Simple Equations

Question 1.
Write the statements “Seven times a number plus 7 gets you 77”in the form of equations:
(a) $7x + 7 = 77$
(b) $7x – 7 = 77$
(c) $7x + 6 = 66$
(d) None of these

Answer: (a) $7x + 7 = 77$

Question 2.
Solve the given equation : $3n – 2 = 46$.
(a) 16
(b) 12
(c) 14
(d) None of these

Answer: (a) 16
After adding 2 on both sides then dividing both sides by 3.

Question 3.
Which is a solution of the equation $4x – 3 = 13$?
(a) $x = 5$
(b) $x = 3$
(c) $x = 4$
(d) None of these

Answer: (c) $x = 4$

Question 4.
Write an equation for If you take away 6 from 6 times y you get 60.
(a) $6y – 6 = 60$

(b) 6y + 6 = 60
(c) 6y ÷ 6 = 60
(d) None of these

Answer: (a) 6y – 6 = 60
y multiplied by 6 and after subtraction of 6 result becomes 60.

Question 5.
The solution of the equation m – 7 = 3 is m =
(a) 15
(b) 12
(c) 10
(d) None of these

Answer: (c) 10

Question 6.
Solve the given equation : x + 6 = 2.
(a) 4
(b) 6
(c) -4
(d) None of these

Answer: (c) – 4
Subtracting 6 from both sides.

Question 7.
By solving the equation 2a – 2 = 20, the value of 'a' will be
(a) 12
(b) 14
(c) 11
(d) 13

Answer: (c) 11

Question 8.
Write an equation for three fourth of t is 15.
(a) t = 15
(b) + t = 15

(c) – t = 15
(d) none of these

Answer: (a) t = 15
t when multiplied by 3 and divided by 4 becomes 15.

Question 9.
The solution of the equation 4m – 2 = 18 is m =
(a) 4
(b) 6
(c) 5
(d) none of these

Answer: (c) 5

Question 10.
Write an equation in statement form : 2m = 7.
(a) Two times of a number m is 7.
(b) Two added to m becomes 7.
(c) Two subtracted from m becomes 7.
(d) None of these.

Answer: (a) Two times of a number m is 7.
m when multiplied by 2 becomes equal to 7.

Question 11.
Which is a solution of the equation 2x = 12?
(a) x = 4
(b) x = 6
(c) x = 5
(d) x = 7

Answer: (b) x = 6

Question 12.
Write an equation for 2 subtracted from y is 8.
(a) y – 2 = 8
(b) 2y = 8
(c) y + 2 = 8
(d) None of these

Answer: (d) None of these
2 subtracted from y becomes 8.

Question 13.
Write the statements “If you take away 6 from 6 time a number, you get 60”in the form of equations:
(a) 6x + 6 = 60
(b) 6x – 5 = 60
(c) 6x – 6 = 60
(d) None of these

Answer: (c) 6x – 6 = 60

Question 14.
Solve the given equation : = 6.
(a) 6
(b) 3
(c) 12
(d) None of these

Answer: (c) 12
Multiplying both sides by 2.

Question 15.
The solution of the equation = 40 is m =
(a) 5
(b) 6
(c) 7
(d) none of these

Answer: (b) 6

Question 16.
Write an equation for one fourth of a number x minus 4 gives 4.
(a) 4x + 4 = 4
(b) 4x – 4 = 4
(c) x – 4 = 4
(d) none of these

Answer: (c) x – 4 = 4
x divided by 4 and subtract 4 from it result becomes 4.

Question 17.
The solution of the equation 3x + 7 = 25 is x =
(a) 6
(b) 4
(c) 5
(d) None of these

Answer: (a) 6

Question 18.
Write an equation in statement form : m minus seven gives 3.
(a) m + 7 = 3
(b) 7m = 3
(c) m – 7 = 3
(d) None of these

Answer: (c) m – 7 = 3
Seven is subtracted from m gives 3 as result.

