSWERS

#### Warm Up

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

#### Read and Understand

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

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

C. 1. He used to borrow things from others.

2. The witty thing we find in this story is that Mulla very cleverly points out that Halim is wearing his jacket.

3. Mulla was fed up with his friend's behaviour. Therefore, he made a plan against him.

4. No, he was just trying to cure his friend of his bad habit.

D. HOTS—No, it is a bad thing. Borrowing from our friends can break our friendship.

E. 1. She has gone out.

2. Mohan was riding a bicycle.

3. She can dance very well.

4. John had collected a few gold coins.

F. 1. am 2. were 3. are 4. is

G. 1. believe 2. field 3. grief 4. achieve 5. shied 6. deceive

H. 1. address 2. children 3. received 4. grateful

I. 1. gloomy 2. swift 3. happy 4. fragile

J. 1. buy 2. bridge 3. tree 4. sheep

J. 1. buy 2. bridge 3. tree 4. sheep

J. 1. buy 2. bridge 3. tree 4. sheep

M. Do it yourself.

N. Do it yourself.

# YOU CAN IF YOU THINK YOU CAN (POEM)

## ANSWERS

### Read and Understand

- A. 1. (b) 2. (a)
- B. 1. If you think that you are beaten, you will fail in any task you undertake.  
2. According to the poet, a person is successful if he/she thinks that he/she is going to be successful and has a positive approach in life.  
3. He who thinks he can.
- C. Do it yourself.

# 5. DAVID AND GOLIATH

## ANSWERS

### Warm Up

1. Srimad Bhagavad Gita 2. Guru Granth Sahib 3. Koran 4. Bible

### Read and Understand

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

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

C. 1. He used to tend the sheep.

2. David went to meet his brothers in order to give them food and find out how they were doing.

3. David wanted to face the giant because he had no fear.

4. He hurled a pebble from his sling which hit Goliath on the forehead. Goliath fell down. David took out his sword and killed Goliath.

D. Mental strength is more important because even if a person is strong physically and has a weak heart, he will tremble when any difficulty comes.

E. 1. Shah Jahan built the Red Fort.

2. Lions and tigers are wild animals.

3. I saw the thief running away.

4. Virender Sehwag hit a six.

5. Amit is riding his bicycle.

F. 1. dances (intransitive) 2. selling (transitive) 3. ran (intransitive)

4. chased (transitive) 5. begins (intransitive)

G. 1. shepherd 2. Israel 3. shield 4. challenged 5. pebbles

H. 1. able 2. ible 3. ible 4. ible 5. able 6. ible

I. 1. ate 2. bear 3. fair 4. deer

J. 1. One should try and try again.

2. Failure.

3. It teaches us to try even if we fail. We are bound to succeed in the end.

M. 1. David was fearless.

2. He loved his country very much.

3. He was obedient.

N. Do it yourself.

## 6. THE HUMBLE MINISTER

### ANSWERS

#### Warm Up

1. (✓) 4. (✓)

#### Read and Understand

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

B. 1. chief minister 2. secret 3. clothes 4. king 5. ashamed

C. 1. The king went to the forest for hunting.

2. The poor man was gathering wood in the forest.

3. The king took the man to his palace and made him a minister.

4. He put on his old clothes before praying because he did not want to forget that he was once a poor man.

5. We learn that we should never become arrogant and forget our old days.

D. Hunting is a bad thing. To kill animals for fun is a very bad thing. It is because of hunting that many animals have become extinct.

E. 1. has stopped 2. has lived 3. has bought 4. have 5. has; completed

F. 1. had reached 2. had read 3. had finished 4. had given

G. 1. minister 2. palace 3. morning 4. fortune 5. honest 6. humble

H. 1. leap—tiger—roar 2. swim—duck—quack 3. slither—snake—hiss  
4. gallop—horse—neigh

I. 1. cow 2. mud 3. liar 4. guard

J. 1. G 2. B 3. B 4. B 5. G 6. B

M. Do it yourself.

N. Do it yourself.



# HOW THE LITTLE KITE LEARNED TO FLY (POEM)

## ANSWERS

### Read and Understand

- A. 1. (c) 2. (b)
- B. 1. The big kite told the small kite to try to fly.  
2. The little kite was thrilled with pride because it was flying side by side with the big kite.  
3. The small kite succeeded because it overcame its fear and tried.

C. Do it yourself.

D. 12, Arjuna Apartments,  
Lajpat Nagar,  
New Delhi

Dear Raju,

I have learnt that you want to learn swimming but are not able to gather courage to learn it.

Dear Raju, remember, courage is the first thing and all other things follow it.

If you learn swimming under a competent coach, it will become easy like a child's play. Hence, don't be afraid and start learning swimming. The day is not far when people will hail you as an expert swimmer.

Your loving brother,

Murli.

## LIFE SKILLS—1

A. Dear Mom

You are the best because you are so selfless and loving. I am truly blessed that you are my mother. May God grant you a long and healthy life.

B. Do it yourself.

## PERIODIC TEST—2

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

B. The correct arrangement of sentences is as follows:

3 → 1; 8 → 2; 5 → 3; 1 → 4; 9 → 5; 6 → 6; 4 → 7; 2 → 8; 10 → 9; 7 → 10

C. Do it yourself.

D. 1. was, cold 2. can, play

E. 1. am 2. were 3. are 4. is

F. 1. Shah Jahan, Taj Mahal 2. She, thief

G. 1. has bought 2. has; completed

- H. 1. She went to Kalpi and then to Gwalior on her horse, Badal, with her son Damodar Rao tied securely on her back.  
2. Tarun felt that celebrating Earth Day was of no use because he could not do anything.  
3. Mulla was fed up with his friend's behaviour. Therefore, he made a plan against him.  
4. Because David was brave and had no fear of the giant.  
5. He put on his old clothes before praying because he did not want to forget that he was once a poor man.

## GRAMMAR WORKSHEETS

### Grammar Worksheet 1

- A. 1. kindness 2. Sincerity 3. happiness 4. bravery 5. beauty; joy 6. strength  
7. sweet; childhood 8. honesty 9. fear 10. truth  
B. 1. giant's 2. children's 3. Mini's 4. woman's 5. John's 6. boy's/boys'  
7. bird's/birds' 8. man's  
C. 1. artist's paintings 2. giraffe's neck 3. birds' feathers 4. dog's bark  
5. soldiers' courage 6. lion's mane

### Grammar Worksheet 2

- A. 1. brave 2. healthy 3. honest 4. big 5. beautiful 6. cloudy  
B. 1. N 2. Q 3. Q 4. N 5. Q  
C. 1. this 2. those 3. These 4. That 5. Those

### Grammar Worksheet 3

- A. 1. He 2. it 3. He; There is misprint in the lines. The line should not have 'a' after 'is'. Also, it should read—is a famous football player.  
4. your 5. she 6. they 7. it 8. She 9. We 10. I  
B. 1. theirs 2. hers 3. mine 4. yours

### Grammar Worksheet 4

- A. 1. (is), making 2. (have), taken 3. (am), eating 4. (were), watching  
5. (was), lighting 6. (were), sitting 7. (has), gone  
B. 1. am 2. is 3. are 4. was 5. were

### Grammar Worksheet 5

- A. 1. are 2. have 3. have 4. are 5. has  
B. 1. Reema writes for the school magazine.  
2. Rahul and Gulshan have gone for a movie.  
3. The principal is in the office.  
4. You are the most talented dancer in this competition.  
5. I do yoga for an hour every day.  
C. 1. fly (I) 2. bakes (T) 3. gave (T) 4. are dancing (I) 5. sang (T)

### Grammar Worksheet 6

- A. 1. has written 2. has gone 3. has eaten 4. has left 5. has opened 6. has arrived

7. have learnt 8. have read 9. has seen 10. have lived
- B.** 1. had bought 2. had finished (The sentence should read. She \_\_\_\_\_ her homework before she went to bed. Also, the verb in the Help Box should be 'had finished' instead of 'has finished').
3. had left 4. had reached 5. had stopped 6. had lived 7. had never seen

