CLASS – VIII MATHS

REVISION WORKSHEETS

Chapter 1 (Rational Number)

Q1. (a) Write the additive Inverse of -7/19

(b)Write multiplicative inverse of -13/15

Q2. Name the property under multiplication

(1) (-4/5) × (-2/7) = (-2/7) × (-4/5)

Q3. Multiply (6/13) by the reciprocal of (-7/16)

Q4. Represents (-5/6) on number line.

Q5. Find the multiplicative Inverse of

(-5/8) × (-3/7)

Q6. Find three Rational number between

(-2/5) and (1/2)

Chapter – 5 (Square & Square roots)

Q1. Find the square of 32.

Q2. Out of the following identify perfect square

(a) 27 (b) 16 (c) 53 (d)1000

Q3. Without adding find sum:-

1+3+5+7+9

Q4. In right $\triangle ABC$, $\angle B = 90°$. If AB=6cm, BC=8cm. Find AC.

Q5. Find the smallest whole number by which it should be multiplied so as to get a perfect square. Given number is 180.

Q6. Find the square root of 169 by repeated subtraction method.

Q7.(a) Find square root of 1764 by long division method.

(b) Find square root of 49 by repeated subtraction.

Chapter –10 (Exponents & Power)

Q1. $a^m \times a^n =$ _____

Q2. Evaluate $(2^0+3^0+4^0)$

Q3. Find the value of $(2^3)^4$.

Q4. Simplify

(a) $(4)^5 \times (4)^6$

(b) $(3^7 \ 3^3)3^5$

Q5. Find the value of m .If

$5^m \times 5^4 = 5^6$

Q6. Express the following in standard form:

(a) 0.00000085

(b) 318000000000

CH7 Comparing Quantities

Multiple Choice Question

Q1. 0.025in term of percentage is
(a) 25% (b) 2.5% (c) 0.25% (d) 37.5%

Q2. If x and y shared Rs. 2200 in the ratio 1:10, how much did x get?
(a) Rs.199 (b) 200 (c) Rs 201 (d) 210

Q3. A watch is sold for Rs.1080 at the loss of 10%.The cost price of the watch is
(a) 1125 (b) 1200 (c) 1188 (d) 972

Very Short Answer

Q1. Find the ratio. Speed of a cycle 15 km per hour to the speed of scooter 30 km per hour.

Q2. A table marked at Rs.15,000 is available for Rs. 14,400. Find the discount given and the discount per cent.

Q3. Convert the following ratios to percentages: (a) 3 : 4 (b) 2 : 3

Short Answer

Q1. The cost of an article was Rs. 15,500. Rs. 450 were spent on its repairs. If it is sold for a profit of 15%, find the selling price of the article.

Q2. 72% of 25 students are interested in mathematics. How many are not interested in mathematics?

Q3. An almirah is sold at Rs. 5,225 after allowing a discount of 5%. Find its marked price?

Q4. The price of a scooter was Rs. 34,000 last year. It has increased by 20% .

Long Answer

Q1. Sohan bought a second hand refrigerator for Rs. 2,500, then spent Rs. 500 on its repairs and sold it for Rs. 3,300. Find his loss or gain percent?

Q2. A milkman sold two of his buffaloes for Rs. 20,000 each. On one he made a gain of 5% and on the other a loss of 10%. Find his overall gain or loss?

Q3 The price of a TV is Rs. 13,000. The sales tax charged on it is at the rate of 12%. Find the amount that Vinod will have to pay if he buys it.

CH6 CUBE AND CUBE ROOT

Q1.What is the smallest number by which 392 must be multiplied so that the product is a perfect cube?

Q2.What is the smallest number by which 3087 must be divided so that the quotient is a perfect cube?

Q3. Find the cube root of (a)2197 (b)46656 (c)13824

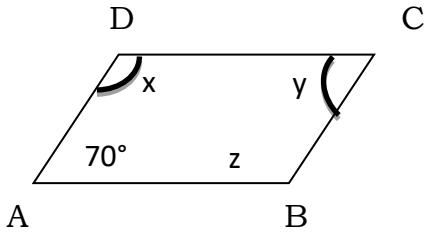
Q4.Find the cube root of -216 x1728

Q5.Is 256 a perfect cube? If not which smallest number to be multiplied by 256 to get a perfect cube?