Question 19.
One – fifth of a number minus 4 gives 3. Find which of the following is the number?
(a) 21
(b) 4
(c) 15
(d) 35

Answer: (d) 35

Question 20.
Write an equation for the sum of numbers x and 4 is 9.
(a) 4x = 9
(b) 4 – x = 9
(c) x + 4 = 9
(d) None of these

Answer: (c) x + 4 = 9
4 added to x becomes 9.

Question 21.
Write the statements “The sum of three times x and 11 is 32” in the form of equations:
(a) $3x + 11 = 32$
(b) $3x – 11 = 34$
(c) $5x – 7 = 2$
(d) None of these

Answer: (a) $3x + 11 = 32$

Question 22.
Write the solution of $x – 1 = 0$.
(a) 1
(b) – 1
(c) 0
(d) None of these

Answer: (a) 1
Adding both side 1 we get 0.

Question 23.
If $0.2(2x−1)−0.5(3x−1) = 0.4$, what is the value of x?
(a)
(b)
(c)
(d)

Answer: (b)

Question 24.
Write an equation for the number b divided by 5 gives 6.
(a) = 6
(b) $5b = 6$
(c) $b + 5 = 6$
(d) None of these

Answer: (a) = 6
b divided by 5 becomes 6.

Question 25.
Write the statements “If you subtract 5 from 6 times a number, you get 7.”in the form of equations:
(a) $6x – 5 = 7$
(b) $3x – 11 = 34$
(c) $5x – 7 = 2$
(d) None of these

Answer: (a) $6x – 5 = 7$

Question 26.
Write an equation for— If you add 3 to one third of x you get 30.
a) $3x + 3 — 30$
(b) $x + 3 = 30$
(c) $3x ÷ 3 = 30$
(d) None of these

Answer: (b) $x + 3 = 30$
x divided by 3 and after addition of 3 result becomes 30.

Question 27.
Which is a solution of the equation $x + 4 = 6$?
(a) $x = 5$
(b) $x = 3$
(c) $x = 2$
(d) $x = 4$

Answer: (c) $x = 2$

Question 28.
Write at least one other form for $5p = 20$.
(a) Five times of a number p is 20
(b) 5 added to p is 20
(c) 5 divided by p is 20
(d) None of these

Answer: (a) Five times of a number p is 20
20 is product of 5 and p.

Question 29.
In a coconut grove, (x+2) trees yield 60 coconuts per year, x trees yield 120 coconuts per year and (x−2) trees yield 180 coconuts per year. If the average yield per year per tree is 100, find x.
(a) 4
(b) 3
(c) 2
(d) 1

Answer: (a) 4

Question 30.
Solve the given equation : 3l = 42.
(a) 14
(b) 3
(c) 0
(d) None of these

Answer: (a) 14
On dividing by 3 on both sides.

Question 31.
Write the statement “p multiplied by 16” in the form of expression.
(a) 16p
(b) p + 16
(c) p – 16
(d) 16 – p

Answer: (a) 16p

Question 32.
Write an equation for seven times m plus 7 gets you 77.
(a) 7m + 7 = 77
(b) 7m – 7 = 77
(c) 7m ÷ 7 = 77
(d) None of these

Answer: (a) 7m + 7 = 77
multiplied by 7 and 7’added to it result becomes 77.

Question 33.
Write the statements “2 subtracted from a number is 8” in the form of equations:
(a) $x - 8 = 2$
(b) $x - 2 = 8$
(c) $x - 5 = 8$
(d) None of these

Answer: (b) $x - 2 = 8$

Question 34.
Write an equation in statement form : $p + 4 = 15$.
(a) The sum of numbers p and 4 gives 15.
(b) The multiplication of numbers p and 4 gives 15.
(c) The division of numbers p and 4 gives 15.
(d) None of these.

Answer: (a) The sum of numbers p and 4 gives 15.
Addition of x and 4 becomes 15.

Question 35.
Which is a solution of the equation $5x + 2 = 17$?
(a) $x = 4$
(b) $x = 2$
(c) $x = 3$
(d) $x = 5$

Answer: (c) $x = 3$

Question 36.
$n + 5 = 19$. Find the solution of given equation.
(a) $n = 13$
(b) $n = 14$
(c) 15
(d) None of these

Answer: (b) $n = 14$
5 added to 14 becomes 19.

