

MATHEMATICS

Worksheets

(Based on Learning Outcomes)

Class- 8



स्वाध्यायान्मा प्रमदः

State Council of Educational Research and Training

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PREFACE

The National Policy on Education 2020 suggests for an increased focus on foundational literacy and numeracy with special focus on reading, writing, speaking, counting, arithmetic, and mathematical thinking throughout the preparatory and middle school education. It also suggests for a robust system of continuous, formative/adaptive assessment to track individualized learning and academic progress.

The academic loss due to Covid -19 pandemic has created a huge learning deficit and students are lagging behind in terms of learning outcomes. Learning Outcomes serve as benchmark for students' achievement in each class and subject. The Learning Outcomes for each class in Languages (Hindi, English and Urdu), Mathematics, Environmental Studies, Science and Social Science up to the elementary stage (Class 1 to 8) have been developed by NCERT and adapted by SCERT Delhi.

To bridge the learning gaps caused by the pandemic and to improve learning levels of students, SCERT Delhi has developed worksheets based on learning outcomes for class 3,5 and 8. The worksheets for class 3 and 5 have been developed for subjects: Mathematics, Environment Studies and Languages (Hindi & English) and for class 8, Science Mathematics, Social Science and Languages (Hindi & English). Each subject has 10 worksheets with 15 MCQs for each worksheet.

These worksheets are provided for practice purpose to improve the competencies of students. These are exemplar and teachers can frame similar worksheets/questions for practice. Guidelines for teachers are also there in each subject booklet to help teachers get better understanding of objectives and content of the worksheets.

It gives me immense pleasure to hand over these worksheets to teachers, our nation builders who are striving and working hard to impart quality education to students. We all as stakeholders need to work collectively to facilitate our students to attain higher order competencies including critical thinking, creativity, problem solving skills so that they are able to meet contemporary needs and can become responsible citizens who can further contribute for national development and be ready to tackle global challenges.



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Mathematics Worksheets Based on Learning Outcomes (Class–8)

Guidelines for Teachers

1. SCERT Delhi has developed worksheets based on learning outcomes for the purpose of practice only.
2. There are ten (10) worksheets of fifteen (15) Multiple Choice Questions (MCQs) each.
3. Each question is having four choices one of them being the correct answer. The students are to mark the correct answer appropriately using (\surd) mark

For example–

Which of the following is the body temperature of a healthy person?

- A) 99.0°F
 - ✓ B) 98.6°F
 - C) 98.0°F
 - D) 98.2°F
4. Answer key is given at the end of the Worksheets.
 5. You as teacher can explain the logic behind the correct answer.
 6. The teacher should provide ample time for the completion of worksheet.
 7. Teacher must ensure that each student attempt all the questions.
 8. Please don't give any clue in finding out the correct answer to the question.
 9. Students may do the calculation work / rough work in the sheet itself.
 10. Students may NOT use a calculator or reference materials while completing the worksheet.
 11. You are advised to prepare more such practice worksheet for the students.
 12. Teachers should keep a record of the progress of all the students and try to improve the learning outcomes.

MATHEMATICS

Worksheet-1

Class : 8

Instructions:

1. All questions are compulsory to attempt.
2. Choose a correct option in each question out of four options.

1. Simplify $\frac{2}{5} - (-\frac{3}{10})$

- A) $-\frac{1}{10}$ B) $-\frac{1}{5}$ C) $\frac{1}{3}$ D) $\frac{7}{10}$

2. Write natural number whose square is one.

- A) -1 B) 0 C) 1 D) 4

3. Which of the following statements is true regarding rational numbers?

- A) The rational number $\frac{9}{7}$ lies on the left of 0 on the number line.
- B) $\frac{2}{3}$ and $\frac{1}{3}$ lie on opposite sides of 0 on the number line.
- C) $\frac{(-3)}{-5}$ and lies on the left of 0 on the number line.
- D) $\frac{3}{4}$ lie on the right side of 0 on the number line.

4. The value of $\frac{9.9 \times 9.9 - 6.2 \times 6.2}{16.1 \times 3.7}$

- A) 1 B) 3.7 C) 6.2 D) 16.1

5. Solve for x, $\frac{x}{2} - \frac{1}{2} = \frac{x}{3} + \frac{2}{3}$

- A) 1 B) 3 C) 6 D) 7

6. Write the factors of $(m^2 - n^2)$

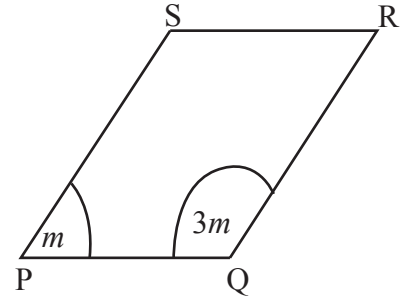
- A) $(m + n)(m + n)$ B) $(m + n)(m - n)$ C) $(m - n)(m - n)$ D) $(m^2 - n) n$

7. If 30% of x = 120, then x is

- A) 130 B) 300 C) 360 D) 400

8. In a rhombus PQRS, find m.

- A) 30°
- B) 40°
- C) 45°
- D) 60°

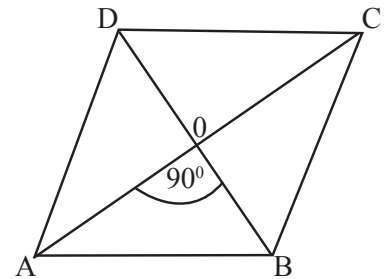


9. How many faces does a triangular prism has?

- A) 5
- B) 4
- C) 3
- D) 6

10. Which of the following is true about the parallelogram ABCD where $\angle AOB = 90^\circ$

- A. $AB > BC$
- B. $AB < BC$
- C. $AB = BC$
- D. $AB \neq BC$



11. The area of trapezium of height 20 cm is 340cm^2 . The length of one of the parallel sides is 20 cm. Find the length of other parallel side.

- A) 14 cm
- B) 20 cm
- C) 25 cm
- D) 35 cm

12. Total surface area of a cylinder is

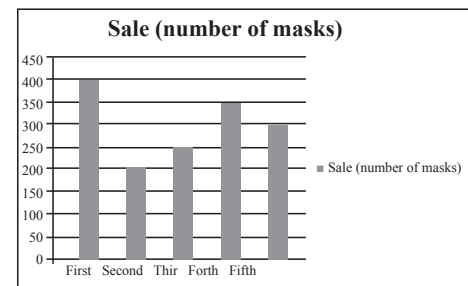
- A) $2\pi rh$
- B) $2\pi r(r+h)$
- C) $\pi r^2 h$
- D) $2\pi r^2 h$

13. Two unbiased coins are tossed simultaneously. Find the probability of getting 'No heads'.

- A) $1/4$
- B) $3/4$
- C) $1/2$
- D) $3/2$

14. Following bar graph shows the number of masks sold during the 5 weeks. What was the weekly average (mean) sale of masks?