Q6.F ind the volume of cube whose surface area is 150 sq.m

CH 3 UNDER STANDING QUADRILATERALS

Q1. In the given parallelogram ABCD, find the values of x, y & z.



Q2. . Find the number of sides of a regular polygon with each exterior angle is 24^0.

Q3.(1)Name the quadrilateral whose diagonals

(a) bisect each other (b)are perpendicular bisector of each other.

(c)all sides of equal length (d)all angles of equal measure

Q4. The perimeter of a parallelogram shaped park PQRS is 150 m. Rohan covered one of its side PQ which is greater than the other side QR by 25 m. And angle formed at point R is 85°.

a) Find the lengths of all the sides of the parallelogram.

b) Find $\angle P$, $\angle Q$, $\angle S$ by using suitable properties.

Q5.If the angles of quadrilateral in 1:2:3:4. Find the measure of each angle of quadrilateral.

Q6 The measure of two adjacent angles of a parallelogram are in the ratio 3: 2. Find the measure of each of the angles of the parallelogram.

Q7. . **Assertion:** Possible angles of a quadrilateral are 115°, 50°, 68°, 125°.

Reason: All angles are possible because sum of angles of a quadrilateral is 360°.

Ch-12 (Factorisation)

1. Factorise:
   a. $21a^2b + 49\ a\ b^2$
   b. $4x^2 - 16xy - 3x + 12y$
   c. $9x^2 + 3xy - 12x - 4y$
   d. $16a^2 + 88a + 121$
   e. $25x^2 - 20xy + 4y^2$
   f. $100 - 49a^2$
   g. $x^4 - 81$
   h. $602^2 - 598^2$
   i. $x^2 - 9x + 14$
   j. $x^2 - 15x + 36$
   k. $x^2 + 4x - 77$
   l. $x^2 - 36x + 99$
2. Divide:
   a. $16b^2yx^2\ by - 2xy$
   b. $5a^2b^2(7c - 21) \div 15ab(c - 3)$
   c. $14yz(z^2 - 5z - 36) \div 7z(z - 9)$
   d. $(a^2 - 21a + 108)\ by\ (a - 12)$
   e. $(a^2 - 21a + 108)\ by\ (a - 12)$
   f. $(x^2 + 23x - 210)\ by\ (x - 7)$

Ch-8 (Algebraic Expressions and Identities)

1. Add: $5x(5 - x)\ and\ 7x^2 - 3x$
2. Simplify the expression and evaluate it for $a = 4\ and\ b = 5$
   $$3b(a + b) + 6b^2$$
3. Simplify: $(2x - 3)(5x^2 - 6x + 9) - 3x(5x^2 + 9)$
4. The perimeter of a triangle is $5x^2 + 3x - 1$ and two of its sides are $2x - 5 + 7x^2$ and $3x^2 + 4 - 2x^3 + x$. Find the third side of the triangle.

5. If $5x$ books cost $Rs\ (10x^2 + 20x)$, what is the cost of one book?
6. Simplify using suitable Identities:
   a. $(3x - 5y)^2$
   b. 52^2
   c. $(5xy - 7)(5xy + 7)$
   d. 390×410
   e. $(3x + 5)(3x + 4)$
   f. $(x - 3)(x + 7)$

Ch-9(Mensuration)

1. Find the height of a cuboid whose base area is 180 cm^2 and volume is 900 cm^3.
2. Find the area of rhombus whose diagonals are 8cm and 10cm.
3. The area of a rhombus is 240 sq.cm and one of the diagonals is 16 cm. Find the other diagonal.
4. A cuboid is of dimensions 60 cm X 50 cm X 30 cm. How many small cubes with side 6 cm can be placed in the given cuboid?
5. Find the height of the cylinder whose volume is 1.54 m^3 and diameter of base is 140 cm.
6. The area of a trapezium is 480 sq.cm. If the length of one of the parallel sides is 72 cm and height is 8 cm. Find the length of the other parallel side.
7. Find the volume of cube whose total surface area is 486 cm^2.
8. The dimensions of a cuboidal tin are $30cm \times 40cm \times 50cm$. Find the cost of tin required for making 20 such tins, if the cost of tin sheet is $Rs\ 20\ per\ m^2$.
9. A cuboidal box of dimensions 2 m × 4 m × 3 m is to be painted except its bottom. Calculate how much area of the box has to be painted.
10. A well 3.5 m in radius and 22.5 m deep has to be dug. Find the cost of digging the well at Rs 3.40 per cubic metre.

