Question:1

$3x - 5 = 0$

Solution:

Question:2

$8x - 3 = 9 - 2x$

Solution:

$8x - 3 = 9 - 2x$

$8x + 2x = 9 + 3$ By transposition

$10x = 12$

Question:3

$7 - 5x = 5 - 7x$

Solution:

Question:4

$3 + 2x = 1 - x$

Solution:

Question:5

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

Solution:

Question:6

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

Solution:

Question:7

Solution:

Question:8

Solution:

Question:9

Solution:

Question:10

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

Solution:

Question:11

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

Solution:

Question:12

Solution:

Question:13

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

Solution:

Question:14

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

Solution:

Question:15

Solution:

Question:16

Solution:

Question:17

Solution:

Question:18
Solution:

Question:19
Solution:

Question:20
Solution:

Question:21
Solution:

Question:22
Solution:

Question:23
Solution:

Question:24
Solution:

Question:25
Solution:

Question:26
Solution:

Question:27
Solution:

Question:28

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

Solution:

Question:29

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

Solution:

Question:30

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

Solution:

Question:31

Solution:

Question:32

Solution:

Question:33

Twice a number when decreased by 7 gives 45. Find the number.

Solution:

Question:34

Thrice a number when increased by 5 gives 44. Find the number.

Solution:

Question:35

Four added to twice a number yields . Find the fractions.

Solution:

Question:36

A number when added to its half gives 72. Find the number.

Solution:

Question:37

A number added to its two-thirds is equal to 55. Find the number.

Solution:

Question:38

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

Solution:

Question:39

A number is as much greater than 21 as it is less than 71. Find the number.

Solution:

Question:40

of a number is less than the original number by 20. Find the number.

Solution:

Question:41

A number is times another number. If their sum is 70, find the numbers.

Solution:

Question:42

Two-thirds of a number is greater than one-third of the number by 3. Find the number.

Solution:

Question:43

The fifth part of a number when increased by 5 equals its fourth part decreased by 5. Find the number.

Solution:

Question:44

Find two consecutive natural numbers whose sum is 63.

Solution:

Question:45

Find two consecutive positive odd integers whose sum is 76.

Solution:

Question:46

Find two consecutive positive even integers whose sum is 90.

Solution:

Question:47

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

Solution:

Question:48

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

Solution:

Question:49

Sumitra has 34 in 50-paise and 25-paise coins. If the number of 25-paise coins is twice the number of 50-paise coins, how many coins of each kind does she have?

Solution:

Question:50

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

Solution:

Question:51

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.

Solution:

Question:52

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.

Solution:

Question:53

Five years ago a man was seven times as old as his son. Five years hence, the father will be three times as old as his son. Find their present ages.

Solution:

Question:54

After 12 years Manoj will be 3 times as old as he was 4 years ago. Find his present age.

Solution:

Question:55

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.

Solution:

Question:56

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

Solution:

Question:57

The total cost of 3 tables and 2 chairs is 1850. If a table costs 75 more than a chair, find the price of each.

Solution:

Question:58

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

Solution:

Question:59

The length of a rectangular field is twice its breadth. If the perimeter of the field is 150 metres, find its length and breadth.

Solution:

Question:60

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.

Solution:

Question:61

Two complementary angles differ by 8^0. Find the angles.

Solution:

Question:62

Two supplementary angles differ by 44^0. Find the angles.

Solution:

Question:63

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.

Solution:

Question:64

A man travelled of his journey by rail, by a taxi, by a bus and the remaining 2 km on foot. What is the length of his total journey?

Solution:

Question:65

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 receives 1880 in all, for how many days did he remain absent?

Solution:

Question:66

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's share is 18000, what was the worth of his total property?

Solution:

Question:67

How much pure alcohol must be added to 400 mL of a 15% solution to make its strength 32%.