- A) 300
- B) 350
- C) 500
- D) 1500



15. The point $(-3, -3)$ on a graph paper is

- A) Nearer to x-axis
- B) Nearer to y-axis
- C) Near to origin
- D) Equidistant from x-axis and y-axis.

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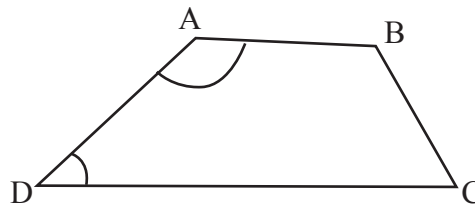
Worksheet-2

Class : 8

Instructions:

- All questions are compulsory to attempt.
- Choose a correct option in each question out of four options.

- Find the value of $\frac{1}{3} \div \frac{2}{9}$
A) $\frac{2}{27}$ B) $\frac{1}{6}$ C) $\frac{2}{3}$ D) $\frac{3}{2}$
- Find the value of $\sqrt{\frac{225}{676}}$
A) $\frac{1}{4}$ B) $\frac{15}{26}$ C) $\frac{25}{26}$ D) $\frac{15}{16}$
- Find the mean of rational numbers $\frac{2}{5}$ and 1.
A) $\frac{2}{5}$ B) $\frac{3}{5}$ C) $\frac{7}{10}$ D) $\frac{4}{5}$
- The sum of the two numbers is 88 and their ratio is 5:3. Find is the first number?
A) 5 B) 11 C) 33 D) 55
- Write the product of $(2s-1)(2s+1)$
A) $(2s^2-1)$ B) $(4s^2-1)$ C) $(2s^2+1)$ D) $(4s^2+1)$
- Write the number of terms a polynomial can contain.
A) One B) Two C) Three D) Any
- The marked price of an item is ₹200.If the shopkeeper allows a discount of 12%, then the selling price of item is
A) ₹134 B) ₹176 C) ₹188 D) ₹212
- What is the sum of any two adjacent angles of a rectangle?
A) 90° B) 180° C) 270° D) 360°
- In trapezium ABCD, $\angle A$ is three times of $\angle D$. Find the value of $\angle A$.
A) 90°
B) 120°
C) 135°
D) 145°

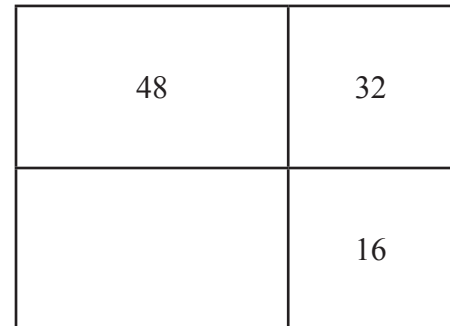


10. Write the number of faces of a cube.

- A) 4 B) 6 C) 5 D) 7

11. A rectangle is divided into four smaller rectangles as shown. The area of three of the rectangles are given, Find area of the fourth rectangle is

- A) 8 cm² B) 16 cm²
 C) 18 cm² D) 24 cm²



12. A carpenter has to make cubical wooden toys of side 20 cm each. How many cubical toys can be made from a log of wood of size 3m by 80 cm by 50 cm?

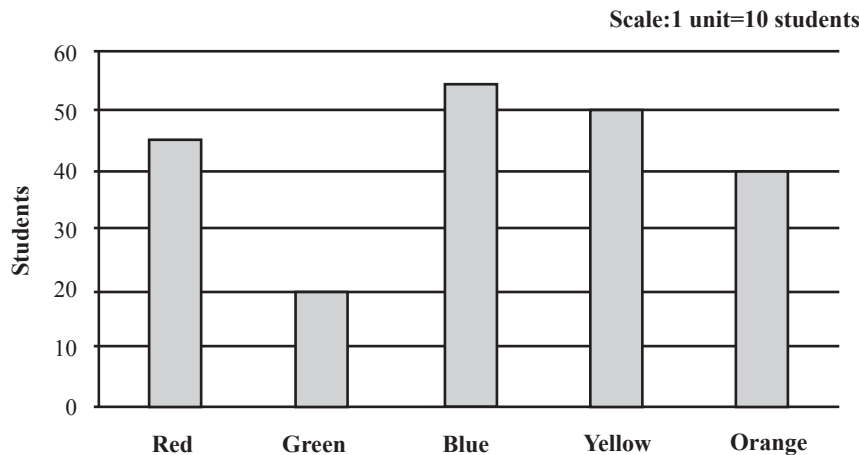
- A) 100 B) 150 C) 160 D) 200

13. How many cubic metres of earth must be dug out to create a well of 12 m deep and of diameter 7m?

- A) 268 m³ B) 324 m³ C) 376 m³ D) 462 m³

14. 210 students of classes 6th, 7th, and 8th were asked to name their favourite colour so as to decide upon what should be the colour of their school Auditorium. The results are shown in the following bar graph. What is the difference between the most preferred colour and the least preferred colour?

- A) 19 B) 35
 C) 36 D) 55



15. Two unbiased coins are tossed simultaneously. Find the probability of getting two tails.

- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{4}$ D) $\frac{3}{2}$

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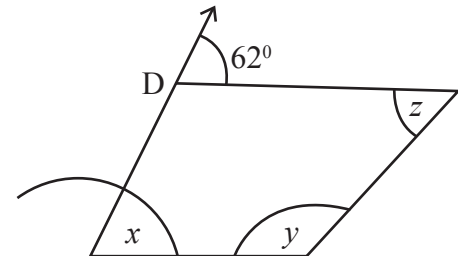
Worksheet-3

Class : 8

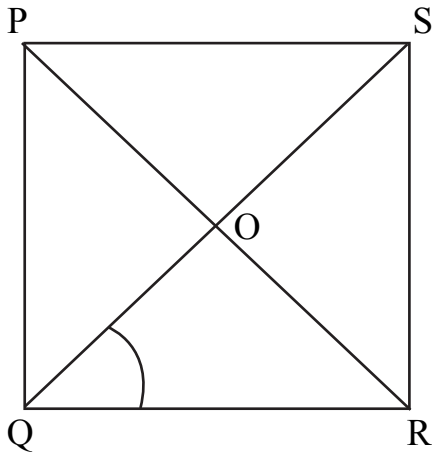
Instructions:

- All questions are compulsory to attempt.
- Choose a correct option in each question out of four options.

