ST. THOMAS SCHOOL, SAHIBABAD
REVISION WORKSHEET (2025-2026)
CLASS: VIII
MATHEMATICS (041)

Section-A

1. If $2x-3=7$, then the value of x is 1
   (A) 3 (B) 4 (C) 5 (D) 6

2. If $x_1=12$, $x_2=6$, $y_2=24$, what is y_1 if x and y vary directly? 1
   (A) 12 (B) 24 (C) 48 (D) 36

3. The usual form of 1.03×10^{-3} is 1
   (A) 1003 (B) 10030 (C) 0.00103 (D) 0.000103

4. 24^3 is same as 1
   (A) $4^3 \times 6$ (B) $6^3 \times 4$ (C) $6^3 \times 4^3$ (D) $4^2 \times 6^2$

5. The coefficient of x^2y in $-10x^3y^2z$ is 1
   (A) 10xyz (B) $-10x^2z$ (C) –10xyz (D) –10xy

6. Factorized form of $r^2 - 10r + 21$ is 1
   (A) (r – 1) (r – 4) (B) (r – 7) (r – 3) (C) (r – 7) (r + 3) (D) (r + 7) (r + 3)

7. If $3(t-3)=5(2t+1)$, then t is equal to 1
   (A) –2 (B) 2 (C) –3 (D) 3

8. The common factors of $4ab^2$, 16ab and 32a are 1
   (A) 8ab (B) $8a^2$ b (C) ab (D) 4a

9. If 5 persons can do a piece of work in 28 days, then the number of persons to do the work in 7 days 1
   (A) 15 (B) 30 (C) 20 (D) 35

10. $4x^2 + xy - 3y + 6$ is 1
    (A) polynomial (B) binomial (C) trinomial (D) not a polynomial

11. If each edge of a cube is doubled, then its volume will increase by
    (A) 6 times (B) 8 times (C) 4 times (D) 16 times

12. The height of a cylinder whose radius is 7 cm and the total surface area is 968 cm^2 is
    (A) 15 cm (B) 17 cm (C) 19 cm (D) 21 cm

13. Which of the following points lies on y-axis?
    (A) (–4 , 0) (B) (4 ,0) (C) (0 , –4) (D) (–4 , 4)

14. The height of a cuboid of volume 300 cm^3 and base area 30 cm^2 is
    (A) 30 cm (B) 10 cm (C) 9 cm (D) 15 cm

15. $(4^2)^3$ is equal to
    (A) 4^6 (B) 4^5 (C) 4^8 (D) 8^3

16. The number of solutions of a linear equation in one variable is
    1 (B) 2 (C) 0 (D) infinite

17. Value of the variable for which L.H.S = R.H.S is called
equation (B) constant (C) solution (D) variable

18. $(4xy + 2y)$ divided by $4y$ is
(A) $x + 2$ (B) $x + 2y$ (C) $x + \frac{1}{2}$ (D) 2

In Question 19 to 22, a statement of Assertion(A) is followed by a statement of Reason(R). Choose the correct option.

(A) Both A and R are the true and R is a correct explanation of A.

(B) Both A and R are the true but R is not a correct explanation of A.

(C) A is true and R is false.

(D) A is false and R is true.

19. Assertion (A): The reciprocal of p^x is p^{-x}. 1
Reason (R): The product of a number and its reciprocal is 1.

20. Assertion (A): Area of rhombus is $\frac{\text{perimeter}}{4} \times h$. 1
Reason (R): Area of a rhombus is base $\times$ height.

21. Assertion (A): Variables whose values depend upon values of other variable are called dependent variable. 1
Reason(R): The relation between a dependent and an independent variable is shown through a graph.

22. Assertion (A): The terms of the expression $3x^2y - 5xy + 7x$ are $3x^2y$, $-5xy$, and $7x$. 1
Reason (R): Terms in an algebraic expression are separated by addition or subtraction signs.

Section-B

23. Solve : $\frac{x}{3} + 31 = 1 + \frac{x}{6}$ 2

24. Simplify using laws of exponents: $2^5 \times (2^3 \div 2^6)$ 2

25. Solve: $3x + 14 = 29$ 2

26. If $3^{-6} = 27^x$. Then find the value of x. 2

27. Express 0.00001 in exponential form. 2

28. Find $2x(3x + 5) - 3(4x - 6)$ 2

29. A girl reaches school in 40 minutes when she travels by foot at the speed of 12 km/hr. How much time will she take to reach school if she cycles at the speed of 30 km/hr? 2

30. If 6 taps fill a tank in 12 hours, how long will 12 taps take? 2

31. Factorize: $3x^2 + 9x$ 2

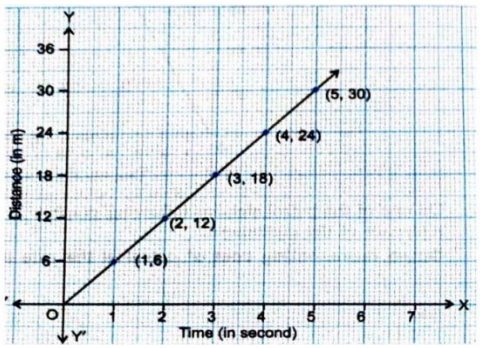
32. If 6 books cost ₹180, find the cost of 15 books. 2

33. Factorize: $a^2 + 11a + 24$ 2

34. Look at the distance - time graph and answer the following questions : 2

i. What is the speed of motion during the period from 3 seconds to 5 seconds?

ii. What is the speed of motion when it covers a distance of 30 m?