Solution:

Question:68

Mark ✓ against the correct answer

If then x = ?

a

b

c 36

d

Solution:

Question:69

Mark ✓ against the correct answer

If then z = ?

a 3

b 4

c

d

Solution:

Question:70

Mark ✓ against the correct answer

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

a 5
b 3
c
d

Solution:

Question:71

Mark ✓ against the correct answer

If then x = ?

a 6
b 7
c 8
d 10

Solution:

Question:72

Mark ✓ against the correct answer

If $8(2x – 5) – 6(3x – 7) = 1$, then x = ?

a 2
b 3
c
d

Solution:

Question:73

Mark ✓ against the correct answer

If then $x = ?$

a 8
b 16
c 24
d 30
Solution:

Question:74
Mark ✓ against the correct answer

If then $x = ?$

a 2
b 4
c 6
d 8
Solution:

Question:75
The sum of two consecutive whole numbers is 53. The smaller number is

a 25
b 26
c 29
d 23
Solution:

Question:76
The sum of two consecutive even numbers is 86. The larger of the two is

a 46
b 36
c 38
d 44
Solution:

Question:77

The sum of two consecutive odd numbers is 36. The smaller one is

a 15
b 17
c 19
d 13

Solution:

Question:78

on adding 9 to the twice of a whole number gives 31. The whole number is

a 21
b 16
c 17
d 11

Solution:

Question:79

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

a 6
b 7
c 8
d 11

Solution:

Question:80

of a number is less than the original number by 10. The original number is

a 30
b 36
c 45
d 60

Solution:

Question:81
Two complementary angles differ by 10°. The larger angle is

a 60°
b 50°
c 64°
d 54°
Solution:

Question:82
Two supplementary angles differ by 20°. The smaller of the two measures

a 60°
b 80°
c 100°
d 120°
Solution:

Question:83
The ages of A and B are in the ratio 5 : 3. After 6 years, their ages will be in the ratio 7 : 5. The present age of A is

a 5 years
b 10 years
c 15 years
d 20 years
Solution:

Question:84
A number when multiplied by 5 is increased by 80. The number is

a 15
b 20
c 25
d 30

Solution:

Question:85

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

a 12 m
b 24 m
c 36 m
d 48 m

Solution:

Question:86

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

Solution:

Question:87

Write the coefficient of x in each of the following:

i $-5xy$
ii $2xy^2z$
iii

Solution:

Question:88

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

Solution:

Question:89

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

Solution:

Question:90

Find the product

Solution:

Question:91

Simplify:

3a + 42a – 3 + 5a – 4a + 2

Solution:

Question:92

Solve:

Solution:

Question:93

Solve:

Solution:

Question:94

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

Solution:

Question:95

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

Solution:

Question:96

Mark ✓ against the correct answer

If then x = ?

a 3

b 4

c

d

Solution:

Question:97

Mark ✓ against the correct answer

If then $x = ?$

a 8

b 16

c 24

d 30

Solution:

Question:98

Mark ✓ against the correct answer

If then $x = ?$

a 2

b 4

c 6

d 8

Solution:

Question:99

Mark ✓ against the correct answer

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

a 21

b 16

c 18

d 19

Solution:

Question:100

Two complementary angles differ by 14°. The larger angle is

a 50°

b 52°

c 54°

d 56°

Solution:

Question:101

The length of a rectangle is twice its breadth and its perimeter is 96 m. The length of the rectangle is

a 28 m
b 30 m
c 32 m
d 36 m

Solution:

Question:102

The ages of A and B are in the ratio 4 : 3. After 6 years, their ages will be in the ratio 11 : 9. A's present age is

a 12 years
b 16 years
c 20 years
d 24 years

Solution:

Question:103

Fill in the blanks

i $-2a^2b$ is a ..... .
ii $(a^2 - 2b^2)$ is a ..... .
iii $(a + 2b - 3c)$ is a ..... .
iv In $-5ab$, the coefficient of a is ..... .
v In $x^2 + 2x - 5$, the ..... term is –5.

Solution:

i $-2a^2b$ is a monomial.
ii $(a^2 - 2b^2)$ is a binomial.
iii $(a + 2b - 3c)$ is a trinomial.
iv In $-5ab$, the coefficient of a is $-5b$.
v In $x^2 + 2x - 5$, the constant term is –5.

Question:104

Write 'T' for true and 'F' for false

i In $-x$, the constant term is -1.

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

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

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

v If $a = 2$ and $b =$ then the value of $ab\,(a^2 + b^2)$ is .

Solution: