



MATHS

BOOKS - NCERT EXEMPLAR

ALGEBRA



1. Write the correct answer from the given four

options:

 $4a \; {\rm equals}$

A. 4 + a

${\sf B.4} imes a$

 $\mathsf{C}.\,a imes a imes a imes a$

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

Answer: B

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2.8 more than three times the number x can

be represented as

A.
$$8+x+3$$

B.
$$3x - 8$$

C. 3x + 8

 $\mathsf{D.}\,8x+3$

Answer: C

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3. Which of the following is an equations ?

A.
$$x + 7$$

$$\mathsf{B.}\,2y+3=7$$

 $\mathsf{C.}\,2p<10$

D. 12*x*

Answer: B

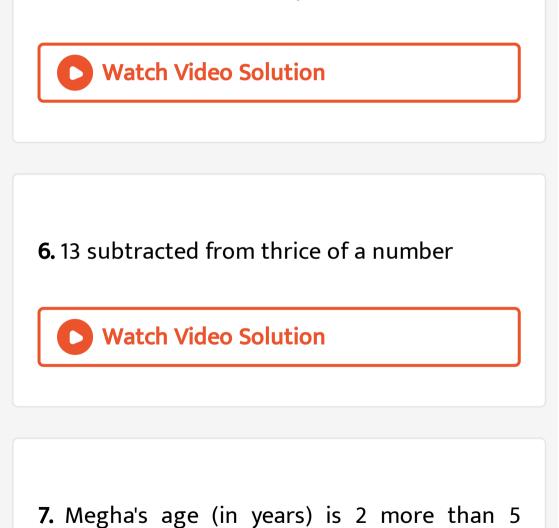
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4. 7 times of y subtracted from 50 can be

expressed as



x=5 is a solution of the equations 3-x=8



times her daughter's age

8. Anagha, Sushant and Faizal are climbing the steps to a hill top. Anagha is at the step p. Sushant is 10 steps ahead and Faizal is 6 steps behind Anagha. Where are Sushant and Faizal? The total number of steps to the hill top is 3 steps less than 8 times what Anagha has reached. Express the total number of steps using p.

9. Change the statements, converting expressions into statements in ordinary language
Cost of pencil is Rs x . A pen costs Rs 6x.

10. Change the statements, converting expressions into statements in ordinary language

Manisha is z years old. Her uncle is 5z years

old and her aunt is (5z - 4) years old.

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1. If each match box contains 50 matchsticks , the number of matchsticks required to fill n such boxes is

A. 50 + n

 $\mathsf{B.}\,50n$

 $\mathsf{C.}\,50+n$

 ${\sf D}.\,50-n$

Answer:

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2. Amulya is x years of age now. 5 years ago

her age was

A.
$$(5-x)$$
 years

B. (5+x) years

C.
$$(x-5)$$
 years

D. (5+x) years

Answer:

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3. Which of the following represents 6 imes x

A. 6x

C.6 + x

D. 6 - x

Answer:



4. Which of the following is an equation?

A.
$$x + 1$$

B.
$$x - 1$$

$$C. x - 1 = 0$$

D. x + 1 > 0

Answer:

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5. If x takes the value 2, then the value of x + 10 is

A. 20

B. 12

C. 5

D. 8

Answer:

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6. If the perimeter of a regular hexagon is xmeters . Then the length of each of its sides is

A.
$$(x+6)$$
 metres

B. (x-6) metres

C.
$$\left(rac{x}{6}
ight)$$
 metres

D.
$$\left(\frac{6}{x}\right)$$
 metres

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7. Which of the following equations has x=2 as a solution ?

A.
$$x+2=5$$

$$\mathsf{B.}\,x-2=0$$

C. 2x + 1 = 0

D.
$$x+3=6$$

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8. For any two integers x and y. Which of the following suggests that operation of additions is commutative ?

A.
$$x + y = y + x$$

 $\mathsf{B.}\, x+y>x$

$$\mathsf{C}.\, x-y=y-x$$

D.
$$x imes y = y imes x$$



9. Which of the following equations does not

have a solutions is integers ?

A.
$$x + 1 = 1$$

B. x - 1 = 3

$$C. 2x + 1 = 6$$

D. 1 - x = 5

Answer:



10. In algebra , a imes b means ab. But in arithmetic 3 imes 5 is

A. 35

B. 53

C. 15

D. 8

Answer:



11. In algebra, Letters may stand for

A. known quantities

B. unknown quantities

C. fixed numbers

D. none of these

Answer:

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12. " Variable " means that it

- A. can take different values
- B. has a fixed value
- C. can take only 2 values

D. can take only three values



- **13.** 10-x means
 - A. 10 is subtracted x times
 - B. x is subtracted 10 times
 - C. x is subtracted from 10
 - D. 10 is subtracted from x

Answer:

14. Savitri has a sum of Rs.x. She spent Rs 1000 on grocery, Rs 500 on clothes and Rs. 400 on educations and received Rs 200 as a gift . How much money (in Rs) is left with her?