- If $4\frac{1}{4}$ litres of oil costs ₹544, what will be the cost of 1 litre of oil?
A) ₹125 B) ₹128 C) ₹132 D) ₹135
- Find the value of (13^2-12^2) .
A) 1 B) 25 C) 313 D) 34336
- If p and q are two non-zero positive rational numbers and $p \neq q$ then
A) $\frac{p+q}{2} < p$ B) $\frac{p+q}{2} < q$ C) $\frac{p+q}{2} = p$ D) $\frac{p+q}{2} = q$
- The perimeter of a rectangular base dumpsite is 240 m. The length of this dumpsite is 20 m more than its breadth. Find the length of the dumpsite.
A) 130 m B) 110 m C) 70 m D) 50 m
- Write the volume of a box of length 2 meters, with width 5 meters, and height 3 metres. Where 'x' is any positive rational number.
A) $30x \text{ m}^3$ B) $10x^2 \text{ m}^3$ C) $15x^3 \text{ m}^3$ D) $30x^4 \text{ m}^3$
- Factors of $(-7b^2 - 14b)$ are
A) $-7b(b-2)$ B) $-7b(b+2)$ C) $7b(b-2)$ D) $7b(b+2)$
- Find the rate of discount on a book whose marked price is ₹210 and the selling price is ₹126.
A) 20% B) 30% C) 40% D) 50%
- In the given figure. Find the value of $(x + y + z)$
A) 240° B) 242°
C) 280° D) 118°



9. In the given square PQRS, $\angle OQR$ is
 A) 60° B) 55° C) 45° D) 35°



10. The relationship among number of faces, number of vertices, and number of edges by Euler formula is
 A) $F - V + E = 2$ B) $F + V + 2 = E$ C) $F + V - E = 2$ D) $F - V - E = 2$
11. All the given shapes in the figure have the same area. Which shape has the smallest perimeter?

A)

1
1
1
1
1
1
12
1
1
1
1
1
1
1
1

B)

		2	
	1	1	
	1	1	
6	1	1	
	1	1	
	1	1	
	1	1	

C)

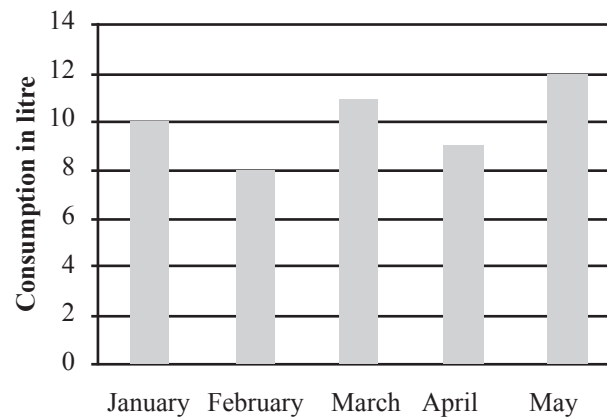
			4	
	1	1	1	1
3	1	1	1	1
	1	1	1	1

D)

			2	
			4	

12. The volume of a cylinder whose diameter is 'x' and height is equal to the diameter
 A) πx^3 B) $\pi x^3/4$ C) $\pi x^3/8$ D) $\pi x^2/16$
13. If the diagonals of a rhombus get doubled then how many times will its area increase?
 A) 2 times B) 3 times C) 4 times D) 6 times
14. If a dice is thrown, what is the probability of getting a number greater than 2 and less than 6?
 A) $\frac{1}{3}$ B) $\frac{1}{2}$ C) $\frac{2}{3}$ D) $\frac{2}{1}$

15. The bar graph given below is presenting the consumption of sanitizer (in lit) in the last five months. Write the name of months in ascending order according to the consumption of sanitizer.



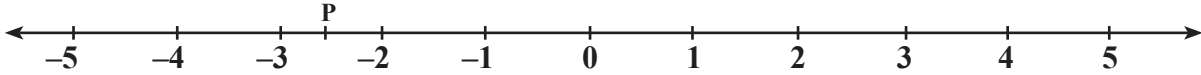
- A) May, March, January, April, February B) February, April, January, May, March
C) February, April, January, March, May D) May, March, January, February, April

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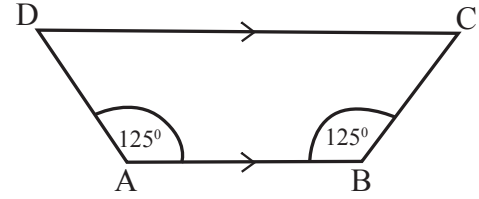
Worksheet-4

Class : 8

Instructions:

- All questions are compulsory to attempt.
 - Choose a correct option in each question out of four options.
- A slide in a park is $\frac{5}{6} m$ high . If a new slide is to be placed near it, which is $\frac{2}{3}$ times higher than the previously placed slide , find the height of the new slide .
A) $\frac{5}{9} m$ B) $\frac{7}{9} m$ C) $\frac{3}{2} m$ D) $\frac{9}{5} m$
 - In the given number line P represents

A) $-\frac{5}{2}$ B) $-\frac{3}{2}$ C) $\frac{3}{2}$ D) $\frac{5}{2}$
 - Find the least number which must be subtracted from 675 to get a perfect square.
A) 1 B) 3 C) 25 D) 50
 - Solve $9x - 81 = 9$
A) 8 B) 10 C) 72 D) 90
 - $(c + d^2) (c^2 - d) =$
A) $c^3 + c^2d^2 - cd - d^3$ B) $c^3 - c^2d^2 - cd - d^3$
C) $c^3 + c^2d^2 + cd - d^3$ D) $c^3 + c^2d^2 + cd + d^3$
 - Write the value of $(a - \frac{1}{a})^2$
A). $a^2 - \frac{1}{a^2}$ B). $a^2 + \frac{1}{a^2}$ C). $a^2 + \frac{1}{a^2} - 2$ D). $a^2 - \frac{1}{a^2} - 2$
 - In case of compound interest the principal
A) increases after every fixed interval of time.
B) decreases after every fixed interval of time.
C) remains constant throughout the the loan period
D) increases for first year then decreases

