MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

LINEAR EQUATION IN ONE VARIABLE

Example

1. Solve: $5x - 6 = 4x - 2$

A. $x = 2$

B. $x = 3$

C. $x = 4$

D. $x = 5$

Answer: C

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

A. $x = \frac{9}{20}$

B. $x = \frac{1}{20}$

C. $x = \frac{9}{5}$

D. $x = \frac{1}{5}$

Answer: A

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3. Solve: $2y + \frac{11}{4} = \frac{1}{3}y + 2.$

A. $y = -\frac{7}{20}$

B. $y = -\frac{5}{20}$

C. $y = -\frac{3}{20}$

D. $y = -\frac{9}{20}$

Answer: D

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4. Solve: $\frac{1}{4}x + \frac{1}{6}x = \frac{1}{2}x + \frac{3}{4}$.

A. $x = 9$

B. $x = -9$

C. $x = -12$

D. $x = 12$

Answer: B

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5. Solve: $\frac{5x-4}{8} - \frac{x-3}{5} = \frac{x+6}{4}$

A. $x = 7$

B. $x = 8$

C. $x = 6$

D. $x = 9$

Answer: B

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6. Solve: $x - \left(2x - \frac{3x-4}{7}\right) = \frac{4x-27}{3} - 3.$

A. 2

B. 4

C. 3

D. 6

Answer: D

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7. Solve: $\frac{2}{3}(x-5) - \frac{1}{4}(x-2) = \frac{9}{2}$

A. $\frac{88}{5}$

B. $\frac{88}{10}$

C. $\frac{77}{5}$

D. none of these

Answer: A

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8. Solve:$0.3x + 0.4 = 0.28x + 1.16$

A. 0.38

B. 3.8

C. 380

D. 38

Answer: D

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Problem Base

1. Nine added to thrice a whole number given 45. Find the number

A. 12

B. 11

C. 10

D. 9

Answer: A

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2. Four fifth of a number is greater than three-fourths of the number by 4. Find the number.

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3. The sum of two consecutive multiples of 3 is 69.

Find them.

A. 33 and 34

B. 31 and 35

C. 33 and 36

D. none of these

Answer: C

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4. The length of a rectangular plot exceeds its breadth by 5 meters. If the perimeter of the plot is 142 metres. Find the dimension of the plot.

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5. A number has two digits whose sum is 9. if 27 is added to the number , its digits get interchanged. Find the number.

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6. The numerator of a fraction is 4 less than the denominator. If 1 is added to both its numerator and denominator, it become $\frac{1}{2}$. Find the fraction.

A. $\frac{7}{11}$

B. $\frac{5}{9}$

C. $\frac{3}{7}$

D. $\frac{4}{7}$

Answer: C

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7. Rahul father is thrice as old as Rahul after 12 years he will be just twice his son. Find the present of Rahul's father.

A. 42 years

B. 24 years

C. 36 years

D. 63 years

Answer: C

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8. A dealer earned a profit of 5% by selling a radio for ₹714. Find the cost price of the radio.

A. ₹580

B. ₹780

C. ₹680

D. ₹980

Answer: C

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9. 50 kg of an alloy of lead and tin contains 60% of lead. How muh lead must be melted into it to make the alloy cantain 75% of lead?

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Exercise 7 A

1. Solve the following equation.

$3x - 5 = 0$

A. $x = \frac{5}{3}$

B. $x = \frac{2}{5}$

C. $x = \frac{3}{5}$

D. None of the above

Answer: A

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2. Solve the following eqations.Check your result in each case

$8X - 3 = 9 - 2X$

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3. Solve the following eqations.Check your result in each case

$7 - 5X = 5 - 7X$

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4. Solve the following eqations.Check your result in each case

$3 + 2X = 1 - X$

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5. Solve the following eqations.Check your result in each case

$2(X-2)+3(4X-1)=0$

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6. Solve the following equations.Check your result in each case

$5(2X-3)-3(3X-7)=5$

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7. Solve the following eqations.Check your result in each case

$$2X - \frac{1}{3} = \frac{1}{5} - X$$

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8. Solve the following equations.Check your result in each case

$$\frac{1}{2}X - 3 = 5 + \frac{1}{3}X$$

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9. Solve the following equations.Check your result in each case

$$\frac{x}{2} + \frac{x}{4} = \frac{1}{8}$$

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10. Solve the following equations.Check your result in each case

$$3x + 2(x + 2) = 20 - (2x - 5)$$

A. $x = 2$

B. $x = 3$

C. $x = 4$

D. $x = 5$

Answer: B

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11. Solve the following equations.Check your result in each case