# 1. NUMBERS (5–6 DIGITS)

## ANSWERS

### Let Us Recall

- A. 5927  
C. 7364  
E. 8931  
G. 8575  
I. 9475, 9476  
K. 3187, 3188, 3189  
M. 5300, 5301  
O. 6285  
Q. 1. 5600 2. 4762  
S. 5792, 5153, 5052  
U. largest: 7531, smallest: 1357  
W. largest: 8761, smallest: 1067
- B. 2 thousands, 3 hundreds, 9 tens and 7 ones  
D.  $8 \times 1000 + 8 \times 100 + 4 \times 10 + 1 \times 1$   
F. Nine thousand six hundred and seventy five  
H. 6527  
J. 7573, 7574  
L. 4999, 5000, 5001  
N. 7258, 7259, 7260  
P. 1. 800 2. 4000  
R. 1. 9263 2. 9987  
T. 3767, 4137, 5179  
V. largest: 7777, smallest: 1111  
X. 1. 5270 2. 5300 3. 8000

### EXERCISE 1.1

- A. 1. 3 ten thousands, 7 thousands, 4 hundreds, 2 tens and 6 ones  
2. 5 ten thousands, 3 thousands, 4 hundreds, 9 tens and 1 ones
- B. 1. 4 lakhs, 8 ten thousands, 6 thousands, 2 hundreds, 3 tens and 4 ones  
2. 2 lakhs, 9 ten thousands, 8 thousands, 2 hundreds, 3 tens and 4 ones
- C. 1. 52843 2. 63032 3. 334844 4. 481231
- D. 1. Place value of 6 is 6; Place value of 5 is 50; Place value of 2 is 200; Place value of 4 is 4000; Place value of 4 is 40000  
2. Place value of 8 is 8; Place value of 7 is 70; Place value of 0 is 0; Place value of 6 is 6000; Place value of 2 is 20000  
3. Place value of 5 is 5; Place value of 0 is 0; Place value of 9 is 900; Place value of 5 is 5000; Place value of 4 is 40000; Place value of 3 is 300000  
4. Place value of 4 is 4; Place value of 3 is 30; Place value of 2 is 200; Place value of 0 is 0; Place value of 9 is 90000; Place value of 2 is 200000

E.

S.No.	L	TTh	Th	H	T	O
1.		4	5	2	5	2
2.		6	3	4	0	8
3.	9	6	3	9	7	5
4.	3	3	8	7	2	3

- F. 1. Thirty four thousand six hundred seventy five  
2. Sixty three thousand five hundred eighty seven

3. Four lakh sixty two thousand seven hundred eighteen  
 4. Nine lakh seventy two thousand seven hundred thirty four
- G. 1. 42869 2. 89937 3. 649795 4. 730905
- H. 1.  $40000 + 4000 + 200 + 50 + 6$   
 2.  $30000 + 6000 + 0 + 70 + 8$   
 3.  $500000 + 40000 + 5000 + 900 + 0 + 5$   
 4.  $600000 + 30000 + 4000 + 500 + 70 + 1$
- I. 1. 37191 2. 42379 3. 845553 4. 725186
- J. 1. Do it yourself 2. Do it yourself
- K. 1. 57234 2. 435678

### EXERCISE 1.2

- A. 1. 23130 2. 770514
- B. 1. 31520 2. 633751
- C. 1. 51072, 51073 2. 723026, 723027
- D. 1. 21033, 21034 2. 172310, 172311
- E. 1. 54252, 54253, 54254 2. 843301, 843302, 843303
- F. 1. 60118, 60119, 60120 2. 563591, 563592, 563593
- G. 1. 74193, 74194 2. 422497, 422498
- H. 1. 25272, 25273, 25274 2. 747358, 747359, 747360
- I. 29392, 29399, 29406, 29413
- J. 57763, 58063, 58363, 58663
- K. 437847, 442847, 447847, 452847

### EXERCISE 1.3

1. (a) 57163 (b) 43322 (c) 371592 (d) 456316
2. (a) 21592 (b) 66316 (c) 234863 (d) 675432
3. (a) 32459, 56589, 58621 (b) 74581, 78282, 117908 (c) 234123, 481742, 718594 (d) 90871, 90872, 549349, 578797
4. (a) 95227, 81742, 71859 (b) 46797, 44872, 43378 (c) 981249, 345629, 342189 (d) 917829, 773727, 723827, 87240

### EXERCISE 1.4

- A. 1. Largest number: 86532; Smallest number: 23568  
 2. Largest number: 64320; Smallest number: 20346
- B. 1. Largest number: 88888; Smallest number: 11111  
 2. Largest number: 99999; Smallest number: 10000
- C. 1. Largest number: 876531; Smallest number: 135678  
 2. Largest number: 986421; Smallest number: 124689
- D. 1. Largest number: 777777; Smallest number: 111111  
 2. Largest number: 999999; Smallest number: 222222

### EXERCISE 1.5

- A. 1. 42820 2. 652480  
B. 1. 42300 2. 773800  
C. 1. 97000 2. 792000  
D. 1. 50000 2. 500000  
E. 1. 600000 2. 300000

### EXERCISE 1.6

- A. 1. 4 hundred thousands, 2 ten thousands, 7 thousands, 4 hundreds, 2 tens and 6 ones  
2. 8 hundred thousands, 3 ten thousands, 3 thousands, 7 hundreds, 5 tens and 6 ones  
B. 1. 542843 2. 953032  
C. 1. Place value of 6 is 6; Place value of 5 is 50; Place value of 2 is 200; Place value of 4 is 4000; Place value of 3 is 30000; Place value of 6 is 600000  
2. Place value of 8 is 8; Place value of 7 is 70; Place value of 2 is 200; Place value of 6 is 6000; Place value of 2 is 20000; Place value of 9 is 900000

D.

S.No.	Thousands Period			Ones Period		
	HTh	TTh	Th	H	T	O
1.		2	3	5	2	5
2.	5	2	5	3	4	0

- E. 1. 824,675 → Eight hundred twenty four thousand six hundred seventy five  
2. 934,587 → Nine hundred thirty four thousand five hundred eighty seven  
F. 1. 532869 2. 737419

### EXERCISE 1.7

- A. 1. VIII 2. XII 3. XVI 4. XL 5. LV 6. LXIX 7. LXXXVII 8. XC 9. XCVIII  
10. XLVI  
B. 1. 7 2. 13 3. 18 4. 34 5. 65 6. 79 7. 82 8. 94  
C. 1. IIII 2. XVX 4. LLI 6. LCX  
D. 1. (c) 2. (d) 3. (e) 4. (b) 5. (a)

### HOTS (page 92)

1.  $\square \vee + \times = \square \times \vee$

2.  $\square | - \times = \times \square |$

or

$$\square - | \times = \times \square |$$

### Fun Zone (Pages 92 – 93)

1. 12421 or 21412 2. 36563 or 63536 3. 43234 or 34243  
4. 965569 or 956659 or 596695 or 569965 or 659956 or 695596

## 2. ADDITION AND SUBTRACTION

### ANSWERS

#### Let Us Recall

- A. 1. 9482 2. 5710  
B. 1. 4541 students 2. 2561 seats  
C. 1. 3258 2. 3474 3. 4339 4. 0 5. 1274  
D. correct  
E. 4552  
F. 5610  
G. 3900  
H. 9000 items

#### EXERCISE 2.1

- A. 1. 66936 2. 86995 3. 848686 4. 67240 5. 95542 6. 702513  
B. 1. 91388 2. 99796 3. 680621 4. 101487  
C. 1. 60353 2. 1040851 3. 126743 4. 98423 5. 1381325 6. 62657

#### EXERCISE 2.2

- A. 1. 123978 letters 2. 68423 men 3. 85367 i-pods 4. 430299 patients 5. 87727 computers  
6. 687379 connections 7. 66998 bricks 8. 80358 9. 522439 cars 10. 120149 televisions

#### EXERCISE 2.3

- A. 1. 77258 2. 52728 3. 741419, 214227 4. 22742, 31091 5. 64041  
6. 545074, 676072 7. 22164, 12707, 41565 8. 46952 9. 672274 10. 0