ASSERTION-REASON

DIRECTION: In this question, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:

a. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
b. Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A).
c. Assertion (A) is true but reason (R) is false.
d. Assertion (A) is false but reason (R) is true.

1. Assertion (A): In an equation, only for certain values of the variable, the expressions on the LHS and RHS are equal.
   Reason (R): Those values are the solutions of the equations.
2. Assertion (A): It is possible to have a regular polygon each of whose exterior angles is 105°?

Reason (R): Each Exterior angle of a regular polygon is $\left(\frac{360}{n}\right)°$.

3. Assertion (A): $4^2 \times 4^{-5} \times 4^6 = 4^3 = 64$.
   Reason (R): if a and b are non-zero integers and m and n are any integers, $(a^m)^n = a^{mn}$.
4. Assertion (A): 0 is not a rational number.
   Reason (R): A rational number is a type of number, which is in the form of $\frac{p}{q}$ where p and q are integers and $q \neq 0$.
5. Assertion(A): Total Surface area of a cylinder having radius of the base 14 cm and height 30 cm is 3872 cm^2.
   Reason(R): If r be the radius and h be the height of the cylinder, then the total surface area = $(2\pi rh + 2\pi r^2)$.
6. Assertion(A): A kite is always a rhombus.
   Reason(R): A kite has two pairs of adjacent sides of equal length.
7. Assertion(A): $x^2 + 4x + 4 = (x + 2)(x + 2)$
   Reason(R): $a^2 + 2ab + b^2 = (a + b)(a + b)$
8. Assertion(A): 7 is the degree of the polynomial obtained on multiplying $(x^3 + 4)$ and $(x^4 + 7x^2 + 3x + 2)$.
   Reason(R): The highest power of the variable is called the degree of the polynomial.

MCQ PRACTICE WORKSHEET

1. How many rational numbers can you find between two rational numbers?

(a) 2 (b) 3 (c) countless (d) 0

2. Multiplicative inverse of -13

(a) 13 (b) -13 (c) $\frac{-1}{13}$ (d) 12

3. Which of the following statements is true?

(a) Every fraction is a rational number.

(b) Every rational number is a fraction.

(c) Every integer is a rational number.

(d) Both (a) and (c).

4. Which number is in the middle if $\frac{-1}{6}, \frac{4}{9}, \frac{6}{-7}, \frac{2}{5}$ and $\frac{-3}{4}$ arranged in descending order?

(a) $\frac{2}{5}$ (b) $\frac{-1}{6}$ (c) $\frac{4}{9}$ (d) $\frac{-6}{7}$

5. The sum of two rational numbers is $\frac{3}{10}$ and one of them is $\frac{-4}{5}$, the other number is :

(a) $\frac{3}{10}$ (b) $\frac{-4}{5}$ (c) $\frac{-1}{2}$ (d) $\frac{11}{10}$

6. The solution of $3m + 9 = 0$ is:

(a) -27 (b) -3 (c) 3 (d) 18

7. If all the angles of a quadrilateral are equal, the measure of each angle is

(a) 90^0 (b) 60^0 (c) 80^0 (d) 100^0

8. The coefficient of mn in the term $-8mn$ is

(a) n (b) m (c) 8 (d) -8

9. The side of a cube is doubled, its volume becomes

(a) 3 times (b) 8 times (c) 4 times (d) 2 times

10. The value of $13^0 + (-13)^0$ is

(a) 13 (b) 0 (c) 1 (d) 2

11. The common factor of $5ab^2$ *and* $15a^2b$ is

(a) ab^2 (b) $5ab^2$ (c) $5ab$ (d) $5a$

12. A simple closed curve made up of only_____is called a polygon .

a. curves (b) line segments (c) lines (d) closed curves

13. A polygon with minimum number of sides is

a. Pentagon (b) Square (c) triangle (d) angle

14. Polygons that have no portions of their diagonals in their exteriors are called

a. Squares (b) triangles (c) convex (d) concave

15. The angle sum of all interior angles of a convex polygon of sides 7 is

(a) 180^o (b) 540^o (c) 630^o (d) 900^o

16. The diagonals of a rhombus bisect each other at__angles.

(a) acute (b) right (c) obtuse (d) reflex

17. Find the ratio of 3 km to 300 m.

(b)10 : 1 b) 1 : 10 c) 1 : 5 d) none of these

18. 72% of 25 students are good in hindi, how many are not good in hindi?

