VIII Revision-2

1) The solution of the equation $ax+b=0$ is
(a) $x=\frac{a}{b}$ (b) $x=-b$ (c) $x=-\frac{b}{a}$ (d) $x=\frac{b}{a}$

2) If $8x-13=25+16x$, then x is
(a) a fraction (b) an integer (c) a rational no. (d) cannot be solved

3) The shifting of a number from one side of an equation to other is called (a) transposition (b) distributivity (c) commutativity (d) associativity

4) Linear Equation in one variable has
(a) only one variable with any power
(b) only one term with a variable
(c) only one variable with power 1
(d) only constant term

5) The value of x for which the expressions $(3x-4)$ and $(2x+1)$ become equal is (a) -3 (b) 0 (c) 5 (d) 1

6) If a and b are positive integers, then solution of the equation $ax=b$ has to be always
(a) positive (b) negative (c) one (d) zero

7) Which of the following is a linear expression ?
(a) x^2+2+y (b) $y+y^2+3$ (c) 4 (d) $1+z$

8) A linear equation in one variable has
(a) only one solution (b) no solution (c) two solutions
(d) more than two solutions

9) The digit in the ten's place of a two-digit number is 3 more than the digit in the unit's place. If the digit at unit's place be b. Then, the number is
(a) $11b+30$ (b) $10b+30$ (c) $11b+3$ (c) $10b+3$

10) Arpita's present age is thrice of Shilpa's. If Shilpa's age 3 years ago was x. Then, Arpita's present age is
(a) $3(x-3)$ (b) $3x+3$ (c) $3x-9$ (d) $3(x+3)$

11) In a linear equation, ____ power of the variable appearing in the equation is one.
(a) lowest (b) highest (c) no (d) none of these

12) Any value of the variable which makes both sides of an equation equal is known as a ____ of the equation

13) A term of an equation can be transposed to the other side by changing its ____

14) If on dividing a number by 18, the result is −144, then the number is ___

15) 19 is subtracted from the product of P and 14. The result is 21. The value of P is ___

16) After 18 years, Subhash will be 4 times as old as he is now. His present age is ___

17) The sum of two consecutive multiples of 10 is 210. The smaller multiple is ___

18) If $4t - 3 - (3t+1) = 5t - 4$, then the root of t is ___

19) If x is an even number, then the next even number is ___

20) Two numbers differ by 40, when each number is increased by 8, the bigger becomes thrice the lesser number. If one number is x, then ~~find~~ the other number is $(40 - x)$ [T/F?]

21) In a two-digit number, the unit's place digit is x. If the sum of digits be 9, then the number is $(10x - 9)$ (T/F?)

22) The number of boys and girls in a class in the ratio 5:4. If the no. of boys is 9 more than the no. of girls, then the no. of boys is 9 (T/F?)

23) Two different equations can never have the same answer (T/F?)

24) Match the following:-

Column A	Column B
(a) $\frac{x}{5} = \frac{x-1}{6}$	(i) 7
(b) $\frac{0.2x+5}{3.5x-3} = \frac{2}{5}$	(ii) −5
(c) $8x - 7 - 3x = 6x - 2x - 3$	(iii) 31/6
(d) $5(x-1) - 2(x+8) = 0$	(iv) 4
(e) $\frac{3x-8}{2x} = 1$	(v) 8
(f) $\frac{5x}{2x-1} = 2$	(vi) 8/3
(g) $\frac{2x-3}{4x+5} = \frac{1}{3}$	(vii) −2
(h) $\frac{8}{x} = \frac{5}{x-1}$	(viii) 7

25) 40% of (100 − 20% of 300) =

26) If $\frac{1}{3}$% of a number is 147, find the number

27) Ankit buys a memory card costing ₹ 550. If the rate of Sales tax is 5%, then find the total amount payable by him.

28) After increasing 15% of the price of an article, its price is ₹ 1725. Find the increased amount

29) By selling an article for ₹ 112000, a girl gains 40%. Find the C.P of the article.

30) Navin purchased a cell phone for ₹ 12000 and sold it for ₹ 8000. Find his loss percent.

31) By how much per cent 2800 is greater than 2400?