#### EXERCISE 2.4

- A. 1. 40680 2. 402570 3. 97560 runs  
B. 1. 98100 2. 967400 3. 48500 cars  
C. 1. 98000 2. 580000 3. 72000  
D. 1. 30000 2. 390000 3. 40000 coins  
E. 1. 700000 2. 600000 3. ₹ 900000

#### EXERCISE 2.5

- A. 1. 53583 2. 24262 3. 311520 4. 19265 5. 55490 6. 328757  
B. 1. 11725 2. 13163 3. 727989 4. 5927  
C. 1. 16998 2. 113883  
D. 1. 22499 2. 26798 3. 434887 4. 9768  
E. 1. correct 2. Incorrect

#### EXERCISE 2.6

1. 32011 patients 2. 37465 3. 31716 men 4. 303132 soldiers 5. 239996 eggs

6. 14031 votes   7. 15409 votes   8. 17084 km   9. 32134   10. 147068

**EXERCISE 2.7**

1. 12552   2. 27142   3. 0   4. 0   5. 57814   6. 0   7. 0   8. 0   9. 912776   10. 17214  
11. 22589   12. 367241

**EXERCISE 2.8**

- A. 1. 20080   2. 209480   3. 13260 coins
- B. 1. 25400   2. 343100   3. 19200
- C. 1. 3000   2. 600000   3. 43000 footfalls
- D. 1. 0   2. 340000   3. 30000 visitors
- E. 1. 500000   2. 400000   3. 200000

**EXERCISE 2.9**

- A. 1. 88698   2. 35503   3. 229949   4. 56870   5. 21343   6. 133875
- B. 37158 Litres
- C. ₹ 48936
- D. 25209 barrels
- E. 161723 bags

**Fun Zone (pages 112–113)**

1. 220   2. 724   3. 1186   4. 834   5. 153   6. 3230



# 3. MULTIPLICATION

## ANSWERS

### Let Us Recall

A.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

B.

×	1	2	3	4	5	6	7	8	9	10
11	11	22	33	44	55	66	77	88	99	100
12	12	24	36	48	60	72	84	96	108	120
13	13	26	39	52	65	78	91	104	117	130
14	14	28	42	56	70	84	98	112	126	140
15	15	30	45	60	75	90	105	120	135	150

C. 1. 6 2. 9 3. 13; 13; 13; 13; 13 4. 6; 15

D. 1. 41536 2. 58500 3. 36205 4. 22316 5. 39885 6. 22068

E. 61250 erasers

F. 1. 6160 2. 37900 3. 36000 4. 1680 5. 64000 6. 12000

G. 1. 21235 2. 30853 3. 0 4. 0 5. 0 6. 72315

H. 53000

### EXERCISE 3.1

A. 1. 7 2. 10 3. 18 4. 19 5. 16; 16; 16; 16; 16 6. 20; 20; 20; 20 7. 8; 17 8. 9; 18

B. 1. 80, 96, 112, 128, 144 2. 68, 85, 102, 119, 136, 153

3. 54, 72, 90, 108, 126, 144, 162 4. 38, 57, 76, 95, 114, 133, 152, 171

5. 40, 60, 80, 100, 120, 140, 160, 180

- C. 1. 112, 96, 80, 64, 48, 32    2. 136, 119, 102, 85, 68, 51, 34  
 3. 162, 144, 126, 108, 90, 72, 54, 36    4. 171, 152, 133, 114, 95, 76, 57, 38  
 5. 180, 160, 140, 120, 100, 80, 60, 40

D.  $9 \times 19 = \underline{171}$                        $7 \times 19 = \underline{133}$                        $5 \times 17 = \underline{85}$   
 $5 \times 20 = \underline{100}$                        $9 \times 17 = \underline{153}$                        $8 \times 17 = \underline{136}$   
 $10 \times 20 = \underline{200}$                        $7 \times 18 = \underline{126}$                        $8 \times 19 = \underline{152}$   
 $10 \times 16 = \underline{160}$                        $10 \times 17 = \underline{170}$                        $7 \times 20 = \underline{140}$   
 $6 \times 20 = \underline{120}$                        $2 \times 18 = \underline{36}$                        $9 \times 16 = \underline{144}$   
 $9 \times 18 = \underline{162}$                        $10 \times 19 = \underline{190}$                        $5 \times 20 = \underline{100}$

**EXERCISE 3.2**

- A. 1. 237555    2. 242064    3. 2279275    4. 615366    5. 649078    6. 2486180  
 B. 1. 228784    2. 2452016    3. 728263    4. 4007172    5. 622926    6. 3839202    7. 450243  
 8. 3844555    9. 522940  
 C. 1. 208431    2. 334984    3. 135359    4. 1475605    5. 1651084

**EXERCISE 3.3**

- A. 1. 74089    2. 164982  
 B. 1. 307359    2. 90210    3. 87552    4. 63128    5. 81498    6. 279992    7. 391356    8. 1741115

**EXERCISE 3.4**

1. 584230    2. 462430    3. 626300    4. 963300    5. 789000    6. 591000    7. 4650000  
 8. 2410000    9. 2300000

**EXERCISE 3.5**

1. 242940    2. 571320    3. 571500    4. 770400    5. 1608000    6. 3017000  
 7. 12600000    8. 2800000    9. 6000000    10. 8000000

**EXERCISE 3.6**

1. 180000    2. 320000    3. 8400000    4. 750000    5. 1764000    6. 7920000    7. 4620000  
 8. 5848000    9. 9480000

**EXERCISE 3.7**

1. 144 toffees    2. 144 km    3. 544306 coins    4. 408500 toys    5. 2011530 calculators  
 6. 80800 cricket bats    7. 1621080 toothbrushes    8. 123960 paintbrushes  
 9. 246000 bottles    10. 700000 note-books    11. 435600 balls    12. 2400000 pens  
 13. 60000 cans    14. 680000 sheets    15. 503700 bags

**EXERCISE 3.8**

1. 231226    2. 1    3. 752343    4. 109079    5. 729281    6. 0    7. 0    8. 235326; 485231  
 9. 321321; 134932    10. 170345; 200521

**EXERCISE 3.9**

- A. 1. 131200    2. 1139500  
 B. 38400 combs  
 C. 1. 120000    2. 150000

- D. 150000 pens  
 E. 1. 4000000 2. 12000000  
 F. 6000000 screws

**Fun Zone (page 130)**

1. 3196 2. 44872 3. 152368

**PERIODIC TEST—1**

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

- B. 1. 60000 2. 100000 3. 3087 4. 720 hours

C. 1.

$$\begin{array}{r}
 5 \boxed{2} 3 \ 4 \ 6 \\
 4 \ 3 \ 7 \ 8 \ \boxed{9} \\
 + \ \boxed{8} 1 \ 5 \ \boxed{2} \ 9 \\
 \hline
 \boxed{1} \ 7 \ 7 \ \boxed{6} \ 6 \ 4
 \end{array}$$

2.

$$\begin{array}{r}
 \boxed{4} \ 8 \ \boxed{9} 1 \ 0 \ \boxed{5} \\
 - 2 \ \boxed{9} 2 \ 9 \ \boxed{0} \ 6 \\
 \hline
 1 \ 9 \ 6 \ \boxed{1} \ 9 \ 9
 \end{array}$$

3.

$$\begin{array}{r}
 3 \ \boxed{8} \\
 \times \ \boxed{2} \ 4 \\
 \hline
 1 \ 5 \ \boxed{2} \\
 7 \ \boxed{6} \\
 \hline
 \boxed{9} 1 \ 2
 \end{array}$$

- D. 1. 10 2. 11000 3. 3200 4. 4 5. 100

- E. 1. (a) LXIX (b) XCVIII  
 2. (a) 18 (b) 82

- F. 1. 97000 2. 792000

- G. 1. Largest number: 876531; Smallest number: 135678  
 2. Largest number: 986421; Smallest number: 124689