Question 37.
Which of the following equations can be constructed with $x = 2$?

(a) 3x+4=8
(b) 3x−4=2
(c) 3x+4=2
(d) 3x−4=8

Answer: (b) 3x−4=2

Question 38.
Write an equation in statement form : + 2 = 8
(a) p multipbed by 2 and plus 2 is 8.
(b) p added to 2 becomes 8.
(c) Half a number of p plus 2 is 8.
(d) none of these

Answer: (c) Half a number of p plus 2 is 8.
p divided by 2 and result becomp.8 after adding 2 to it.

Question 39.
The solution of the equation 2m = 7 is m =
(a) 14
(b)
(c)
(d) None of these

Answer: (b)

Question 40.
Write an equation for Ten times a is 70.
(a) a +10 = 70
(b) a – 10 = 70
(c) 10a = 70
(d) None of these

Answer: (c) 10a = 70
a when multiplied by 10 becomes 70.

Match the following:

Question 1.

1. 5p = 20	(a) m = 6
2. 3n + 7 = 1	(b) p = 4
3. – 2 = 6	(c) n = – 2
4. = 2	(d) m = 32

Answer:

1. 5p = 20	(b) p = 4
2. 3n + 7 = 1	(c) n = – 2
3. – 2 = 6	(d) m = 32
4. = 2	(a) m = 6

Question 2.

1. 8y = 36	(a) z =
2. =	(b) a =
3. =	(c) y =
4. 20t = – 10	(d) t = –

Answer:

1. 8y = 36	(c) y =
2. =	(a) z =
3. =	(b) a =
4. 20t = – 10	(d) t = –

Question 3.

1. = 40	(a) p = 20
2. = 6	(b) p = – 15
3. – = 5	(c) p = – 3
4. 3p = – 9	(d) p = 6

Answer:

1. = 40	(d) p = 6
2. = 6	(a) p = 20
3. – = 5	(b) p = – 15
4. 3p = – 9	(c) p = – 3

Question 4.

1. 5t + 28 = 10	(a) l =
2. 6z + 10 = – 2	(b) x =
3. =	(c) z = – 2
4. =	(d) t = –

Answer:

1. 5t + 28 = 10	(d) t = –
2. 6z + 10 = – 2	(c) z = – 2
3. =	(a) l =
4. =	(b) x =

State whether the given statements are true or false:

Question 1.
I am a number,
Tell my identity !
Take me seven times over
And add a fifty
To reach a triple century
You still need forty !
Thus I am 30

Answer: true

Question 2.
Irfan says that he has 7 marbles more than five times the marbles Parmit has. Irfan has 37 marbles. How many marbles does Parmit have ?
Parmit has 5 marbles.

Answer: false

Question 3.
In an isosceles triangle, the base angles are equal. The vertex angle is 40. What are the base angles of the triangle ? Base angle is of 70° each

Answer: true

Question 4.
What is that number one-third of which added to 5 gives 8. Number is 12.

Answer: false

Fill in the blanks:

1. An equation is a condition on a variable such that two expressions in the variable should have ……

Answer: equal value

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2. The value of the variable for which the equation is satisfied is ealled the …….. of the equation.

Answer: solution

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3. An equation remains the same if the L.H.S. and the R.H.S. are ……..

Answer: interchanged

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4. In case of the balanced equation if we :

(i) …….. the same number both sides.

Answer: Add

(ii). ……. the same number both sides.

Answer: Subtract

(iii). …… both sides by the same number.

Answer: Multiply

(iv). ……. both sides by the same number.

Answer: Divide

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5. …….. means moving to the other side.

Answer: Transposing

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6. The letters which are used to represent numbers are called ……..

Answer: variables

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7. A statement of equality involving one or more letters is called an …….

Answer: equation

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8. An equation can be solved by …… method.

Answer: trial and error