- A. x-1700
- B. x 1900
- C. x + 200
- D. x-2100



15. The perimeter of the triangle shown in figure. is

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A. 2x+ y

B. x +2y

C. x+y

D. 2x-y

Answer:

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16. The area of a sqaure having each side x is

A. x imes x

 $\mathsf{B.}\,4x$

 $\mathsf{C}. x + x$

 $\mathsf{D.4} + x$



17. The expression obtained when x is multipled by 2 and then subtracted from 3 is

A. 3-2x

B. 2x+3

C. x+x

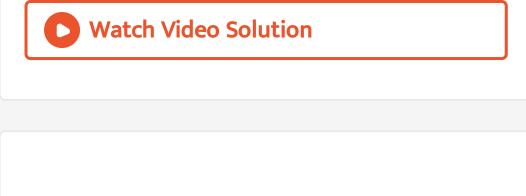
D. 4+x



18.
$$\frac{q}{2}$$
 = 3 has a solution

- B. 8
- C. 3
- D. 2

Answer:



19. x- 4 =-2 has a solutions

A. 6

B. 2

C.-6

D.-2

Answer:

20.
$$rac{4}{2}=2$$
 denotes a

A. numerical equation

B. algebraic expression

C. equations with a variable

D. false statement

Answer:

21. Kanta has p pencil in her box. She puts q more pencils in the box the total number of pencils with her are

A. p+q

B.pq

C. p-q

D.
$$rac{p}{q}$$

Answer:



22. The equation 4x = 16 is satisfied by which

value of x

A. 4

B. 2

C. 12

D. - 12

Answer:

23. I think of a number and on adding 13 to it, I

get 27. The equations for this is

A.
$$x-27=13$$

$$\mathsf{B.}\,x-13=27$$

C.
$$x + 27 = 13$$

D.
$$x + 13 = 27$$

Answer:



24. The distance (in km) travelled in h hours at

a constant speed of 40 km per hour is

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25. p kg of potatoes are bought for Rs 70. Cost

of 1kg of potatoes (in Rs) is

26. An auto rickshaw charges Rs 10 for the first kilometre then Rs 8 for each such subsequent kilometre. The total charge (in Rs) for d kilometres is

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27. If 7x + 4 = 25, then the value of x is



28. The solution of the equations 3x + 7 = -20 is Vatch Video Solution

29. x exceeds y by 7 can be expressed as

30. 8 more than three times the number x can

be written as _____

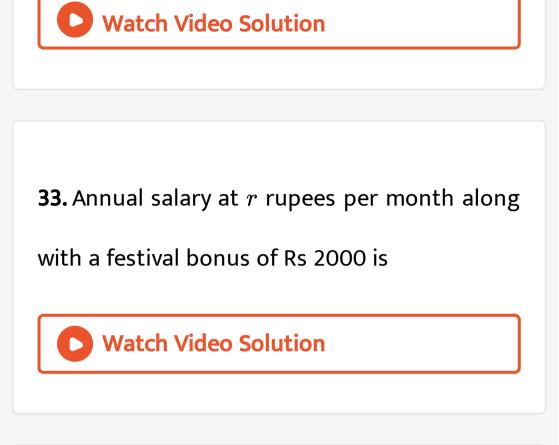
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31. Number of pencils bought for Rs. x at the

rate of Rs. 2 per pencil is _____

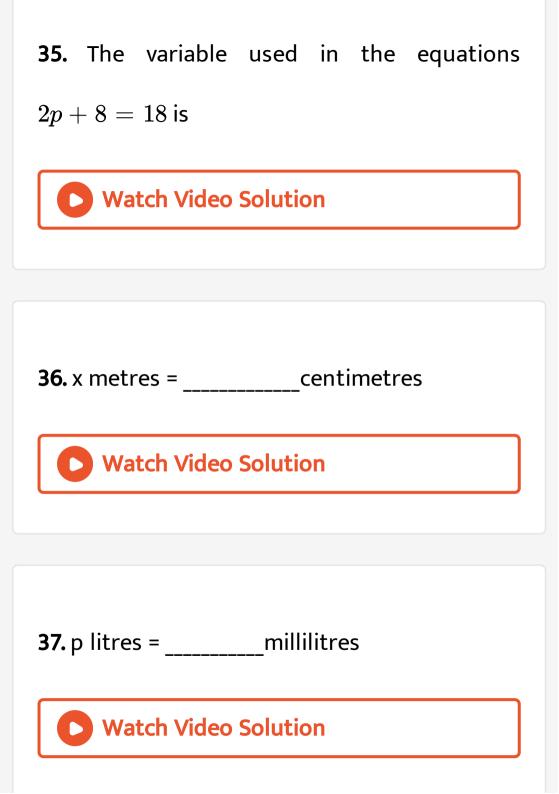
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32. The number of days in w weeks is