- H. 1. 307359 2. 279992

- I. 32134

# 4. DIVISION

## ANSWERS

### Let Us Recall

- A. 1. 6 2. 8 3. 4 4. 7 5. 9  
B. 8 bananas  
C. 1. 1266 2. 4624 3. 7425 4. 4652 5. 3145  
D. 1.  $Q = 3261; R = 8$  2.  $Q = 3400; R = 12$   
E. 1. 1 2. 64143 3. 24241 4. 1

### EXERCISE 4.1

$126 \div 18 = \underline{7}$	$40 \div 20 = \underline{2}$	$144 \div 16 = \underline{9}$
$85 \div 17 = \underline{5}$	$96 \div 16 = \underline{6}$	$160 \div 20 = \underline{8}$
$51 \div 17 = \underline{3}$	$180 \div 20 = \underline{9}$	$136 \div 17 = \underline{8}$
$38 \div 19 = \underline{2}$	$153 \div 17 = \underline{9}$	$112 \div 16 = \underline{7}$
$90 \div 18 = \underline{5}$	$64 \div 16 = \underline{4}$	$119 \div 17 = \underline{7}$
$80 \div 16 = \underline{5}$	$102 \div 17 = \underline{6}$	$114 \div 19 = \underline{6}$
$95 \div 19 = \underline{5}$	$54 \div 18 = \underline{3}$	$108 \div 18 = \underline{6}$
$140 \div 20 = \underline{7}$	$171 \div 19 = \underline{9}$	$133 \div 19 = \underline{7}$
$100 \div 20 = \underline{5}$	$57 \div 19 = \underline{3}$	$200 \div 20 = \underline{10}$
$128 \div 16 = \underline{8}$	$36 \div 18 = \underline{2}$	$162 \div 18 = \underline{9}$

### EXERCISE 4.2

- A. 1.  $Q = 17023$  2.  $Q = 17260$  3.  $Q = 38529$  4.  $Q = 23641$  5.  $Q = 11688$   
B. 1.  $Q = 193576; R = 15$  2.  $Q = 375536; R = 11$  3.  $Q = 8089; R = 3$  4.  $Q = 38078; R = 16$   
5.  $Q = 415411; R = 17$

### EXERCISE 4.3

- A. 1.  $Q = 3747; R = 25$  2.  $Q = 9651; R = 32$  3.  $Q = 5743; R = 40$  4.  $Q = 57481; R = 15$   
5.  $Q = 65557; R = 13$  6.  $Q = 5448; R = 58$  7.  $Q = 3669; R = 131$  8.  $Q = 3541; R = 155$   
9.  $Q = 23939; R = 282$  10.  $Q = 18015; R = 425$   
B.  $Q = 10101$  C.  $Q = 10010, R = 9$

### EXERCISE 4.4

- A. 1.  $Q = 52$  2.  $Q = 283$  3.  $Q = 7883$  4.  $Q = 19$  5.  $Q = 272$  6.  $Q = 3282$   
7.  $Q = 24$  8.  $Q = 913$  9.  $Q = 1274$   
B. 1.  $Q = 423; R = 3$  2.  $Q = 9086; R = 2$  3.  $Q = 872, R = 76$  4.  $Q = 1822, R = 34$   
5.  $Q = 327, R = 370$  6.  $Q = 6387, R = 173$

### EXERCISE 4.5

1. 9 tables 2. 8 items 3. 1453 packets 4. 9 copies  
5. 45158 packets can be made, only 4 pens are left behind

6. 4540 garlands can be made
7. 18083 packets can be made, only 14 pan cakes are left behind
8. 14520 packets can be made
9. 201992 packets can be made, only 7 soap cakes are left behind
10. 35622 containers can be completely packed, only 18 shuttle cocks are left behind
11. 4878 garlands can be made, only 24 flowers are left behind
12. 2033 containers can be completely packed, only 111 buttons are left behind
13. 37 roses    14. 16 marbles
15. 174 packets can be made, only 92 pan cakes are left behind

### EXERCISE 4.6

1. 1    2. 1    3. 84156    4. 762988    5. 91245    6. 674481    7. 52161    8. 248153    9. 1
10. 1    11. 12537    12. 473981

### EXERCISE 4.7

- A. 1. 9    2. 5    3. 5      B. 1. 10    2. 6    3. 16      C. 1. 40    2. 40    3. 80    4. 250

### HOTS (page 146)

1.  $3 + 5, 2 \times 4, 9 - 1$ , etc., give result 8.
2.  $6 \div 3, 2 \times 1, 7 - 5, 8 \div 4$ , etc., give result 2.
3.  $8 \div 2, 9 - 5, 4 + 0, 1 + 3, 7 - 3$ , etc., give result 4.

### Fun Zone (page 147)

#### Triangle Challenge!

Rule:  $\bigcirc \xrightarrow{\times 2} \bigcirc \xrightarrow{-1} \bigcirc \xrightarrow{\times 3} \bigcirc \xrightarrow{+1} \bigcirc \xrightarrow{\times 4} \bigcirc$

Row 1:  $(4) (8) (7) (21) (22) (88)$     Row 2:  $(7) (14) (13) (39) (40) (160)$

Row 3:  $(3) (6) (5) (15) (16) (64)$     Row 4:  $(8) (16) (15) (45) (46) (184)$

Row 5:  $(6) (12) (11) (33) (34) (136)$     Row 6:  $(5) (10) (9) (27) (28) (112)$

### Puzzle (pages 147–148)

#### Triangle Challenge!

1.  $(5 + 4) \times 6 = 54, (3 + 9) \times 6 = 72, (8 + 12) \times 6 = 120$
2.  $(35 \div 7) \times 2 = 10, (96 \div 16) \times 2 = 12, (105 \div 15) \times 2 = 14$
3.  $(7 + 5) \times 2 = 24, (19 + 11) \times 2 = 60, (37 + 13) \times 2 = 100$

#### Square Challenge!

1.  $\xrightarrow{+}$ 

356	120	476
225	75	300
131	45	176

    2.  $\xrightarrow{-}$ 

999	500	499
444	356	88
1443	856	587

    3.  $\xrightarrow{\div}$ 

48	12	4
6	3	2
288	36	8

    4.  $\xrightarrow{\times}$ 

120	15	1800
8	5	40
15	3	45

# 5. FACTORS AND MULTIPLES

## ANSWERS

Page 150

								1	×	18	=	18						
		2	×	9	=	18												
	3	×	6	=	18													

### EXERCISE 5.1

- A. 1. 1, 2, 7, 14   2. 1, 2, 4, 5, 10, 20   3. 1, 2, 3, 5, 6, 10, 15, 30   4. 1, 2, 3, 4, 6, 9, 12, 18, 36  
 5. 1, 2, 3, 6, 7, 14, 21, 42   6. 1, 2, 4, 7, 8, 14, 28, 56   7. 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60  
 8. 1, 3, 5, 15, 25, 75
- B. 1. Yes   2. Yes   3. No   4. Yes   5. No   6. Yes   7. No   8. Yes
- C. 1. 1   2. 2, 3   3. 10   4. two; 1, 5   5. factors
- D. 1. 5, 7, 9, 20   2. 6, 9, 3, 10, 18   3. 2, 3, 4, 6, 8, 9, 12, 18, 24, 36   4. No
- E. 1. 1, 2   2. 1, 5   3. 1, 2, 3, 4, 6, 12   4. 1, 2, 3, 4, 6, 8, 12, 24   5. 1, 2, 3, 5, 6, 10, 15, 30  
 6. 1, 2, 4, 8, 16, 32   7. 1, 5, 25   8. 1, 2, 3, 6, 7, 14, 21, 42

### EXERCISE 5.2

- A. 1.  $5 \rightarrow 5, 10, 15, 20, 25$    2.  $7 \rightarrow 7, 14, 21, 28, 35$    3.  $8 \rightarrow 8, 16, 24, 32, 40$   
 4.  $10 \rightarrow 10, 20, 30, 40, 50$    5.  $11 \rightarrow 11, 22, 33, 44, 55$    6.  $14 \rightarrow 14, 28, 42, 56, 70$   
 7.  $17 \rightarrow 17, 34, 51, 68, 85$    8.  $20 \rightarrow 20, 40, 60, 80, 100$
- B. 1. 18, 21, 24   2. 39, 52, 65, 78   3. 55 and 66   4. 105, 120, 135   5. 96, 128 and 176
- C. 1. No   2. Yes   3. No   4. Yes
- D. 1. 6, 12, 18, ...   2. 30, 60, 90, ...   3. 24, 48, 72, ...   4. 36, 72, 108, ...   5. 30, 60, 90, ...  
 6. 60, 120, 180, ...   7. 48, 96, 144, ...   8. 18, 36, 54, ...

