

SAINIK SCHOOL CHANDRAPUR

Summer Vacations Assignment

Session – 2024 – 25

Class – VIII (Mathematics)

Instructions:- Assignment should be done in 100 pages notebook or project paper which should be compiled in a file. Assignment should be submitted on the very first day of reopening of the school.

Important things to remember :-

1. Learn mathematical tables from 12 to 25 to increase your calculation speed.
2. Complete your vacations task on daily basis. (Max 7 to 8 examples)
Don't try to complete it in one or two days.
3. Don't try to copy it from any sources, don't do calculations on mobile or calculators.
4. Don't complete your assignment on time. It is for your practice which will boost your confidence and will keep you in touch with Maths.
5. Happy Vacations, along with lots of enjoyment , daily take out 1 to 2 hours for your challenging subjects.

PRACTICE QUESTIONS
CLASS VIII: CHAPTER - 1
RATIONAL NUMBERS

1. Find $\frac{3}{7} + \left(\frac{-6}{11}\right) + \left(\frac{-8}{21}\right) + \frac{5}{22}$
 2. Find $\frac{-4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \left(\frac{-14}{9}\right)$
 3. Find using distributive property: (i) $\left\{\frac{7}{5} \times \left(\frac{-3}{12}\right)\right\} + \left\{\frac{7}{5} \times \frac{5}{12}\right\}$ (ii) $\left\{\frac{9}{16} \times \frac{4}{12}\right\} + \left\{\frac{9}{16} \times \frac{-3}{9}\right\}$
 4. Find $\frac{2}{5} \times \frac{-3}{7} - \frac{1}{14} - \frac{3}{7} \times \frac{3}{5}$
 5. Simplify: $\frac{-4}{5} \times \frac{3}{7} \times \frac{15}{16} \times \left(\frac{-14}{9}\right)$
 6. Multiply $\frac{6}{13}$ by the reciprocal of $\frac{-7}{16}$.
 7. What number should be added to $\frac{7}{12}$ to get $\frac{4}{15}$?
 8. What number should be subtracted from $-\frac{3}{5}$ to get -2 ?
 9. Is $\frac{8}{9}$ the multiplicative reciprocal of $-1\frac{1}{8}$? Why or why not?
 10. Is 0.3 the multiplicative reciprocal of $3\frac{1}{3}$? Why or why not?
 11. Write any 3 rational numbers between -2 and 0 .
 12. Find any ten rational numbers between $\frac{-5}{6}$ and $\frac{5}{8}$
 13. Find three rational numbers between $\frac{1}{4}$ and $\frac{1}{2}$
 14. Find ten rational numbers between $\frac{1}{4}$ and $\frac{1}{2}$
 15. Represent these numbers on the number line. (i) $\frac{7}{4}$ (ii) $\frac{-5}{6}$ (iii) $\frac{4}{7}$ (iv) $\frac{9}{4}$
 16. Represent $\frac{-2}{11}, \frac{-5}{11}, \frac{-9}{11}$ on the number line
 17. Find five rational numbers between. (i) $\frac{2}{3}$ and $\frac{4}{5}$ (ii) $\frac{-3}{2}$ and $\frac{5}{3}$ (iii) $\frac{1}{4}$ and $\frac{1}{2}$
 18. Write five rational numbers greater than -2
 19. Find ten rational numbers between $\frac{3}{5}$ and $\frac{3}{4}$.
 20. Write.
 - (i) The rational number that does not have a reciprocal.
 - (ii) The rational numbers that are equal to their reciprocals.
 - (iii) The rational number that is equal to its negative.
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ASSIGNMENT QUESTIONS
CLASS VIII: CHAPTER - 1
RATIONAL NUMBERS