a) 16 b) 14 c) 18 d) 7

19. What are the coefficients of y in the expression $4x - 3y$?

a. 4 (b) –3 (c) 3 (d) none of these

20. Write the expression for the statement: the sum of three times x and 11

(a) x +3 +11 (b) 3x + 11 (c) 3 + 11x (d) 3x – 11

21. The number of terms in $4p^2q - 3pq^2+5$ is

(a) 7 (b) 3 (c) 1 (d) 4

22. The value of expression 5n – 2, when n= –2 is

(a) –12 (b) 8 (c) 1 (d) –8

23. The factorization of $7a^2 +14a$ is

(a) 7(a + z) (b) 21a (c) 7(a + 1) (d)7a(a + 2)

24. The area of parallelogram is

(a) base + height (b) base x height (c) base x base (d) height x height

25. Two cubes each of edge 12 cm are joined. The surface area of new cuboid is

(a) 140 cm^2 (b) 1440 cm^2 (c) 144 cm^2 (d) 72 cm^2

26. A godown measures 40 m × 25 m × 10 m. Find the maximum number of wooden crates each measuring 1.5 m × 1.25 m × 0.5 m that can be stored in the godown.

(a) 18000 (b) 16000 (c) 15000 (d) 14000

27. 7 x 10^{-5} m is the standard form of which of the following__.

(a) 0.0007 m (b) 0.000007 m (c) 0.0000007 m (d) 0.00007 m

28. The factors of $2x^2 - 7x + 3$ are:

(a) $(x - 3)(2x - 1)$ (b) $(x + 3)(2x + 1)$

(c) $(x - 3)(2x + 1)$ (d) $(x + 3)(2x - 1)$

29. The value of 95 x 96 is:

(a) 9020 (b) 9120 (c) 9320 (d) 9340

30. Find the correct identity

(a) $(a + b)^2 = a^2 + 2ab + b^2$ (c) $(a + b)^2 = a^2 - 2ab + b^2$

(b) $(a - b)^2 = a^2 + 2ab + b^2$ (d) $(a^2 - b^2) = a^2 + 2ab + b^2$

DATA HANDLING

. In a school only, 3 out of 5 students can participate in a competition. What is the probability of the students who does not make it to the competition?

(a) 0.65 (b) 0.4 (c) 0.45 (d) 0.6

. Listed below are the temperature in °C for 10 days –6, –8, 0, 3, 2, 0, 1, 5, 4, 4. What is the range of the data?

(a) 8 (b)13°C (c)10°C (d)12°C

. Data represented using circles is known as

(a) Bar graph (b) Histogram (c) Pictograph (d) Pie chart

. A glass jar contains 6 red, 5 green, 4 blue and 5 yellow marbles of same size. Hari takes out a marble from the jar at random. What is the probability that the chosen marble is of red colour?

(a) 7/10 (b)3/10 (c)4/5 (d) 2/5

6. In a pie chart, the total angle at the centre of the circle is

(a) 180° (b) 360° (c) 270° (d) 90°

7. A card is drawn at random from a pack of 52 cards. Find the probability that the card is drawn is a red king.

(a) 1/13 (b) 1/26 (c) 13 (d) 26

8. Total number of outcomes, when a ball is drawn from a bag which contains 3 red, 5 black and 4 blue balls, is _____.

(a) 8 (b) 12 (c) 7 (d) 9

9. 18 out of 36 people love reading, so reading in the pie chart will be represented by

(a) 36 degree sector (b) quarter sector

(c) semi circular sector (d) None of these

10. When a die is thrown, list the outcomes of an event of getting a composite number.

a) 1, 3, 5 b) 2, 4, 6 c) 4, 6 d) None of these

11. A coin is tossed three times. The number of possible outcomes is ____.

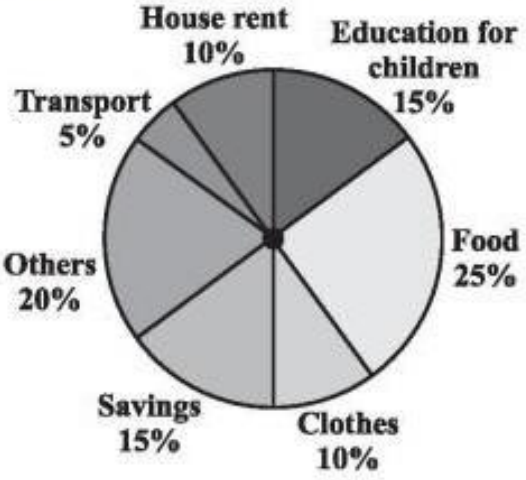
12. A die is thrown once. Find the probability of getting a number greater than 4.