Section-C

35. Riya can drive to Agra in 4 hours at 60 km per hour. How long will Riya take if she reduce her speed to 40 km per hour? Also find the constant of variation. 3

36. Solve the equation: $2\,(y-8)-2=3y+4$ 3

37. If a box of sweets is divided among 24 children, they will get 5 sweets each. How many would each get, if the number of the children is reduced by 4? 3

38. Factorize: $x^2-8x+15$ 3

39. Simplify : $\frac{64a^2-1}{8a+1}$ 3

40. Find the volume of a cuboid of length= 6xy units, breadth = 3xy units and height = $2x^2$ units. 3

41. Factorize: $18x^2-32y^2$ 3

42. By what number should 6^{-3} be multiplied to obtain 6^5? 3

43. Find 'x' if $3^{2x}:\ 3^{x+5}=1:27$ 3

44. Factorize: $3y^2-y-30$. 3

45. A wall measuring 10 m × 1.62 m × 28 cm is to be built by using bricks each measuring 21 cm × 9 cm × 6 cm. How many bricks will be needed assuming no wastage in the process? Find the cost of the bricks at ₹1.50 per piece. 3

Section-D

46. Solve: $2x-\frac{x-2}{3}=10-\frac{x-2}{5}$. 5

47. Simplify and evaluate the following expression when x = 1, y = –1 and z = 3 5

$$\left(\frac{-3}{2}\,xyz\right)\times\left(-\frac{16}{9}\,x^2y\right)\times\left(\frac{1}{2}\,xy^2z\right)$$

48. There are two juice tins – one cylindrical in shape having diameter 7 cm and height 20 cm. The other juice tin is cuboidal in shape having dimensions 90 cm × 15 cm × 5 cm. Which juice tin has a greater volume and by how much? [$\pi=\frac{22}{7}$] 5

49. Subtract the sum of $2a^2-3ab+7$ and $3a^2-6ab+3$ from the sum of $-9a^2+2ab-4$ and $a^2-6ab-9$. 5

50. A train is moving at a constant speed of 50 km/h. Draw a distance – time graph. How far will it travel in 2 hours 30 minutes? Find the time required to cover a distance of 300 km. 5

51. A road roller of 160 cm height has a diameter of 70 cm. To level a playground it takes 95 complete revolutions. Determine the cost of levelling the playground at the rate of ₹ 30.5 per square metre. $[\pi = \frac{22}{7}]$ 5

Section-E

52. A playground is in the shape of a square. The area of the square is 256 m^2 with each of its side $(x + 2)$ m. One day Suraj along with his two friends Ajay and Aman went to play there with bicycle. Someone stole Suraj's bicycle, but Ajay and Aman helped him by contributing ₹$(4a + 60)$ and ₹$(6a + 10)$ respectively to buy a new bicycle. The cost of bicycle was ₹4200. On the basis of this information answer the following questions.

i. Find the value of 'x'. 1

ii. Find the expression for the total amount given by Ajay and Aman to Suraj. 1

iii. Find the value of 'a'. 2

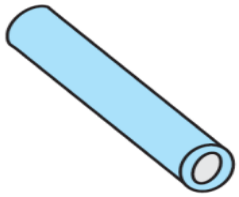
53. A solid cylindrical tank, closed at both ends, has height 20 m and base diameter 14 m. Hari wants to paint all surfaces of the cylindrical tank. Based on this situation answer the following questions. $[\pi = \frac{22}{7}]$

i. Find the curved surface area of the cylindrical tank. 1

ii. Find the total area of both ends of the cylindrical tank. 1

iii. How many buckets of paint will Hari need to paint all the surfaces of the cylindrical tank if each bucket can paint 100 m^2 area? 2

54. Savitri had to make a model of a cylindrical kaleidoscope for her science project. She wanted to use chart paper to make the curved surface of the kaleidoscope. She wanted to make a kaleidoscope of length 25 cm with a 7cm diameter? You may take $\pi = \frac{22}{7}$.



i. Find the area of chart paper required to make kaleidoscope. 1

ii. Find the cost of chart paper if the rate of chart paper is ₹2 per 100 cm^2. 1

iii. Find the volume of the kaleidoscope. 2

55. The given table shows the interest on Riya's deposits in a bank in a particular year:

Deposit (in ₹)	1000	1500	2500	4000
Simple interest (in ₹):	80	120	200	320

i. Draw the graph for the given data. 1

ii. Using the graph, find the interest on ₹3500 for the year. 1

iii. How much money Riya should invest to get an interest of ₹160? 2