$13(y-4) - 3(y-9) - 5(y+4) = 0$

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12. Solve the following eqations.Check your result in each case

$(2m + 5) = 3m - 10$

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13. Solve the following eqations.Check your result in each case

$6(3x + 2) - 5(6x - 1) = 3(x - 8) - 5(7x - 6) + 9x$

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14. Solve the following equations.Check your result in each case

$$t-(2t+5)-5(1-2t)=2(3+4t)-3(t-4)$$

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15. Solve the following equations.Check your result in each case

$$\frac{2}{3}x=\frac{3}{8}x+\frac{7}{12}$$

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16. Solve the following equations.Check your result in each case

$$\frac{3x-1}{5}-\frac{x}{7}=3$$

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17. Solve the following eqations.Check your result in each case

$$2x-3=\frac{3}{10}(5x-12)$$

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18. Solve the following equations.

$$\frac{y-1}{3} - \frac{y-2}{4} = 1$$

A. $y = 20$

B. $y = 30$

C. $y = 10$

D. $y = 50$

Answer: C

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19. Solve the following equation.Check your result in each case

$$\frac{x-2}{4}+\frac{1}{3}=x-\frac{2x-1}{3}$$

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20. Solve the following equations.Check your result in each case

$$\frac{2x-1}{3}-\frac{6x-2}{5}=\frac{1}{3}$$

A. $x=-\frac{9}{2}$

B. $x=-\frac{7}{2}$

C. $x = -\frac{1}{2}$

D. $x = -\frac{5}{2}$

Answer: C

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21. Solve the following equations.Check your result in each case

$$\frac{y+7}{3} = 1 + \frac{3y-2}{5}$$

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22. Solve the following equation.Check your result in each case

$$\frac{2}{7}(x-9)+\frac{x}{3}=3$$

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23. Solve the following equation.Check your result in each case

$$\frac{2x-3}{5}+\frac{x+3}{4}=\frac{4x+1}{7}$$

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24. Solve the following equation.Check your result in each case

$$\frac{3}{4}(7x-1)-\left(2x-\frac{1-x}{2}\right)=x+\frac{3}{2}$$

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25. Solve the following equation.Check your result in each case

$$\frac{x+2}{6}-\left(\frac{11-x}{3}-\frac{1}{4}\right)=\frac{3x-4}{12}$$

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26. Solve the following equation.Check your result in each case

$$\frac{9x+7}{2} - \left(x - \frac{x-2}{7}\right) = 36$$

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27. Solve the following equation.Check your result in each case

$$0.5x + \frac{x}{3} = 0.25x + 7$$

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28. Solve the following equations.Check your result in each case

$0.18(5x - 4) = 0.5x + 0.8$

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29. Solve the following equations.Check your result in each case

$2.4(3 - x) - 0.6(2x - 3) = 0$

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30. Solve the following equations.Check your result in each case

$$0.5x - (0.8 - 0.2x) = 0.2 - 0.3x$$

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31. Solve the following equations.Check your result in each case

$$\frac{x+2}{x} - 2 = \frac{7}{3}$$

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32. Solve the following equations.Check your result in each case

$$\frac{2x+5}{3x+4}=3$$

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Exercise 7 B

1. Twice a number when decreased by 7 gives 45. find the number.

A. 36

B. 26

C. 16

D. 46

Answer: B

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2. thrice a number when increased by 5 gives 44. find the number.

A. 14

B. 15

C. 13

D. 14

Answer: C

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3. four added to twice a number yields $\frac{26}{5}$. find the fraction.

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4. a number when added to its half gives 72. find the number.

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5. a number added to its two-thirds is equal to 55. find the number.

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6. A number when multiplied by 4, exceeds itself by 45. find the number.

A. 11

B. 12

C. 13

D. 15

Answer: D

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7. a number is as much greater than 21 as it is less than 71. find the number.

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8. $\frac{2}{3}$ of a number is less than the original number by 20 . find the number.

A. 40

B. 60

C. 30

D. 50

Answer: B

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9. a number is $\frac{2}{5}$ times another number. if their sum is 70, find the numbers.

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10. two-third of a number is greater than one-third of the number by 3. find the number.

A. 7

B. 9

C. 8

D. 6

Answer: B

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11. the fifth part of the number when increased by 5 equals its fourth part decreased by 5. find the number.

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12. find two consecutive natural numbers whose sum is 63.

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13. find two consecutive positive odd integers whose sum is 76.

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14. find three consecutive positive even integers whose sum is 90.