### Mental Test (page 158)

1. LCM = 16, HCF = 4   2. LCM = 45, HCF = 9   3. LCM = 36, HCF = 12   4. LCM = 147, HCF = 7

### EXERCISE 5.3

- A. 1. 6   2. 5   3. 6   4. 8   5. 2   6. 4   7. 5   8. 12
- B. 1. 6   2. 12   3. 10   4. 40   5. 48   6. 18   7. 60   8. 60
- C. 1. No, as 6 is not a factor of 15.   2. Yes, as 18 is a factor of 72.

3. No, as 25 is not divisible by 20. 4. Yes, as 48 and 84 are divisible by 12.  
5. HCF = 2 and LCM = 60; 60 is divisible by 2.

### EXERCISE 5.4

- A. 1. odd 2. even 3. odd 4. odd 5. even 6. odd 7. odd 8. even 9. even  
10. odd 11. odd 12. even
- B. 1. prime 2. composite 3. prime 4. composite 5. composite 6. composite  
7. prime 8. composite 9. composite 10. prime 11. prime 12. composite
- C. 1. 2, 3, 5, 7, 11, 13, 17, 19 2. 3, 5; 5, 7; 11, 13; 17, 19, etc. 3. 9  
4. 2, 3; 6, 7; 16, 25; etc. 5. 1 is neither prime nor composite. 6. 4  
7. No 8. 15 is composite, so, 13 and 15 are not twin primes. Yes, 10 and 21 are co-primes.  
9. No, as 2 is even.

### Test Yourself (page 161)

30, 60, 90

### EXERCISE 5.5

- A. 1. (a) 20, 36, 44, 98 (b) 102, 324, 990 2. (a) 12, 75, 90 (b) 417, 834, 3012  
3. (a) 65, 80, 145 (b) 675, 880, 1350 4. (a) 30, 50, 270, 1020 (b) 3500, 8310

B.

	Numbers	by 2	by 3	by 5	by 10
1.	720	✓	✓	✓	✓
2.	2345	×	×	✓	×
3.	10360	✓	×	✓	✓
4.	20610	✓	✓	✓	✓
5.	35545	×	×	✓	×
6.	36918	✓	✓	×	×

- C. 1. 2 2.1 3.4 4.1 5.1 6.2

- D. 1. 42, 48, 54 2. No, as 15 and 25 are divisible by 5 but not divisible by 10.

### Fun Zone (page 163)

1. 3, 5; 5, 7; 11, 13; 17, 19; 29, 31; 41, 43; 59, 61 and 71, 73  
2. Yes, 90, 91, 92, 93, 94, 95, 96  
3. 10 pairs in all → 3, 13; 7, 17, 13, 23; 19, 29; 31, 41; 37, 47; 43, 53; 61, 71; 73, 83 and 79, 89



# 6. GEOMETRY

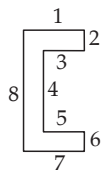
## ANSWERS

Page 165

C	U	B	O	I	D		
Y			T		R	A	Y
L	C	U	R	V	E		
I		C	I	R	C	L	E
N			A		T		
D	C	O	N	E	A		L
E			G		N		I
R	P	O	L	Y	G	O	N
C	U	B	E		L		E
S	Q	U	A	R	E		

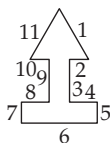
### EXERCISE 6.1

A. 1.



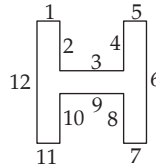
8 line segments

2.



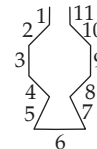
11 line segments

3.



12 line segments

4.



11 line segments

B. 1. Line segment:  $\overline{QT}$ , Rays:  $\overline{QP}$  and  $\overline{TU}$ , Line:  $\overline{RS}$

2. Line segments:  $\overline{AB}$ ,  $\overline{BC}$  and  $\overline{AC}$ , Ray:  $\overline{CF}$ , Line:  $\overline{DE}$

3. Line segment:  $\overline{XZ}$ , Ray:  $\overline{YZ}$ , Line:  $\overline{XY}$

C. 1. Open 2. Closed 3. Closed 4. Open 5. Closed 6. Open

D. Polygons: 3, 4 and 5

E. Do it yourself.

F. 1.  $\overline{AB} = 4.4$  cm,  $\overline{BC} = 2.1$  cm 2.  $\overline{CD} = 4.1$  cm,  $\overline{EF} = 3.3$  cm 3.  $\overline{PQ} = 3.1$  cm,  $\overline{LM} = 3.1$  cm

### Mental Test (page 169)

An angle between walls of the room, An angle between the wall and the ladder, An angle between two spikes of the bicycles' wheels, etc.

### EXERCISE 6.2

A. 1.



Two

2.



Four

3.



Three

4.



One



- B. 1.  $\angle 1$  2.  $\angle a$  3.  $\angle a$  and  $\angle p$  4.  $\angle 1$  and  $\angle 2$  5.  $\angle LMN$  or  $\angle NML$  6.  $\angle BAC$  or  $\angle CAB$   
 7.  $\angle PQR$  or  $\angle RQP$  and  $\angle QRS$  or  $\angle SRQ$   
 C. 1. A, F 2. C, G, E 3. X, B, Y, D, Z  
 D. 1. False 2. False 3. False 4. True 5. True E. 1. 10 2. 14

### EXERCISE 6.3

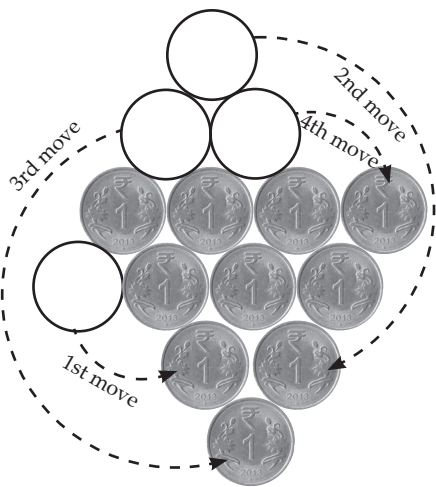
- A. 1. 8 cm 2. 5 cm  
 B. 1. centre 2. diameter 3. chord 4. radius 5. PQ 6. arc  
 C. 

Radius	2 cm	3 cm	3.5 cm	7.5 cm	20 cm	2 m 10 cm
Diameter	4 cm	6 cm	7 cm	15 cm	40 cm	4 m 20 cm

  
 D. 1. diameter = 6 cm 2. diameter = 10 cm 3. diameter = 9 cm 4. diameter = 7.6 cm  
 E. Do it yourself.  
 F. Do it yourself.  
 G. 1. Diameter = 4 cm, Radius = 2 cm 2. Diameter = 10 cm, Radius = 5 cm  
 H. 1. circumference 2. diameter 3. radius 4. centre 5. equal

### Fun Zone (pages 175–176)

Hint: B.



### Puzzle (page 157)

7 circles; yes, 42 strips

## PERIODIC TEST—2

- A. 1. (c) 2. (b) 3. (a) 4. (b) 5. (a)  
 B. 1. True 2. True 3. False 4. False  
 C. 1.  $30000 + 6000 + 0 + 70 + 8$  2.  $500000 + 40000 + 5000 + 900 + 0 + 5$   
 D. 101487  
 E. 522940  
 F. 1. No 2. No  
 G. 3; 5, 11; 13  
 H. 3  
 I. 1. A, F 2. C, G, E 3. X, B, Y, D, Z  
 J. 1. one 2. 12 cm 3. 15, 25, 35, 45, 55, etc.