8. If $AB \parallel DC$, then find $\angle D$
- A) 50° B) 55°
 C) 125° D) 18°



9. A wire of length 32 cm is converted into a parallelogram of length 10 cm. The width of the parallelogram is

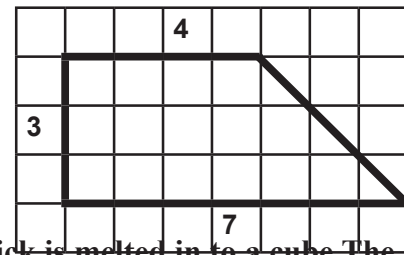
- A) 22 cm B) 11 cm C) 6 cm D) 12 cm

10. Number of vertices of the cuboid has :

- A) 6 B) 12 C) 9 D) 8

11. Estimate the area of the given figure.

- A) 12.0 square unit
 B) 16.5 square unit
 C) 17.0 square unit
 D) 21.0 square unit



12. A metal sheet sheet 32 cm long, 16 cm broad and 1 cm thick is melted in to a cube. The side of cube is

- A) 6cm B) 8cm C) 13cm D) 14cm

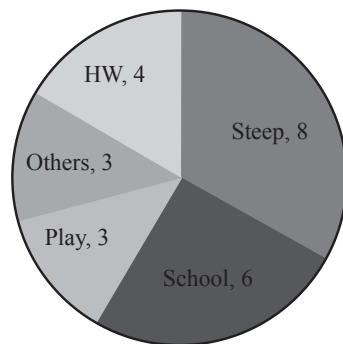
13. Two parallel sides of a trapezium are of lengths 8.5 cm and 3.4 cm and the distance between them is 6 cm. Area of the trapezium is

- A) 17.9 cm^2 B) 23.8 cm^2 C) 35.7 cm^2 D) 71.4 cm^2

14. Three unbiased coins are tossed together. The probability of getting at least two tails is

- A) $\frac{0}{8}$ B) $\frac{3}{8}$ C) $\frac{4}{8}$ D) $\frac{6}{8}$

15. Time spent during school is equal to the total of time spent on given two areas in the pie chart.



- A) Play and Others B) Homework and Play
 C) Others and Homework D) Play and School

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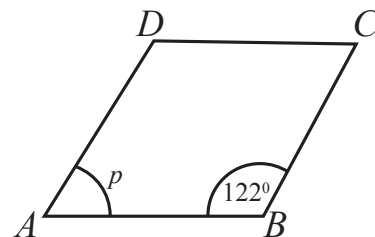
Worksheet-5

Class : 8

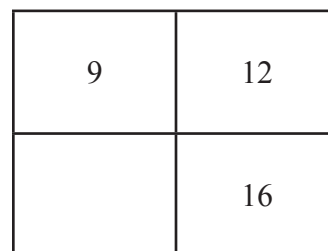
Instructions:

- All questions are compulsory to attempt.
- Choose a correct option in each question out of four options.

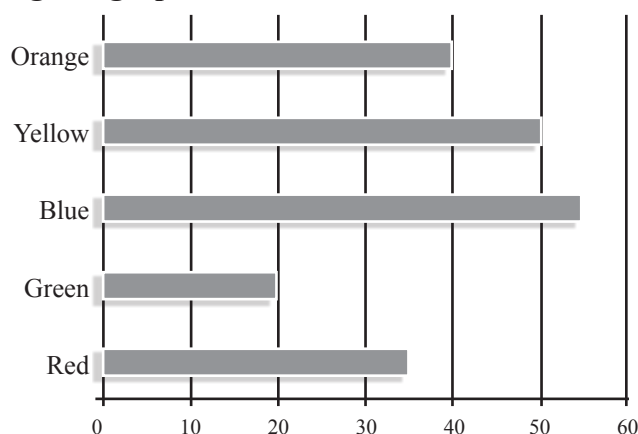
- What should be added to $\frac{-3}{4}$ to get 1 ?
A) $\frac{-5}{4}$ B) $\frac{-1}{4}$ C) $\frac{1}{4}$ D) $\frac{7}{4}$
- Unit's place digit of cube of a number ending with 3 is
A) 0 B) 3 C) 7 D) 9
- Which of the following rational number lies between -1 and 1?
A) -2 B) $\frac{-3}{4}$ C) 0 D) $\frac{3}{2}$
- The present ages of daughter and father are in the ratio 1:6. After 5 years the ratio of their ages will be 2:7. What is the present age of the son who is 2 years younger than the daughter?
A) 3 years B) 5 years C) 7 years D) 9 years
- If $a = -1$, $b = 2$, then find the value of $(a+b)^3$
A) 1 B) -1 C) -8 D) 8
- Common factors of $16m^3$, $4m^2$ and $32m$
A) $4m$ B) $-4m$ C) 4 D) -4
- Marked price of a book is ₹500. If it is sold for ₹460, then the discount percent is
A) 8% B) 10% C) 15% D) 16%
- The diagonals of a rhombus are 6 cm and 8 cm. Find the length of the side of the rhombus.
A) 4 cm B) $3\sqrt{2}$ cm C) $4\sqrt{2}$ cm D) 5 cm
- Find p in the given parallelogram ABCD in which $AB \parallel DC$ and $AD \parallel BC$.
(A) 58°
(B) 60°
(C) 122°
(D) 180°



10. The shape of base of a prism is
 (A) Rectangle (B) Triangle (C) Square (D) Any shape
11. A square is divided in 2 rectangles and 2 squares as shown in the figure. The area of three of the square are given, Find area of the fourth square is
 A) 5cm^2 B) 12cm^2
 C) 13cm^2 D) 19cm^2



12. Total surface area of a cube is 150 cm^2 . The length of edge of the cube is
 A) 5 cm B) 6 cm C) 10 cm D) 15 cm
13. Volume of a box is 150 cm^3 . If its length is 6 cm and breadth 5 cm. What is its height ?
 A) 4 cm B) 5 cm C) 6 cm D) 8 cm
14. 200 students of 7th and 8th classes were asked to name their favourite colour. The result is shown in the following bar graph. Name the most favoured colour and number of students who selected it.