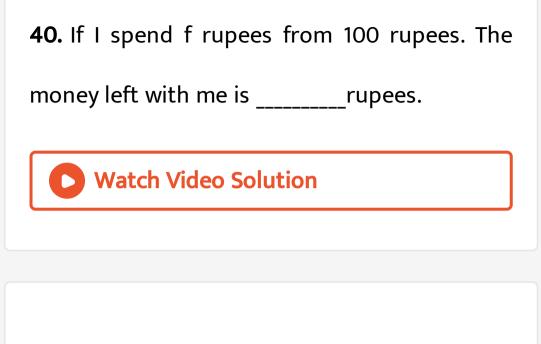
34. The two digit number whose ten's digits is

t and unit's digit is u is





39. If the presents age of Ramandeep is n years. Then her age after 7 years will be

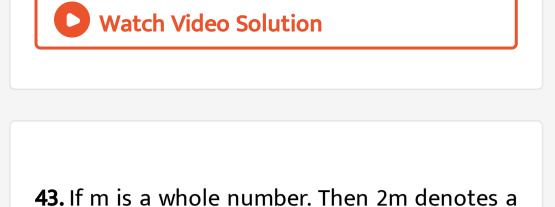


41. O is a solution of the equations x + 1=0

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42. The equations x+1 =0 and 2x+2=0 have the

same solutions



multiple of 2.

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44. The additive inverse of an integers x is 2x.

45. If x is a negative integer, -x is a positive integer.

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46. State True or False:

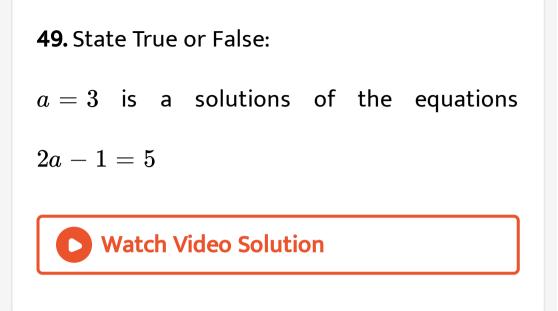
2x - 5 > 11 is an equation.

In an equations, the LHS is equal to the RHS

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48. State True or False:

In the equation 7k - 7 = 7 the variable is 7.



The distance between New Delhi and Bhopal is

not a variable.



t minutes are equal to 60t seconds.



52. State True or False:

x=5 is the solutions of the equations

3x + 2 = 20

One third of a number added to itself gives 8

can be expressed as $\frac{x}{3} + 8 = x$.



54. State True or False:

The difference between the ages of two sisters

Leela and Yamini is a variable.

The number of lines that can be drawn through a point is a variable.

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56. Write the algebraic expression for:

One more than twice the number.

 $20^{\,\circ}\,C$ less than the present temperature.



58. Write the algebraic expression for:

The successor of an integer.



The perimeter of an equilateral triangle, if side

of the triangle is m.



60. Write the algebraic expression for:

Area of the rectangle with length k units and

breadth n units.



Omar helps his mother 1 hours more than his sister does.



62. Write the algebraic expression for:

Two consecutive odd integers.



Two consecutive even integers.



64. Write the algebraic expression for:

Multiple of 5.



The denominator of a fractions is 1 more than

its numerator.



66. Write the algebraic expression for:

The height of Mount Everest is 20 times the

height of Empire State building.

67. If a note book costs Rs p and a pencil costs

Rs. 3 then the total cost (in Rs) of two note

books and one pencil is

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68. Write the algebraic expression for:

z is multiplies by -3 and the result is

subtracted from 13.

p is divided by 11 and the result is added to 10.



70. Write the algebraic expression for:

x times of 3 is added to the smallest two

digits number.



71. Write the expression for

6 times q is subtracted from the smallest two

digit number.



72. Write an equations for which 0 is the solution

73. Write two equations for which 2 is the solution.Watch Video Solution

74. Write an equations whose solutions is not

a whole number.