# 1. FOOD MAKING IN PLANTS

## ANSWERS

### Warm Up

Leaves make food and flower turns into fruit.

### Checkpoint 1

1. Glucose 2. chlorophyll 3. take 4. Starch

### Checkpoint 2

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

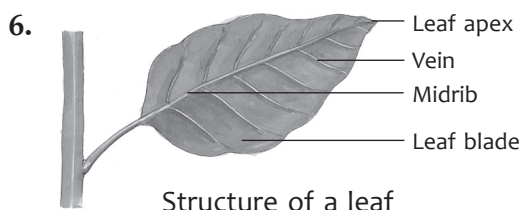
### Check Your Study

- A. 1. (b) 2. (d) 3. (a) 4. (c)
- B. 1. leaves 2. chlorophyll 3. food 4. water; minerals
- C. 1. Stomata help in the exchange of gases and water vapour between the leaf and the air.  
 2. Chlorophyll makes the leaves look green and helps in the synthesis of food.  
 3. Xylem carries water taken by roots to all parts of the plant.  
 4. Phloem carries food made by leaves to all parts of the plant.
- D. 1. Carbon dioxide + Water  $\xrightarrow[\text{Chlorophyll}]{\text{Sunlight}}$  Glucose + Oxygen + Water vapour  
 2. The food manufactured by plants is used for growth and building new cells, and to repair worn-out cells.

3.

Pitcher plant	Cactus
(a) Its digests insects to get required minerals.	(a) Its stem becomes green, thick and fleshy.
(b) Its leaves take the shape of pitchers.	(b) Its leaves get changed into spines.

4. Because cacti grow in deserts where enough water is not available.
5. (a) Animals breathe out carbon dioxide which is used by plants for making food while in turn, plants release oxygen which is used by animals for breathing.  
 (b) Animals get food from plants and when die, they become part of the soil and make it rich in minerals which are used by plants.



- E. 1. Root hair; Root hair is a part of root, rest are parts of a leaf.  
 2. Stomata; Stomata help in exchange of gases, rest distribute water and food in the plant.  
 3. Carbon dioxide; Carbon dioxide is used whereas rest are produced by plants during photosynthesis.

## 2. ADAPTATIONS IN PLANTS

### ANSWERS

#### Warm Up

This plant grows in water.

#### Checkpoint 1

1. Habitat
2. Terrestrial plants
3. Cones
4. Mangroves
5. Spiny leaves

#### Checkpoint 2

1. Lotus
2. Waterlily
3. Water hyacinth
4. Yam

#### Check Your Study

- A. 1. (a) 2. (a) 3. (a)
- B. 1. Aquatic plant 2. Terrestrial plant 3. Terrestrial plant 4. Aquatic plant  
5. Aquatic plant 6. Terrestrial plant
- C. 1. False 2. False 3. True 4. True 5. False
- D. 1. Hilly plants have shorter stems, needle-like leaves and conical shape.  
2. Plants growing in plains are mostly big trees, have big and broad leaves which are shed in winters and new one are grown in spring.  
3. (a) Desert plants have long root system that goes deep in the ground to get water.  
(b) Their stems become fleshy by storing water.  
(c) They have waxy coating on leaves and stems to reduce water loss.  
(d) In some plants, leaves change into spines.  
4. As mangroves grow in waterlogged soil, their roots grow out of the soil to get air.  
5. The submerged plants carry out exchange of gases through their body surface.
- E. 1. The pineapple fruit has spines to protect itself from animals.  
2. To save themselves from animals.  
3. To save themselves from rotting.

# 3. ADAPTATIONS IN ANIMALS

## ANSWERS

### Warm Up

This animal lives in snowy areas.

### Checkpoint 1

1. Trees
2. Snow
3. Water
4. Caves, old buildings
5. Desert
6. Trees
7. Snow
8. Land, water

### Checkpoint 2

1. Herbivore
2. Carnivore
3. Parasite
4. Camouflaging animal

### Check Your Study

- A. 1. (a) 2. (c) 3. (c)
- B. 1. False 2. False 3. True 4. False
- C. 1. snake 2. fur 3. tail 4. webbed
- D. 1. Duck 2. Squirrel 3. Camel 4. Snake
- E. 1. Amphibians breathe through lungs on land and through skin in water.
2. The hiding of some animals in warm places to save themselves from cold during winters is called hibernation. Frog and lizard are hibernating animals.
3. The merging of an animal by means of its body colour with its surroundings for protecting itself from its enemies is called body camouflaging. For example, chameleon changes its colour according to its surroundings and the body colour of grasshopper is exactly the colour of the leaves of plants.
4. Porcupine has spines on its body to protect itself from its enemies.
- F. 1. To run very fast for catching their prey.
2. Because they suck the food from the body of their host.
3. To make it difficult to be spotted by its enemies.

# 4. REPRODUCTION IN ANIMALS

## ANSWERS

### Warm Up

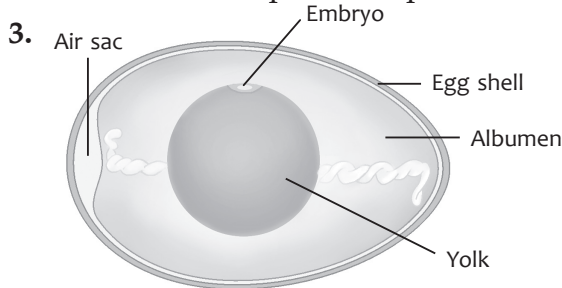
Birds make nest to lay their eggs and bring up their babies.

### Checkpoint

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

### Check Your Study

- A. 1. (a) 2. (b) 3. (a) 4. (c)  
B. 1. embryo 2. tadpole 3. moulting 4. pupa 5. cocoon  
C. 1. Reproduction 2. Reptiles 3. Yolk 4. Spawn  
D. 1. Producing babies of own kind is called reproduction.  
2. Birds, fishes, reptiles, amphibians and insects lay eggs.



Structure of a bird's egg

4. The different stages in the lifecycle of a butterfly are egg, larva, pupa and adult.  
5. The frog produces spawn of eggs in water. The eggs hatch into tadpoles which develop legs and arms and grow into young frogs with tails. After a few days, their tail disappears and adult frogs are formed.  
6. Mammals take care of their babies by feeding and protecting them from enemies.
- E. 1. (a) Frog; Frog is an amphibian, rest are insects.  
(b) Crow; Crow is a bird, rest are reptiles.  
(c) Tadpole; Tadpole is a larval form, rest are adults.  
(d) Dolphin; Dolphin is a mammal, rest are birds.  
2. (a) Because mammals take good care of their babies. They feed them and keep them safe until they learn to look after themselves.  
(b) Because it lives in water and has gills to breathe.

## PERIODIC TEST—1

- A. 1. mangroves 2. Yolk 3. starch 4. Bat 5. cones  
B. 1. False 2. True 3. True 4. False 5. True  
C. 1. (c) 2. (a) 3. (e) 4. (b) 5. (d)  
D. 1. (c) 2. (a) 3. (a) 4. (c) 5. (a)  
E. 1. Different types of terrestrial habitats are hills and mountains, plains, marshy areas,

and deserts.

2. (i) Desert plants store water in their stems.  
(ii) They have short and spiny leaves to reduce loss of water.
3. Birds have light, hollow and air-filled bones to make their body light.
4. Animals reproduce to continue their generation.
5. The food manufactured by plants is used for growth, building new cells, and to repair worn-out cells.