1. Simplify: (i) $\frac{-2}{5} - \left(\frac{-3}{10}\right) - \left(\frac{-4}{15}\right)$ (ii) $\frac{5}{3} - \frac{7}{6} + \left(\frac{-2}{3}\right)$ (iii) $\frac{-3}{2} + \left(\frac{5}{4} - \frac{7}{4}\right)$
2. Verify that $(x \times y)^{-1} = x^{-1} \times y^{-1}$ when $x = \frac{-2}{3}$ and $y = \frac{-3}{5}$
3. If you subtract $\frac{1}{2}$ from a number and multiply the result by $\frac{1}{2}$, you get $\frac{1}{8}$. What is the number?
4. Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3, and 4 respectively, they add up to 74. Find these numbers.
5. Represent the following rational numbers on the number line
(a) $-\frac{1}{4}$ (b) $-1\frac{1}{5}$ (c) $-3\frac{8}{5}$
6. Represent the following rational numbers on the number line
(a) $-\frac{7}{10}$ (b) $-5\frac{3}{5}$.
7. Find two rational numbers between (i) -2 and 2 . (ii) -1 and 0 .
8. Insert six rational numbers between (i) $-\frac{1}{3}$ and $-\frac{2}{3}$ (ii) $\frac{1}{4}$ and $\frac{1}{2}$.
9. Arrange the following numbers in ascending order: $\frac{4}{-9}$, $\frac{-5}{12}$, $\frac{7}{-18}$, $\frac{-2}{3}$
10. Arrange the following numbers in descending order: $-\frac{5}{6}$, $-\frac{7}{12}$, $\frac{-13}{28}$, $\frac{23}{-24}$
11. Represent $4\frac{2}{3}$ on the number line.
12. What number should be added to $\frac{-7}{8}$ to get $\frac{4}{9}$?
13. The sum of two rational numbers is $\frac{-1}{2}$. If one of the numbers is $\frac{5}{6}$, find the other.
14. What number should be subtracted from $\frac{-2}{3}$ to get $\frac{-1}{2}$?
15. Divide the sum of $\frac{13}{5}$ and $\frac{-12}{7}$ by the product of $\frac{-31}{7}$ and $\frac{-1}{2}$.
16. The product of two rational numbers is $\frac{-16}{9}$. If one of the numbers is $\frac{-4}{3}$, find the other.
17. Find three rational numbers between 4 and 5.
18. Find three rational numbers between $\frac{2}{3}$ and $\frac{3}{4}$.
19. Find the HCF of $\frac{9}{10}$, $\frac{12}{25}$, $\frac{18}{35}$, $\frac{21}{40}$.

20. After reading $\frac{7}{9}$ of a book, 40 pages are left. How many pages are there in the book?
21. A drum full of rice weights 4016 kg. If the empty drum weights 1334 kg, find the weight of rice in the drum.
22. Raju earns Rs16000/month. He spends $\frac{1}{4}$ of his income on food; $\frac{3}{10}$ of the remainder on house rent and $\frac{5}{21}$ of the remainder on education of children. How much money is still left with him?
23. Divide the sum of $2\frac{1}{4}$ and $5\frac{1}{5}$ by the product of $2\frac{1}{4}$ and $\frac{2}{3}$
24. Divide the difference of $\frac{12}{7}$ and $\frac{13}{4}$ by the product of $\frac{4}{5}$ and $\frac{25}{2}$.
25. A tin holds $16\frac{1}{2}$ litres of oil. How many such tins will be required to hold $313\frac{1}{2}$ litres of oil?
26. Salma bought $2\frac{1}{2}$ kg onions at Rs. 12 per Kg. and $1\frac{3}{8}$ Kg. tomatoes at Rs. $16\frac{8}{11}$ per Kg. How much money did she give to the shopkeeper?
27. A designer needs $\frac{3}{5}$ th of a metre of cloth to make a fancy dress for children taking part in a dance performance. If 200 children are taking part, how much cloth will the designer need?
28. Find a rational number between $\frac{1}{2}$ and $\frac{1}{4}$ such that its denominator is 8.
29. Which number should be subtracted from $\frac{11}{12}$ so that we obtain $\frac{-3}{4}$?
30. What number should be added to $\frac{15}{16}$ so that we get the rational number $\frac{77}{48}$.
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MCQ WORKSHEET-III
CLASS VIII: CHAPTER - 2
LINEAR EQUATION IN ONE VARIABLE

1. The difference between two whole numbers is 66. The ratio of the two numbers is 2 : 5. What are the two numbers?
(a) 110, 44 (b) 120, 54 (c) 140, 74 (d) none of these
 2. Sum of two numbers is 95. If one exceeds the other by 15, find the numbers.
(a) 55, 35 (b) 50, 45 (c) 40, 25 (d) none of these
 3. Two numbers are in the ratio 5:3. If they differ by 18, what are the numbers?
(a) 45, 27 (b) 50, 32 (c) 40, 22 (d) none of these
 4. Three consecutive integers add up to 51. What are these integers?
(a) 117, 121, 125 (b) 110, 121, 132 (c) 110, 99, 154 (d) none of these
 5. The sum of three consecutive multiples of 8 is 888. Find the multiples.
(a) 120, 136, 400 (b) 110, 121, 132 (c) 110, 99, 154 (d) none of these
 6. Solve: $2x - 3 = x + 2$
(a) 5 (b) -9 (c) 5 (d) 9
 7. Solve: $3x = 2x + 18$
(a) 18 (b) -18 (c) 14 (d) none of these
 8. Solve: $5t - 3 = 3t - 5$
(a) 1 (b) -1 (c) 2 (d) none of these
 9. Solve: $5x + 9 = 5 + 3x$
(a) 2 (b) -2 (c) 3 (d) none of these
 10. Solve: $4z + 3 = 6 + 2z$
(a) $\frac{3}{2}$ (b) $-\frac{3}{2}$ (c) 2 (d) none of these
 11. Solve: $2x - 1 = 14 - x$
(a) 5 (b) -9 (c) 5 (d) 9
 12. Solve: $8x + 4 = 3(x - 1) + 7$
(a) 1 (b) -1 (c) 0 (d) none of these
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PRACTICE QUESTIONS
CLASS VIII: CHAPTER - 2
LINEAR EQUATION IN ONE VARIABLE