- A) Blue colour, 50 students B) Yellow colour, 50 students
 C) Yellow colour, 55 students D) Blue colour, 55 students
15. Two unbiased coins are tossed simultaneously. Find the probability of getting at least one tail.
 A) $\frac{1}{4}$ B) $\frac{3}{4}$ C) $\frac{3}{4}$ D) $\frac{3}{2}$

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Worksheet-6

Class : 8

Instructions:

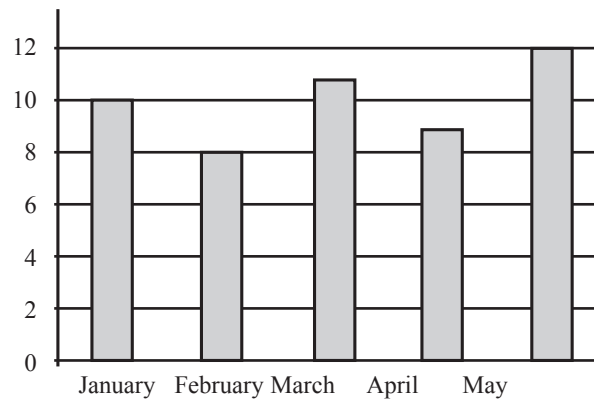
1. All questions are compulsory to attempt.
2. Choose a correct option in each question out of four options.

1. A rectangle is divided into four rectangles as shown in the figure. The area of three of the rectangles are given, Find area of the fourth rectangle is

- A) $14cm^2$ B) $10cm^2$
C) $22cm^2$ D) $24cm^2$

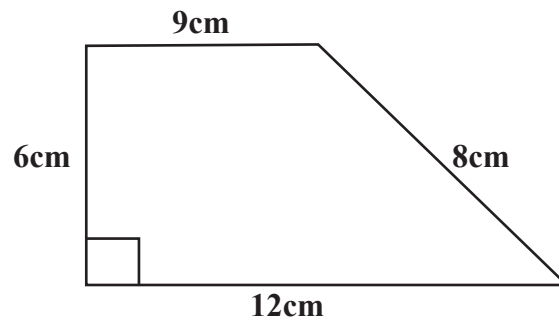
	16
18	12

2. The bar graph is presenting the consumption of sanitizer (in litre) in the last five months. In which of the two months the difference is 4 litres.

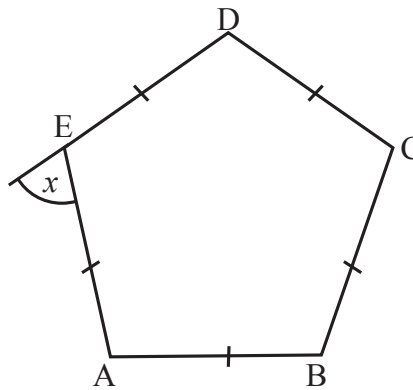


- A) February and January B) May and April
C) May and February D) March and April
3. Two unbiased coins are tossed simultaneously. Find the probability of getting at most one head.
- A) $\frac{1}{4}$ B) $\frac{1}{2}$ C) $\frac{3}{4}$ D) $\frac{3}{2}$
4. Total surface area of an open box whose length, breadth and height are l , b and h respectively is
- A) $2(lb+bh+hl)$ B) $2(lb+bh)+hl$ C) $2(bh+hl)+bl$ D) $2(lb+hl)+bh$

5. A field is in the shape of a trapezium with the dimensions given below. The area of the field is



- A) 63 cm^2 B) 84 cm^2 C) 126 cm^2 D) 168 cm^2
6. Find the value of x in a regular Pentagon.



- A) 60° B) 72° C) 80° D) 90°
7. How many faces a sphere has?
- A) 1 B) 2 C) 4 D) 0
8. A wire of length 44 cm is converted into a rhombus. Find the side of the rhombus.
- A) 22 cm B) 11 cm C) 6 cm D) 12 cm
9. The compound interest on ₹15000 at 10% per annum for 3 years is
- A) ₹12585 B) ₹ 16365 C) ₹4965 D) ₹33275
10. We get 8 if 8 is subtracted from a number. Find the number.
- A) 0 B) -16 C) 16 D) -8
11. Product of $-\frac{14}{5}m^2np^2$ and $-\frac{15}{7}mn^2p$ is
- A) $6m^3n^3p^3$ B) $-6m^3n^3p^3$ C) $6m^2n^2p^3$ D) $-6m^3n^3p^3$

12. Divide $28x - 35$ by 7

- (A) $28x - 5$ (B) -1 (C) $4x - 5$ (D) $4x - 35$

13. Three friends were hopping on one foot. The table given below shows the distance covered by each.

Name	Sanjay	Seema	Sam
Distance covered (in km)	$\frac{1}{20}$	$\frac{1}{30}$	$\frac{1}{25}$

Find the difference in the highest and lowest distance covered.

- A) $\frac{1}{150}$ B) $\frac{1}{100}$ C) $\frac{1}{60}$ D) $\frac{1}{30}$

14. When a number X is divided by 5 leaves a remainder 4. What is the units digit of X.

- A) 1 B) 2 C) 3 D) 4

15. If $\sqrt{\frac{144}{a}} \times \sqrt{\frac{100}{a}} = 4$, then value of 'a' is

- A) 2 B) 30 C) 120 D) 3600

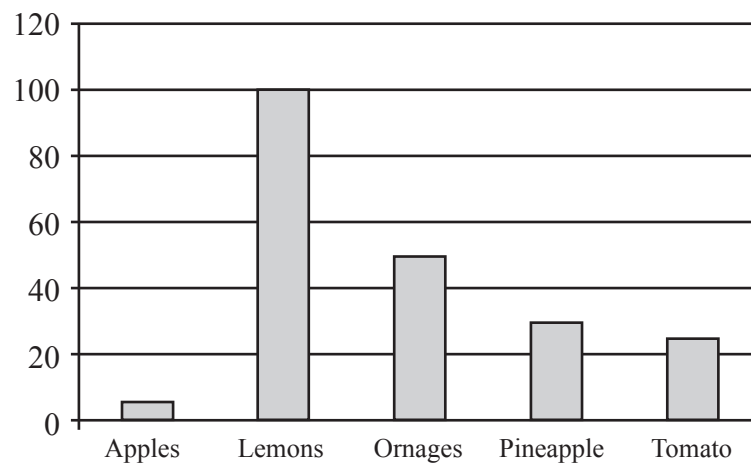
MATHEMATICS

Worksheet-7

Class : 8

Instructions:

- All questions are compulsory to attempt.
 - Choose a correct option in each question out of four options.
1. (0, 6) are the coordinates of a point lying on which of the following?
A) origin B) y-axis C) x-axis D) First quadrant
2. Manju started a campaign to educate students about the benefits of Vitamin C, so she drew this graph to show the amount of vitamin C in some different types of fruits. Select the table of the graph.