# 5. THE WORLD OF MICROBES

## ANSWERS

### Warm Up

Mushrooms

### Checkpoint 1

1. True
2. False
3. True

### Checkpoint 2

1. Cholera, Tetanus
2. Common cold, Polio
3. Dysentery, Malaria

### Check Your Study

- A. 1. (d) 2. (a) 3. (c) 4. (c)
- B. 1. Viruses 2. Protozoa 3. Fungi 4. hot; damp
- C. 1. Microbes are tiny organisms that can be seen only under a microscope. They are bacteria, viruses, protozoa and fungi.
2. Bacteria are round, rod-shaped, spiral and comma-shaped.
  3. Because fungi do not have chlorophyll.
  4. Removal of water from a substance is called dehydration.
  5. Boiling kills harmful microbes present in the milk.
  6. Too much of salt in pickles and sugar in jams does not allow microbes to grow.
- D. 1. Cholera; Cholera is a bacterial disease, rest are diseases caused by viruses.
2. Chickenpox; Chickenpox is caused by virus, rest are bacterial diseases.
  3. Washing; Washing is an act of cleaning something, rest are methods of preserving food.
  4. Protozoa; Protozoa are classified as animals, rest are classified as plants.

# 6. HEALTHY EATING

## ANSWERS

### Warm Up

Yes, because it has many types of fresh fruits.

### Checkpoint 1

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

### Checkpoint 2

1. Balanced diet
2. Overcooking
3. Steaming
4. Jams

### Check Your Study

- A.** 1. (b) 2. (c) 3. (d) 4. (b)
- B.** 1. nutrients 2. carbohydrates; fats 3. protein 4. roughage 5. preservation
- C.** 1. We need food to stay alive and to get energy, grow and keep the body fit.  
2. The diet that contains the right amount of all the nutrients is called a balanced diet.  
The main components of a balanced diet are the food items from grain group, fruit group, vegetable group, meat group and milk group.  
3. Vitamins and minerals are important because they protect us from diseases.  
4. Boiling, frying, steaming, roasting and baking are different ways of making food edible.  
5. Because overcooking destroys the nutrients of the food.  
6. The process of protecting food from getting spoiled by microbes and keeping it safe to eat for longer period of time is called food preservation. Baking, salting, drying, refrigeration, etc., are some ways of food preservation.
- D.** 1. (a) Cashewnut; Cashewnut is a dried-fruit that contains fat, rest are vegetables and contain vitamins and minerals.  
(b) Apple; Apple is a protective food containing minerals and vitamins, rest are energy-giving food containing fats.  
(c) Potato; Potato contains carbohydrate, rest contain protein.
2. (a) Because they are rich source of vitamin C which protects us from many diseases.  
(b) Because some food items in raw form are not easily digested.  
(c) Because they have to perform lots of physical activities which need extra energy and strong muscles.



# 7. TEETH AND DIGESTION

## ANSWERS

### Warm Up

The teeth of a baby are shown.

### Checkpoint 1

1. Milk teeth 2. Pulp 3. Canines 4. Enamel 5. Root

### Checkpoint 2

1. bad breath 2. starch 3. small intestine 4. large intestine

### Check Your Study

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

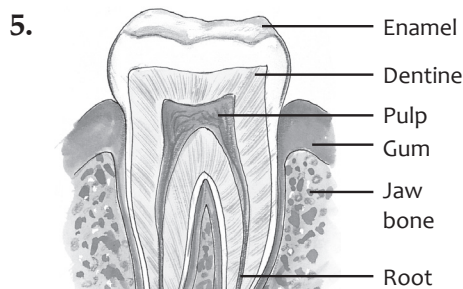
B. 1. False 2. True 3. True 4. True

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

D. 1. The teeth that erupt between the age of six and nine months and fall out between six and twelve years of age are called milk teeth. They are 20 in number. The new set of teeth that takes place of milk teeth is called permanent teeth. They are 32 in number.

2. (a) Incisors – They are used to bite the food.  
(b) Canines – They are used for tearing the food.  
(c) Premolars – They are used for crushing the food.  
(d) Molars – They are used for grinding the food.
3. (a) Brushing teeth twice a day.  
(b) Rinsing mouth after every meal.  
(c) Avoiding too much of sweets and aerated drinks.  
(d) Getting checked by dentist regularly.

4. Mouth → Foodpipe → Stomach → Small intestine → Large intestine → Anus



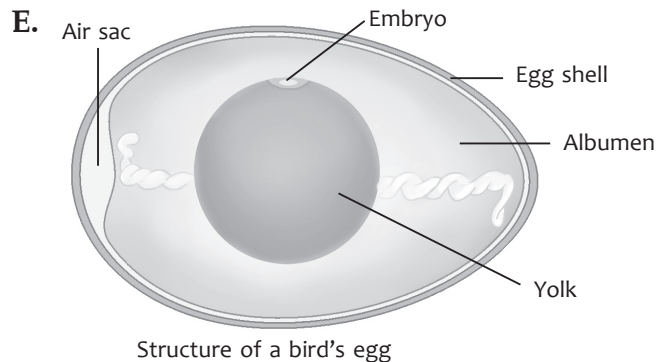
Structure of a tooth

D. 1. Unhealthy teeth cannot chew the food well. The unchewed food cannot be digested properly.

2. Because chewing the food mixes saliva well with it and helps in the digestion.
3. Teeth at the back of jaw are broader to crush and grind the food properly.

## PERIODIC TEST—2

- A. 1. apex 2. water 3. protozoa 4. 20 5. large
- B. 1. Fungi 2. Unicellular 3. Fat 4. Baking 5. Enamel
- C. 1. (d) 2. (a) 3. (f) 4. (e) 5. (c) 6. (b)
- D. 1. Insectivorous plants catch insects to get required minerals because they grow in soil poor in minerals.
2. We keep food in refrigerator to save it from spoilage.
3. We should take care of our teeth by
- (a) Brushing teeth twice a day.
  - (b) Rinsing mouth after every meal.
  - (c) Avoiding too much of sweets and aerated drinks.
  - (d) Getting checked by dentist regularly.
4. Overcooking of food should be avoided because it destroys the nutrients of the food.
5. The merging of an animal with its surroundings by means of its body colour for protecting itself from its enemies is called camouflaging. For example, chameleon changes its body colour according to its surroundings.



# 1. INDIA – OUR MOTHERLAND

## ANSWERS

### Warm Up

First map.

### Checkpoint

1. seventh
2. Palk Strait
3. Tropic of Cancer
4. Indira Point

### Check Your Study

A. 1. (b) 2. (c)

B. 1. False 2. True 3. False

C. 1. China, Nepal, Bhutan, Bangladesh, Sri Lanka, Pakistan and Afghanistan.

2. The Union Territories are governed by the central government but the states are governed by state governments elected by the people of the states.

3. The main physical divisions of India are the northern mountain, the northern plains, the western desert, the southern plateaus, the coastal plains and the Islands.

D. **Hint:** From warm-wet to dry hot, cold to extreme cold.

E. **Hint:** visit: [www.telangana.gov.in](http://www.telangana.gov.in)

F. Do it yourself.

## 2. INDIA –THE NORTHERN MOUNTAINS

### ANSWERS

#### Warm Up

2. Bachendri Pal (✓)

#### Checkpoint

1. Home of Snow. 2. K2 3. Shiwalik.

#### Check Your Study

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

- B. 1. The Himalayan mountain ranges extend to a distance of about 2500 km from west to east.
2. The Greater Himalayas, the Lesser Himalayas and the Lower Himalayas.
  3. The forests provide us with wood and medicines.
  4. 1. The high mountain ranges act as a natural barrier against invaders.  
2. The ranges protect us from the cold winds coming from the far north.  
3. They check the monsoon winds coming from the Arabian Sea and the Bay of Bengal, and thus provide heavy rainfall.  
4. Many rivers originate from the glaciers in the mountains.  
5. The forests on the mountains provide us with wood.  
6. Dams, which are built across many rivers, help in producing electricity.

- C. **Hint:** Tourism.

- D. Do it yourself.

- E. One should wear a proper helmet and, oxygen mask and equipment while climbing a mountain.