1. Find the solution of $\frac{3x+5}{2x+1} = \frac{1}{3}$
2. Find the solution of $\frac{x+6}{4} + \frac{x-3}{5} = \frac{5x-4}{8}$
3. Solve: $\frac{x}{4} + \frac{x}{6} = x - 7$
4. Solve: $\frac{2}{3}x + 1 = \frac{7}{3}$
5. Solve: $\frac{x}{3} + \frac{5}{2} = \frac{-3}{2}$
6. Solve: $\frac{15}{4} - 7x = 9$
7. Solve: $x = \frac{4}{5}(x+10)$
8. Solve: $\frac{2x}{3} + 1 = \frac{7x}{15} + 3$
9. Solve: $2y + \frac{5}{3} = \frac{26}{3} - y$
10. Solve: $3m - 5m = \frac{8}{5}$
11. Solve: $5x + \frac{7}{2} = \frac{3}{2}x - 14$
12. The perimeter of a rectangular swimming pool is 154 m. Its length is 2 m more than twice its breadth. What are the length and the breadth of the pool?
13. The base of an isosceles triangle is $\frac{4}{3}$ cm. The perimeter of the triangle is $4\frac{2}{15}$ cm. What is the length of either of the remaining equal sides?
14. Sum of two numbers is 95. If one exceeds the other by 15, find the numbers.
15. Two numbers are in the ratio 5:3. If they differ by 18, what are the numbers?
16. Three consecutive integers add up to 51. What are these integers?
17. The sum of three consecutive multiples of 8 is 888. Find the multiples.
18. Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3 and 4 respectively, they add up to 74. Find these numbers.
19. The ages of Rahul and Haroon are in the ratio 5:7. Four years later the sum of their ages will be 56 years. What are their present ages?
20. The number of boys and girls in a class are in the ratio 7:5. The number of boys is 8 more than the number of girls. What is the total class strength?

21. Fifteen years from now Ravi's age will be four times his present age. What is Ravi's present age?
22. A rational number is such that when you multiply it by $\frac{5}{2}$ and add $\frac{2}{3}$ to the product, you get $-\frac{7}{12}$. What is the number?
23. Lakshmi is a cashier in a bank. She has currency notes of denominations Rs 100, Rs 50 and Rs 10, respectively. The ratio of the number of these notes is 2:3:5. The total cash with Lakshmi is Rs 4,00,000. How many notes of each denomination does she have?
24. I have a total of Rs 300 in coins of denomination Re 1, Rs 2 and Rs 5. The number of Rs 2 coins is 3 times the number of Rs 5 coins. The total number of coins is 160. How many coins of each denomination are with me?
25. The organisers of an essay competition decide that a winner in the competition gets a prize of Rs 100 and a participant who does not win gets a prize of Rs 25. The total prize money distributed is Rs 3,000. Find the number of winners, if the total number of participants is 63.
26. Deveshi has a total of Rs 590 as currency notes in the denominations of Rs 50, Rs 20 and Rs 10. The ratio of the number of Rs 50 notes and Rs 20 notes is 3:5. If she has a total of 25 notes, how many notes of each denomination she has?

27. Solve: $\frac{6x+1}{3} + 1 = \frac{x-3}{6}$

28. Solve: $5x - 2(2x - 7) = 2(3x - 1) + \frac{7}{2}$

29. Solve: $\frac{3x-2}{4} - \frac{2x+3}{3} = \frac{2}{3} - x$

30. Solve: $\frac{3x+2}{7} + \frac{4(x+1)}{5} = \frac{2}{3}(2x+1)$

31. Solve: $x - \frac{x-1}{2} = 1 - \frac{x-2}{3}$

32. Solve: $\frac{x}{2} - \frac{3x}{4} + \frac{5x}{6} = 21$

33. Solve: $x + 7 - \frac{8x}{3} = \frac{17}{6} - \frac{5x}{2}$

34. Solve: $\frac{3x+4}{2-6x} = \frac{-2}{5}$

35. Solve: $\frac{7x+4}{x+2} = \frac{-4}{3}$