A)

Fruits	Apples	Lemons	Oranges	Pineapple	Tomato
Vitamin C	6	100	30	50	25

B)

Fruits	Apples	Lemons	Oranges	Pineapple	Tomato
Vitamin C	6	100	50	30	25

C)

Fruits	Apples	Lemons	Oranges	Pineapple	Tomato
Vitamin C	6	100	30	50	25

D)

Fruits	Apples	Lemons	Oranges	Pineapple	Tomato
Vitamin C	6	100	50	25	30

3. Two unbiased coins are tossed together. Find the probability of getting no head.
 A) $0/4$ B) $1/4$ C) $3/4$ D) $4/4$
4. Two cubes of each of side 6 cm are placed together. What will be the surface area of the solid thus formed?
 A) 120 cm^2 B) 180 cm^2 C) 240 cm^2 D) 360 cm^2
5. The total surface area of a right circular cylinder is $300\pi \text{ cm}^2$ and its radius is 6 cm. Find the sum of its height and radius.
 A) 20 cm B) 25 cm C) 30 cm D) 35 cm
6. With which following sets of angles a quadrilateral can be constructed?
 A) $60^\circ, 70^\circ, 120^\circ, 100^\circ$ B) $60^\circ, 70^\circ, 120^\circ, 120^\circ$
 C) $60^\circ, 60^\circ, 120^\circ, 120^\circ$ D) $70^\circ, 70^\circ, 120^\circ, 120^\circ$
7. Write the number of diagonals of a cuboid.
 A) 2 B) 3 C) 4 D) 5
8. The length of the side of the rhombus is 10 cm and one of its diagonals is 16 cm. Find the length of the other diagonal.
 A) $10\sqrt{2} \text{ cm}$ B) $8\sqrt{2} \text{ cm}$ C) 6 cm D) 12 cm
9. The cost price of a chair is ₹840. What will be its selling price if loss is 5%?
 A) ₹784 B) ₹798 C) ₹842 D) ₹882
10. Factorise $l^2 + lm - 2l - 2m$
 A) $(l + m)(l + 2m)$ B) $(l + m)(l - 2)$
 C) $(l - m)(l + 2)$ D) $(l + m)(l - m)$

11. In a right angled triangle if one of the acute angles is 20° more than the other acute angle. Find the smallest angle.
- A) 90° B) 70° C) 55° D) 35°
12. What is the product of $(m+1)(m-1)$ and 0.
- A) m^2-1 B) -1 C) 1 D) 0
13. What will be the product of $\frac{-3}{4}$ and $\frac{2}{9}$?
- A) $\frac{-1}{5}$ B) $\frac{-1}{6}$ C) $\frac{1}{6}$ D) $\frac{1}{5}$
14. What is the value of $\sqrt[3]{8^3 \times 125^3}$?
- A) 10 B) 40 C) 250 D) 1000
15. Between Two rational numbers we can find
- A) one and only one rational number B) only two rational numbers
C) only 10 rational numbers D) infinitely many rational numbers

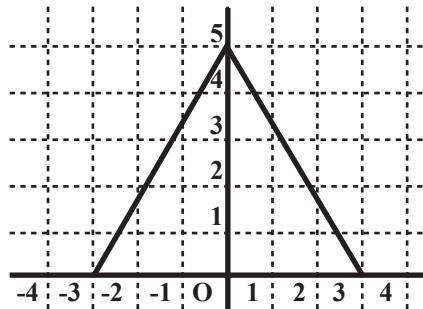
MATHEMATICS

Worksheet-8

Class : 8

Instructions:

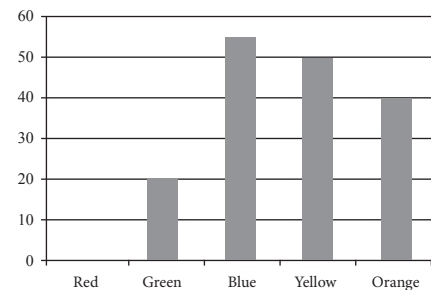
- All questions are compulsory to attempt.
 - Choose a correct option in each question out of four options.
1. In figure an equilateral triangle is given. Select the correct coordinates of vertices of the triangle.



- A) (5,0) (3,0) (0,-3) B) (-3,0) (3,0) (0,5)
C) (3,0) (0,-3) (0,5) D) (5,0) (3,0) (3,3)
2. Two hundred students of 7th, and 8th class were asked to name their favourite colour so as to decide upon what should be the colour of their Maths Room. The results are shown in the following bar graph.

Select the least favoured colour and number of students who selected it.

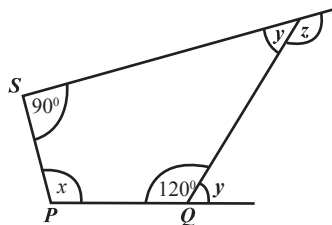
- A) Green colour 20 students
B) Orange colour 40 students
C) Yellow colour 50 students
D) Blue colour 55 students



3. Practical exam of class 8th is scheduled, so 7 cards numbered 1,2,3.....7 representing activities are put in a box. What is the probability that Rajan gets an activity card of a Prime number.

- A) $\frac{5}{7}$ B) $\frac{4}{7}$ C) $\frac{3}{7}$ D) $\frac{0}{7}$

4. The volume of a water tank is 3 m^3 , find its capacity in litres.
 A) 30 B) 300
 C) 3000 D) 30000
5. In a trapezium sum of two parallel sides is 20 cm and distance between them is 5 cm, find its area.
 A) 25 cm^2 B) 50 cm^2 C) 100 cm^2 D) 200 cm^2
6. In which of the following 'diagonals are always the right bisectors of each other'.
 A) Trapezium B) Parallelogram C) Kite D) Rhombus
7. Find the value of $x + y + z$