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15. divide 184 into two parts such that one-third of one part may exceed one-seventh of the other part by 8.

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16. A sum of rupees 500 is in the form of denominations of rupees 5 and rupees 10. If the total number of notes 90, find the number of notes of each type.

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17. Sumitra has ₹34 in 50-paise and 25-paise coin. If the number of 25-pasie coin is twice the number of 50-paise coin, hoe many coin of each kind does she have?

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18. Raju is 19 years younger than his cousin .after 5 years ,their ages will be in the ratio 2:3 find their present ages

A. 30 years 42 years

B. 33 years 52 years

C. 30 years 54 year

D. 40 years 12 years

Answer: B

19. A father is 30 years older than his son . In 12 years the man will be three times as old as his son. Find their present ages.

A. 27 years 3 years

B. 30 years 3 years

C. 33 years ,3 years

D. 25 years 5 years

Answer: C

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20. The ages of sonal and manoj are in the ratio $7:5$ ten years hence, the ratio of their ages will be $9:7$. Find their present ages

A. 40 years 34 years

B. 37 years 27 years

C. 35 years 25 years

D. 36 years 26 years

Answer: C

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21. Five years ago a man was seven times asold as his son. Five yeears hense, the father will be three time times as old as his son. Find their present ahes

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22. After 12 years I shall be 3 times as old as I was 4 years ago. Find my present age.

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23. In an examination a student requires 40% of the total marks to pass if rupa gets 185 marks and fails by 15 marks, Find the total marks.

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24. A number consists of two digits whose sum is 8. If 18 is added to the number its digits are reversed. Find the number.

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25. The total cost of 3 tables and 2 chairs is ₹1850. if a table costs ₹75 more than a chair, Find the price of chair

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26. A man sold an article for ₹495 and gained 10% on it Find the cost price of the article.

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27. The length of a rectangular Field is twice its breadth. If the perimeter of the field is 150 metres. Find its length and breadth.

A. $60m, 25m$

B. $50m, 25m$

C. $50m, 35m$

D. $70m, 25m$

Answer: B

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28. Two equal sides of a triangle are each 5 metres less than twice the third side. If the perimeter of the triangle is 55 metres. Find the lengths of its sides.

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29. Two complementary angles differ by 8° . Find the angles.

A. $40^\circ, 50^\circ$

B. $40^\circ, 60^\circ$

C. $41^\circ, 49^\circ$

D. $40^\circ, 48^\circ$

Answer: C

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30. Two supplementary angles differ by 44° . Find the angles.

A. $212^\circ, 68^\circ$

B. $112^\circ, 88^\circ$

C. $112^\circ, 68^\circ$

D. $116^\circ, 68^\circ$

Answer: C

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31. In an Isosceles triangle the base angles are equal and the vertex angle is twice of each base angle. Find the measures of the angles of the triangle.

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32. Aman travelled $\frac{3}{5}$ of his journey by rail $\frac{1}{4}$ by a taxi, $1/8$ by a bus and the remaining 2 km on Foot. What is the length of his total journey?

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33. A labourer is engaged for 20 days on the condition that he will receive ₹120 for each day he works and will be fined ₹10 for each day he is absent. If he receive 1880 in all, for how many days did he remains absent?

A. 2 days

B. 12 days

C. 10 days

D. 4 days

Answer: D

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34. Hari babu left one-third of his property to his son, one-fourth to his daughter and the remainder to his wife.If his wife share is 18000, What was the worth of his total property?

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35. How much pure alcohol be added to 400 ml of a 15% solution to make its strength 32%?

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Exercise 7 C

1. IF $5x - \frac{3}{4} = 2x - \frac{2}{3}$, then $x = ?$

A. $\frac{1}{12}$

B. $\frac{1}{4}$

C. 36

D. `1/36

Answer: d

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2. if $2z + \frac{8}{3} = \frac{1}{4}z + 5$, then z=?

A. 3

B. 4

C. $\frac{3}{4}$

D. $\frac{4}{3}$

Answer: d

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3. If$(2n + 5) = 3(3n - 10)$,then n=?

A. 5

B. 3

C. $\frac{2}{5}$

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

Answer: a

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4. if (x-1)/(x+1)=7/9,then x=?

A. 6

B. 7

C. 8

D. 10

Answer: c

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5. If $8(2x-5)-6(3x-7)=1$ then x= ?

A. 2

B. 3

C. $\frac{1}{2}$

D. $\frac{1}{3}$

Answer: c

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6. If $\frac{x}{2} - 1 = \frac{x}{3} + 4$, then x=?