## 3. INDIA – THE NORTHERN PLAINS

### ANSWERS

#### Warm Up

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

#### Checkpoint

1. river basin 2. Satluj 3. Mansarovar Lake

#### Check Your Study

- A. 1. (b) 2. (b) 3. (b)  
B. 1. (c) 2. (a) 3. (b)  
C. 1. The Satluj River Basin, the Ganga River Basin and the Brahmaputra River Basin.  
2. The Bhakra Dam helps in irrigation and in producing electricity.  
3. The Northern Plains are fertile and help to produce a good amount of foodgrains.  
D. **Hint:** Yes, pollution affects agriculture and other things.  
E. **Hint:** visit site [www.moef.nic.in/sites/default/files/ngrba/index.html](http://www.moef.nic.in/sites/default/files/ngrba/index.html)  
F. (b)

## 4. INDIA – THE WESTERN DESERT

### ANSWERS

#### Warm Up

Camel (✓)

#### Checkpoint

1. (X)

#### Check Your Study

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

B. 1. Dune 2. Oasis 3. Caravan

C. 1. The Thar Desert or the great Indian Desert is located towards the west of the Northern Plains of India.

2. Low hills of sand are called sand dunes. Strong wind shifts them.

3. Camels help in the transport of people and goods.

D. Do it yourself.

E. Do it yourself.

F. (b)

# 5. INDIA – THE SOUTHERN PLATEAUS

## ANSWERS

### Warm Up

The Nilgiri Hills are called the Blue Mountains because they look blue due to scattering of light. The blue colour is also attributed to bluish flowers of Kurinji shrubs.

### Checkpoint

1. Ranchi.
2. Bhubaneshwar.

### Check Your Study

- A. 1. (b) 2. (c)
- B. 1. The Central Highlands are towards the north of the Narmada river.  
2. The Southern Plateaus are towards the south of the Narmada river.  
3. Chambal, Betwa and Son.
- C. **Hint:** Rock is made of lava.
- D. **Hint:** visit the site [www.telangana.gov.in](http://www.telangana.gov.in)

## PERIODIC TEST—1

### Warm Up

- A. 1. (a) 2. (c) 3. (b) 4. (a) 5. (b)
- B. 1. seventh 2. 29; 7 3. Shimla 4. south 5. Satpura
- C. 1. False 2. True 3. False 4. True 5. False
- D. 1. (e) 2. (a) 3. (c) 4. (d) 5. (b)
- E. 1. India is located in the northern hemisphere and in the southern part of Asia.
2. The Himalayan mountain ranges are useful to us in many ways:  
(a) The high mountain ranges act as a natural barrier against the invaders.  
(b) The ranges protect us from the cold winds coming from the far north.  
(c) They check the monsoon winds coming from the Arabian Sea and the Bay of Bengal, and thus provide heavy rainfall.  
(d) Many rivers originate from the glaciers in the mountains.  
(e) The forests on the mountains provide us with wood.  
(f) Dams, which are built across many rivers, help in producing electricity.
3. The Northern Plains have been formed by the deposition of gravel, sand, clay and silt, brought by the rivers coming from the mountains. The fine silt is very fertile and is called **alluvium**.
4. Oasis is a source of water for the people, plants and animals living near it.
5. The area towards the north of the Narmada is called the **Central Highlands**. It is bound by Aravalli range in the north-west, the Vindhya range in the south and Bundelkhand in the east. In the east, the Central Highlands extend up to the **Chhotanagpur Plateau** in Jharkhand and Odisha.

## 6. INDIA –THE COASTAL PLAINS AND ISLANDS

### ANSWERS

#### Warm Up

Kathakali dance

#### Checkpoint

1. 'Land of coconuts' 2. Marina 3. Matri Mandir; Aurobindo Ashram

#### Check Your Study

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

B. 1. India has two coastal plains—Western and Eastern Coastal Plains. The area between the Western Ghats and the Arabian Sea is the Western Coastal Plain and the area between the Eastern Ghats and the Bay of Bengal is the Eastern Coastal Plain.

2. The Andaman and Nicobar group of islands is situated in the Bay of Bengal. It consists of 265 big and small islands. Out of them, about 38 islands are inhabited. Most of the islands are mountainous.

The Lakshadweep group of islands is located in the Arabian Sea. It consists of only 27 islands, out of which only 11 are inhabited. These islands are flat and are of coral origin.

C. **Hint:** Plain and fertile land suitable for all human activities.

D. **Hint:** Visit site [www.vizagport.com/Favourites/PhotoGallery.aspx](http://www.vizagport.com/Favourites/PhotoGallery.aspx)



# 7. INDIA – THE CLIMATIC CONDITIONS

## ANSWERS

### Warm Up

Do it yourself.

### Checkpoint

1. Rainfall
2. coldest
3. Southern
4. West Bengal
5. two

### Check Your Study

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

B. 1. Climate 2. Season cycle 3. Western Disturbance

C. 1. The monsoon winds are very important for us. The rainfall in India depends on them. India's agriculture depends on rainfall.

2. (i) Arabian Sea branch (ii) Bay of Bengal branch

D. Do it yourself based on the hints provided.

E. Do it yourself.

F. 2. Remain calm and listen to government instructions.

## 8. INDIA – FORESTS AND WILDLIFE

### ANSWERS

#### Warm Up

The first image.

#### Checkpoint

1. Evergreen Forest    2. Sundari

#### Check Your Study

- A. 1. (b)    2. (b)  
B. 1. Wild animals    2. Vanamahotsava    3. Extinct  
C. 1. Babul, palm and Kikar    2. Pine, cedar, fir and chir  
D. Do it yourself.

E.

Name of National Parks/ Wildlife Sanctuaries	States	Animals conserved
Kanha National Park	Madhya Pradesh	Tigers, leopards, etc.
Gir Wildlife Sanctuary	Gujarat	Indian lion, sloth bears, etc.
Ranthambore Wildlife Sanctuary	Rajasthan	Tiger, hyaena, wild boar, etc.

- F. (b)

## 9. INDIA – TYPES OF SOILS

### ANSWERS

#### Warm Up

The second image.

#### Checkpoint

1. Sand, clay and organic matter.
2. Alluvial soil.
3. Regur soil.
4. Igneous rocks.

#### Check Your Study

- A. 1. (c) 2. (c)
- B. 1. Black soil 2. Laterite soil 3. Mountain soil
- C. 1. The Northern Plains and deltas.  
2. Since it is the most fertile soil, it is important for food production.  
3. We can conserve soil by planting more trees, following crop rotation, controlling over-grazing, etc.
- D. **Hint:** They should use irrigation from canals.
- E. Do it yourself.
- F. (b)

# 10. INDIA – WATER RESOURCES

## ANSWERS

### Warm Up

The first image.

### Checkpoint

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

### Check Your Study

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

B. 1. **Fresh water:** Fresh water is the water that has less amount of dissolved salt in it. Fresh water can be drunk, used in agriculture and in factories. Rivers, lakes, ponds, wells, etc., are the sources of fresh water.

**Salt water:** Salt water is the water that has a high amount of dissolved salts in it. Salt water cannot be drunk, used in agriculture and in factories. Salt water is used to produce salt. The sources of salt water are oceans, seas, bays, lakes, etc.

2. **River:** A river is a natural source of fresh water. A river has an origin, a long course and a confluence which are natural. Rivers create different landforms in their different courses.

**Canal:** A canal is an artificial stretch of water. It is dug from a river or any other source to facilitate water transport, agriculture, drinking water supply, etc.

- C. 1. Persian wheel, ponds and tubewells.  
2. Tubewells.  
3. Lakes, rivers, ponds, wells, tubewells, etc.
- D. **Hint:** Rainwater harvesting helps use the rainwater that generally goes waste.
- E. POND, TUBEWELL, WELL, TANK, DAM
- F. Do it yourself.

## PERIODIC TEST—2

- A. 1. (b) 2. (b) 3. (a) 4. (c) 5. (a)
- B. 1. regur 2. Rajasthan 3. tidal 4. Mawsynram 5. hill people
- C. 1. False 2. False 3. True 4. True 5. True
- D. 1. (e) 2. (a) 3. (b) 4. (c) 5. (d)
- E. 1. The Jog Falls.  
2. Dams are used for storing water and producing electricity.  
3. Alluvial soil, black soil, red soil, laterite soil, desert soil, mountain soil.  
4. Conservation of wildlife.  
5. The condition of the atmosphere in one area at a particular time is called weather. The average condition of weather of a large area for a long time is called the climate of that area.