- A) 360^0 B) 260^0 C) 210^0 D) 270^0
8. The relationship among number of faces, number of vertices and the number of edges by Euler's formula is
 A) $F - V + E = 2$ B) $F + V + 2 = E$ C) $F + V - E = 2$ D) $F - V - E = 2$
9. If C.P of a sofa set is ₹60,000 and loss is 10%, then find its S.P.
 A) ₹54,000 B) ₹55,000 C) ₹63,000 D) ₹65,000
10. Factorise: $R^2 + 6R - 16$
 A) $(R + 8)(R - 2)$ B) $(R - 8)(R + 2)$ C) $(R + 8)(R + 2)$ D) $(R - 8)(R - 2)$
11. Find the product of the monomials $5r^3$ and $-4r$.
 A) -20 B) $-20r^4$ C) $-20r$ D) $-20r^3$
12. Vyomini Kumar has a total of ₹280 as currency notes in the denomination of ₹10, ₹20, and ₹50. The ratio of the number of ₹10, ₹20, ₹50 notes is 5:2:1. How many notes of the denomination ₹10 she has?
 A) 2 B) 4 C) 10 D) 16
13. $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$ is equal to
 A) 2 B) 4 C) 8 D) 16
14. If m represents a rational number then $-(-m)$ is equal to:
 A) $-m$ B) m C) $\frac{-1}{m}$ D) $\frac{1}{m}$
15. If $285z61$ is divisible by 11, where z is a digit, what is the value of z ?
 A) 1 B) 2 C) 3 D) 4

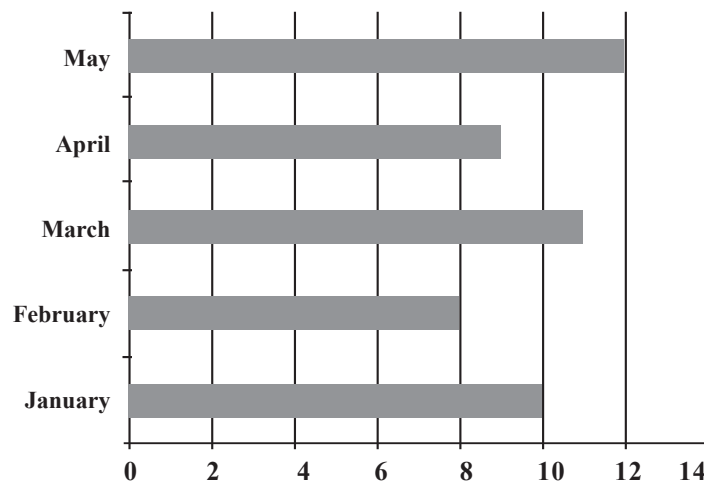
MATHEMATICS

Worksheet-9

Class : 8

Instructions:

- All questions are compulsory to attempt.
 - Choose a correct option in each question out of four options.
1. In the last ten football matches, Chandigarh team did the following numbers of goals 2, 5, 1, 1, 3, 4, 7, 1, 3, 3. The range, median, and mean are
- A) 6, 3, 3 B) 4, 2, 3 C) 6, 3, 4 D) 4, 2, 3
2. The bar graph given below is presenting the consumption of sanitizer (in litre) in the last five months.
- In which of the two months sum of consumption is 20 litres.
- A) February and January B) May and February
C) May and April D) March and April



3. Two unbiased coins are tossed together. Find the probability of getting two heads.
- A) $0/4$ B) $1/4$ C) $2/4$ D) $3/4$
4. The ratio of radii of two cylinders is 1:2. If the ratio of their heights is 2:1, then find the ratio of their volumes.
- A) 1:2 B) 1:4 C) 2:1 D) 4:1
5. 1 m^3 is equal to
- A) 1000 cm^3 B) 1000 mm^3 C) 1000 dm^3 D) 1000 dam^3

6. **The sum of adjacent angles of a Parallelogram is always**
 A) 90° B) 180° C) 220° D) 270°
7. **The top view of a cone looks like**
 A) a circle B) a sphere C) a circle with center D) a square
8. **One diagonal of a square is 6 cm. Side of the square is**
 A) $2\sqrt{3}$ cm B) $3\sqrt{2}$ cm C) 3 cm D) 6 cm
9. **The amount for a sum of ₹800 for 1 year at the rate of 20% p.a compounded half yearly is**
 A) ₹832 B) ₹880 C) ₹920 D) ₹968
10. **Solve $\frac{3t}{5} - 1 = \frac{2t}{5} + 1$**
 A) 10 B) 5 C) 2 D) 1
11. **Simplify : $\left(2x^2 - \frac{1}{2x^2}\right)^2$**
 A) $4x^2 - \frac{1}{4x^4}$ B) $4x^4 - \frac{1}{4x^4}$ C) $4x^4 - \frac{1}{4x^4} - 2$ D) $4x^4 + \frac{1}{4x^4} - 2$
12. **The product of (y - a) and (y - b) is**
 A) $y^2 - (a - b)y + ab$ B) $y^2 - (a + b)y + ab$ C) $y^2 - (a + b)y - ab$ D) $y^2 + (a - b)y - ab$
13. **What is the sum of $\frac{-1}{2}$ and its additive inverse?**
 A) $-1/2$ B) 0 C) $1/2$ D) 1
14. **Find the length of each side of a square whose area is equal to 7396 sq. cm.**
 A) 82 cm B) 83 cm C) 84 cm D) 86 cm
15. **By using which relation we can find rational numbers between a and b?**
 A) $\frac{a+b}{2}$ B) $\frac{a-b}{2}$ C) $\frac{a \times b}{2}$ D) $\frac{a \div b}{2}$

MATHEMATICS

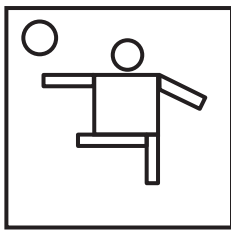
Worksheet-10

Class : 8

Instructions:

1. All questions are compulsory to attempt.
2. Choose a correct option in each question out of four options.

1. Kabir designs an image for his t-shirt on the computer. But the final image on the t-shirt

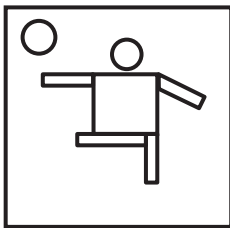


will be a mirror image of the design on the computer.

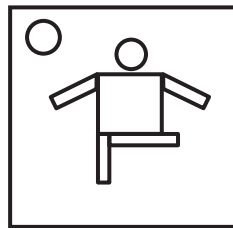
This picture shows a design that Kabir designed.

How will the design appear on the t-shirts?