A. 8

B. 16

C. 24

D. 30

Answer: d

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7. If $\frac{2x-1}{3} = \frac{x-2}{3} + 1$, Then $x = ?$

A. 2

B. 4

C. 6

D. 8

Answer: A

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8. The sum of two consecutive whole number is 53.

the smaller number is

A. 25

B. 26

C. 29

D. 23

Answer: b

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9. The sum of two consecutive even number is 86. The large of the two is.

A. 46

B. 36

C. 38

D. 44

Answer: d

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10. The sum of two consecutive odd number is 36. the smaller one is

A. 15

B. 17

C. 19

D. 13

Answer: B

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11. On adding 9 to the twice of a whole number gives 31. the whole number is

A. 21

B. 16

C. 17

D. 11

Answer: d

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12. Thrice a number when increased by 6 gives 24. The number is

A. 6

B. 7

C. 8

D. 11

Answer: A

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13. $\frac{2}{3}$ of a number is less than the orignal number by 10. The original number is

A. 30

B. 36

C. 45

D. 60

Answer: A

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14. Two complementry angles differ by 10° the larger angle is

A. 60°

B. 50°

C. 64°

D. 54°

Answer: b

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15. Two supplementary angle differ by 20°. The smaller of the two measures

A. 60°

B. 80°

C. 100°

D. 120°

Answer: b

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16. The ages of A and B are in the ratio $5:3$ After 6 years. Their ages will be in the ratio $7:5$, A's present age is

A. $5 years$

B. $10 years$

C. $15 years$

D. $20 years$

Answer: C

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17. A number when mulitiplied by 5 is increased by 80. The number is

A. 15

B. 20

C. 25

D. 30

Answer: B

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18. The length of a rectangle is three times its width and its perimeter is 96 m. The length is

A. $12m$

B. $24m$

C. $36m$

D. $48m$

Answer: C

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Test Paper 7 A

1. Evaluate $x^3 + y^3 + z^3 - 3xyz$ when x=2, y=-1 and z=3.

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Test Paper A

1. Write the coefficient of x in each of the following:

(1) $-5xy$

(2) $2xy^2z$

(3) $-\frac{3}{2}abx$

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2. Subtract $x^2 - 22xy + 5y^2 - 4$ from $4xy - 5x^2 - y^2 + 6$

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3. How much is $x^2 - 2xy + 3y^2$ less than $2x^2 - 3y^2 + xy$?

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4. Find the product $\left(\frac{3}{5}abc^2\right) \cdot \left(-\frac{25}{12}a^2b^2\right) \cdot (-8b^2c)$.

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5. Simplify: $(3a+4)(2a-3)+(5a-4)(a+2)$.

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6. Solve: $\frac{3x}{10}+\frac{2x}{5}=\frac{7x}{25}+\frac{29}{25}$

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7. Solve: $0.75x + \frac{x}{2} = 0.5x + 8.$

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8. The sum of two consecutive odd numbers is 68. Find the numbers.

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9. Reenu father is thrice as old as reenu. After 12 years he will be just twice his daughter Find their present ages.

A. 30 years and 18 years

B. 36 years and 12 years

C. 36 years and 10 years

D. none of these

Answer: B

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Test Paper 7 B

1. If $2x + \frac{5}{3} = \frac{1}{4}x + 4$, then x=?

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2. If $\frac{x}{2} - \frac{x}{3} = 5$, then x=?

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3. If $\frac{x-2}{3} = \frac{2x-1}{3} - 1$,then x=?

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4. A number when multiplied by 4 in increased by 54. The number is

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5. Two complementry angle differby 14° the larger angle is

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6. The length of a rectangle is three times its width and its perimeter is $96m$. The length of the rectangle is

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7. The ages of A and B are in the ratio $4:3$ After 6 years. Their ages will be in the ratio $11:9$, as present age is

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Test Paper 7 C

1. Fill in the blanks.

(1) $-2a^3b$ is a.....

(2) $\left(a^2-2b^2\right)$ is a .....

(3) $(a+2b-3c)$ is a .....

(4) In $-5ab$, the coefficient of a is .....

(5) In $x^2 + 2x - 5$,the.....term is -5

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Test Paper 7 D

1. Write t for ture and f for false for each of the following:

1. In-x, the constant trem is -1

2. The coefficient of x in$x^2 - 3x + 5$ is 3.

$(5x - 7) - (3x - 5) = 2x - 12$

4. $(3x + 5y)(3x - 5y) = (9x^2 - 25y^2)$

5. If a=2 and b=$\frac{1}{2}$ then value of $ab(a^2 + b^2) is \frac{4.1}{4}$

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