75. Change the statements, converting expressions into statements in ordinary language
A pencil costs Rs p and pen costs Rs 5p.
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76. Change the statements, converting expressions into statements in ordinary language

Leela contributed Rs y towards the Prime

Minister's Relief Fund. Leela is now left with

Rs(y+10000).



77. Kartik is n years old. His father is 7n years

old.

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78. Change the statements, converting expressions into statements in ordinary

language

The maximum temperature on a day in Delhi was $p^{\,\circ}\,C$. The minimum temperature was ($p-10)^{\,\circ}\,C.$



79. Change the statements, converting expressions into statements in ordinary language:

John planted t plants last years. His friend Jay

planted 2t+10 plants that years.





80. Change the statements, converting expressions into statements in ordinary language: Shared used to take p cups tea a day . After having some health problem . He takes p-5

cups of tea a day.



81. Change the statements, converting expressions into statements in ordinary language:

The number of students dropping out of

school last years was m. number of students

dropping out of school this years is m-30.

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82. Change the statements, converting expressions into statements in ordinary

language:

Price of petrol was Rs p per litre last month .

Price of petrol now is Rs(p-5) per litre.



83. Change the statements, converting expressions into statements in ordinary language:

Khader's monthly salary was Rs. P in the years

2005. his salary in 2006 was Rs (P+1000).



84. Change the statements, converting expressions into statements in ordinary language:

The number of girls enrolled in a school last years was g. the number of girls enrolled this years in the school is 3g-10.

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85. Translate of the following statements into

an equation. Using x as the variable.

13 subtracted from twice a number gives 3.



86. Translate of the following statements into an equation. Using x as the variable. One fifth of a number is 5 less than that number.



87. Translate of the following statements into

an equation. Using x as the variable.

Two third of number is 12.



88. Translate of the following statements into

an equation. using x as the variable.

9 added to twice a number gives 13.



89. Translate of the following statements into an equation.

Using x as the variable,1 subtracted from one-

third of a number gives 1.



90. Tranlate of the following statement into an

equations:

The perimeter (p) of an equilateral triangle is

three times of its side (a).



91. Tranlate of the following statement into an equations:

The diameter (d) of a circle is twice its radius (

r).



92. Tranlate of the following statement into an equations:

The selling price (s) of an item is equal to the

sum of the cost price (c) of an item and the

profit (p) earned.



93. Tranlate of the following statement into an

equations:

Amount (A) is equal to the sum of Principal (P)

and Interest (I).

94. Let Kanika's present age be x years. Complete the following table. Showing ages of her relatives :

	Situation (described in ordinary language)	Expressions
(i)	Her brother is 2 years younger.	
(ii)	Her father's age exceeds her age by 35 years.	
(iii)	Mother's age is 3 years less than that of her father.	
(iv)	Her grand father's age is 8 times of her age.	



95. If m is a whole number is less than 5. complete the table and by inspection of the table find the solutions of the equation 2m-

5=-1:

т			
2 <i>m</i> –5			

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96. A class with p students has planned a picnic. Rs 50 per students is collected, out of which Rs 1800 is paid in advance for transport. How much money is left with them to spend on other items?

97. In a village, there are 8 water tanks to collect rain water. On a particular day. xlitres of rain water is collected per tank. If 100 litres of water was already there in one of the tanks, what is the total amount of water in the tanks on that day?

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98. What is the area of a square whose side is

m cm?



99. Perimeter of a triangle is found by using the formula P = a + b + c where a, b and care the sides of the triangle. Write the rule that is expressed by this formula in words.

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100. Perimeter of a rectangle is found by using the formula P=2(I+w), where I and w are

respectively the length and breadth of the rectangle. Write the rule that is expressed by this formula in words.

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101. On my last birthday, I weighed 40 kg . If I put on m kg of weight after a year , what is my present weight ?

102. Length and breadth of a bulletin board are r Cm and tcm, respectively.

What will be the length (in cm) of the

aluminium strip required to frame the board,

if 10cm extra strip is required to fix it properly.



103. Sunita is half the age of her mother Geeta.

Find their ages

(i) after 4 years ?

(ii) before 3 years.

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104. Match the items of Column I with that of

Column II:

Column I

- (i) The number of corners of a quadrilateral
- (ii) The variable in the equation 2p + 3 = 5
- (iii) The solution of the equation x + 2 = 3
- (iv) solution of the equation 2p + 3 = 5
- (v) A sign used in an equation

Column II

- (A) = (B) constant
- (C) +1
- (D) -1
- (E) p
- (F) x