13. What is the probability of an impossible event?

14. The monthly salary of an average person is Rs. 15,000. The central angle of the given sector representing his expenses on food and house rent on a pie chart is 60°. The amount he spends on his food and house rent is _____.

Adjoining pie-chart gives the expenditure (in percentage) on various items and savings of a family during a month.

Study the given pie-chart and answer the questions from Q15 – Q19.



15. On which item the expenditure was maximum?

16. On which item the expenditure was minimum?

17. Expenditure on which item is equal to total savings of the family?

18. Expenditure on which item is equal to total savings and the House Rent?

19. If the monthly savings of the family is Rs 3000. What is the monthly income of the family?

20. If you have a spinning wheel with 3 green sectors, 1 blue sector and 1 red sector, what is the probability of getting a green sector? What is the probability of getting a non-blue sector?

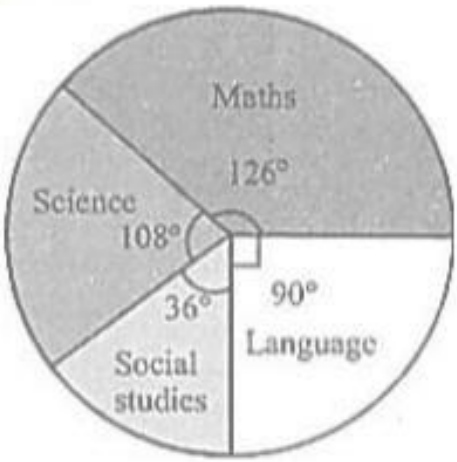
37. The number of students in a hostel, speaking different languages is given below. Display the data in a pie chart.

Language	Hindi	English	Marathi	Tamil	Bengali	Total
No. of students	40	12	9	7	4	72

38. Construct a pie chart for the given data:

Method of travel	Walk	Bike	Car	Bus
Frequency	9	3	6	12

32. A school has strength of 2000 students. The following pie graph shows the interests of students in different subjects.



(a)The number of students interested in Maths is _____.

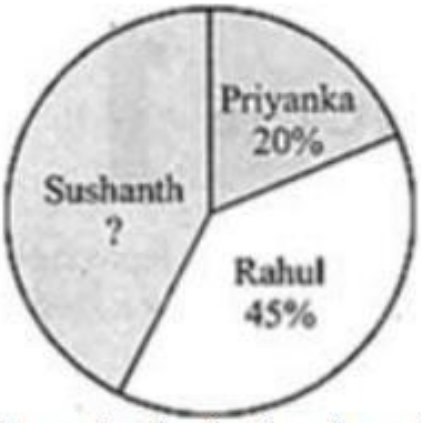
(b) The number of students interested in Scince is _____.

(c) The number of students interested in Social Studies is _____.

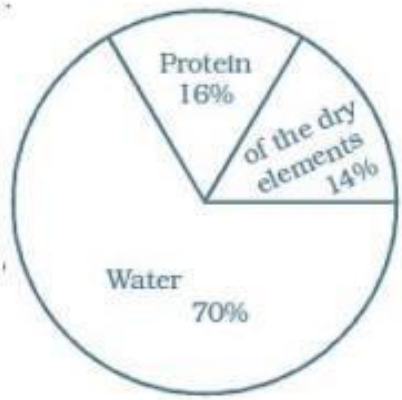
33. The pie chart shows a percentage breakdown of 1000 votes in student elections.

(a) How many votes did Sushanth receive?

(b) What is the central angle of the sector showing the votes to Priyanka?



34. The pie chart given below shows the distribution of constituents in the human body.



(a) What is the central angle of the sector showing the distribution of protein and other constituents ?

(b) What is the central angle of the sector showing the distribution of water?