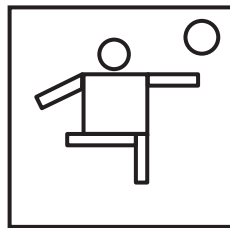
a)



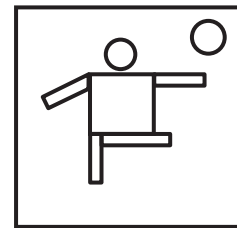
b)



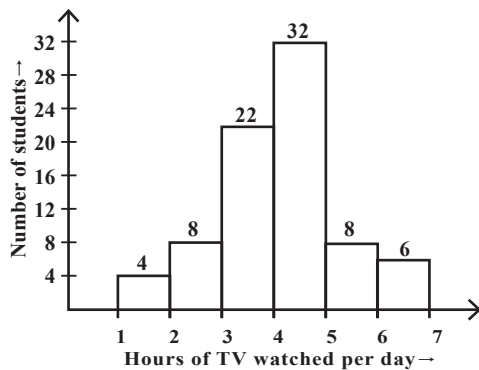
c)



d)



2. Following bar graph shows the number of hours of watched per day by students. How



many students watched TV for minimum time?

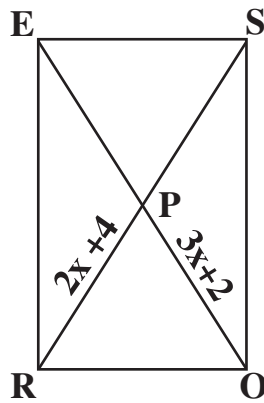
A) 4

B) 6

C) 8

D) 10

- 3) If a dice is thrown then find the probability of getting a prime number which is less than 5.
- A) $\frac{1}{3}$ B) $\frac{1}{2}$ C) $\frac{2}{3}$ D) 1
4. How many coins each of thickness 0.1 cm and diameter 1.6 cm will be melted to form a solid right circular cone of height 16 cm and diameter 4 cm?
- A) 500 B) 700 C) 1000 D) 1500
5. Area of rhombus is
- A) $2 \times$ (Product of its diagonals) B) $2 \times$ (Sum of its diagonals)
- C) $\frac{1}{2} \times$ (Product of its diagonals) D) $\frac{1}{2} \times$ (Sum of its diagonals)
6. In a regular polyhedron
- A) Faces are made of regular polygons and any number of faces can meet at each vertex.
- B) Faces are made of irregular polygons and the same number of faces meet at each vertex.
- C) Faces are made of regular polygons and the same number of faces meet at each vertex.
- D) Faces are made of irregular polygons and any number of faces can meet at each vertex.
7. The sum of all angles of a polygon is 360° . Name the Polygon.
- A) Triangle B) Quadrilateral C) Pentagon D) Hexagon
8. Diagonals of a rectangle ROSE intersect each other at the point P. Find the value of x.



- A) 0 B) 2 C) 3 D) 4
9. Which of the following is the example of inverse proportion?
- A) The money deposited in the bank and the interest earned.
- B) Height of an object and the length of the object under similar conditions.
- C) The number of workers on a job and the time to complete the job.
- D) The number of articles purchased and the total cost.
10. Fourteen years from now Kattappa's age will be three times his present age.

What was Kattappa's age three years ago?

- A) 4 years B) 7 years C) 10 years D) 14 years

11. Find the product of $(ac-d)$ and $(ac-d)$

A) $a^2 c^2 - d^2$

C) $a^2 c^2 + d^2$

B) $a^2 c^2 + d^2 - 2acd$

C) $a^2 c^2 - d^2 + 2acd$

12. What is the product of $(m + p)$ and $(m + q)$

A) $m^2 + (p - q)m + pq$

C) $m^2 + (p + q)m + pq$

B) $m^2 + (p - q)m - pq$

D) $m^2 + (p + q)m - pq$

13. Multiply $\frac{1}{3}$ by $\frac{3}{2}$

A) $\frac{1}{3}$

B) $\frac{1}{2}$

C) 1

D) $\frac{3}{2}$

14. Find the value of $\sqrt{0.25}$

A) 0.05

B) 0.5

C) 2.5

D) 5

15. Find the value of B.

$$\begin{array}{r} 31B \\ + 1B3 \\ \hline 512 \end{array}$$

A) 0

B) 5

C) 8

D) 9

MATHEMATICS

Class : 8

ANSWER KEY

WORKSHEET-1

1.	D	2.	C	3.	D	4.	A	5.	D	6.	B	7.	D	8.	C	9.	A	10.	C
11.	A	12.	B	13.	A	14.	A	15.	D										

WORKSHEET-2

1.	D	2.	B	3.	C	4.	D	5.	B	6.	D	7.	B	8.	B	9.	C	10.	B
11.	D	12.	B	13.	D	14.	B	15.	A										

WORKSHEET-3

1.	B	2.	B	3.	B	4.	C	5.	D	6.	B	7.	C	8.	B	9.	C	10.	C
11.	D	12.	B	13.	C	14.	B	15.	C										

WORKSHEET-4

1.	A	2.	A	3.	D	4.	B	5.	A	6.	C	7.	A	8.	B	9.	C	10.	D
11.	B	12.	B	13.	C	14.	C	15.	A										

WORKSHEET-5

1.	D	2.	C	3.	C	4.	A	5.	A	6.	A	7.	A	8.	D	9.	A	10.	D
11.	B	12.	A	13.	B	14.	D	15.	B										

WORKSHEET-6

1.	D	2.	C	3.	B	4.	C	5.	A	6.	B	7.	D	8.	B	9.	C	10.	C
11.	A	12.	C	13.	C	14.	D	15.	C										

WORKSHEET-7

1.	B	2.	B	3.	A	4.	D	5.	B	6.	C	7.	C	8.	C	9.	D	10.	B
11.	D	12.	D	13.	B	14.	D	15.	D										

WORKSHEET-8

1.	B	2.	A	3.	C	4.	C	5.	B	6.	D	7.	C	8.	C	9.	A	10.	A
11.	B	12.	C	13.	A	14.	B	15.	D										

WORKSHEET-9

1.	A	2.	B	3.	B	4.	A	5.	C	6.	B	7.	C	8.	B	9.	D	10.	A
11.	D	12.	B	13.	B	14.	D	15.	A										

WORKSHEET-10

1.	D	2.	A	3.	A	4.	C	5.	C	6.	C	7.	B	8.	B	9.	C	10.	A
11.	B	12.	C	13.	B	14.	B	15.	D										