



KINETICS

We Nurture The Future

IIT-JEE | Medical | Foundations

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) $6y \div 6 = 60$
- (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) $3x \div 3 = 30$
- (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) $7m \div 7 = 77$
- (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 multiplied 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 becomes 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:

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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

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

Answer: solution

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

Answer: interchanged

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

5. means moving to the other side.

Answer: Transposing

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

Answer: variables

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

Answer: equation

8. An equation can be solved by method.

Answer: trial and error