32) The population of a city 1 year ago was 5,5500. Due to an epidemic, it decreases every year at the rate of 5% p.a. Find its present population.

33)

VIII Revision-2 (Answers)

1) $ax+b=0$
$ax=-b$
$x=-\frac{b}{a}$ (c)

2) $8x-13=25+16x$
$8x-16x=25+13$
$-8x=38$
$x=\frac{-38}{8}=\frac{-19}{4}$, a rational number

3) transposition (a)
4) only one variable with power 1 (c)
5) $3x-4=2x+1$
$3x-2x=1+4$
$x=5$ (c)
6) $ax=b$
$x=\frac{b}{a}$, positive (a)
7) 1+3 (d)
8) only one solution (a)
9)

T	O
b+3	b

number is $10(b+3)+b$
$=10b+30+b$
$=11b+30$ (a)

10) Shilpa's present age $= x+3$
$\therefore$ Arpita's present age $= 3(x+3)$ (d)
11) highest (b)
12) Solution
13) sign
14) Let the number be x
Then, $\frac{x}{18}=-144$
$x=-144\times 18=-2592$ //
15) $14p-19=21$
$4p=40$
$\therefore p=\frac{40}{4}=10$

16) Let the present age of Subhash be x years
After 18 years, Subhash's age $= x+18$
Then, $x+18 = 4x$
$18 = 4x - x$
$3x = 18$
$x = \underline{6}$ yrs . Hence, his present age = 6 years.

17) Let the two consecutive multiples be x and $x+10$.
Then, $x + x+10 = 210$
$2x = 210 - 10 = 200$
$x = \frac{200}{2} = 100$

$\therefore$ The smaller multiple is 100.

18) $4t - 3 - 3t - 1 = 5t - 4$
$t - 4 = 5t - 4$
$t - 5t = -4 + 4$
$-4t = 0$
$\therefore t = 0$

19) $x+2$

20) False, since the numbers differ by 40
then the numbers will be $40+x$ and x. False

21)

T	O
$9-x$	x

$\therefore$ the number is $10(9-x)+x = 90 - 10x + x$
$= 90 - 9x$
$= 9(10-x)$ False

22) Let the no. of boys and girls be $5x$ and $4x$ respectively.
Then, $5x = 4x + 9$
$x = 9$
$\therefore$ No. of boys $= 5x = 45$ False

$x+4=8 \Rightarrow x=8-4=4$ //

$x+2=6 \Rightarrow x=6-2=4$ //

24) (a) $\frac{x}{5}=\frac{x-1}{6}$

$6x=5(x-1)$

$6x=5x-5$

$6x-5x=-5$

$x=-5$ (ii)

(b) $5(0.2x+5)=2(3.5x-3)$

$x+25=7x-6$

$x-7x=-6-25$

$-6x=-31$

$x=\frac{31}{6}$ (iii)

(c) $8x-7-3x=6x-2x-3$

$5x-7=4x-3$

$5x-4x=-3+7$

$x=4$ (iv)

(d) $5x-5-2x-16=0$

$3x-21=0$

$3x=21$

$x=\frac{21}{3}=7$ (viii)

(e) $3x-8=2x$

$3x-2x=8$

$x=8$ (v)

(f) $5x=2(2x-1)$

$5x=4x-2$

$5x-4x=-2$

$x=-2$ (vii)

(g) $3(2x-3)=4x+5$

$6x-9=4x+5$

$6x-4x=5+9$

$2x=14$

$x=7$ (i)

(h) $\frac{8}{x} = \frac{5}{x-1}$

$8(x-1) = 5x$

$8x - 8 = 5x$

$8x - 5x = 8$

$3x = 8$

$x = \frac{8}{3}$ (vi)

25) $\frac{\cancel{40}^{2}}{\cancel{100}_{5}} \times \left(100 - \frac{\cancel{20}}{\cancel{100}_{5}} \times \cancel{300}^{60}\right) = \frac{2}{5}(100-60) = \frac{2}{\cancel{5}_{1}} \times \cancel{40}^{8} = \underline{\underline{16}}$

26) Let the number be x.

Then $\frac{7}{3} \times \frac{1}{100} \times x = 147$

$x = \frac{\cancel{147}^{21} \times 300}{\cancel{7}_{1}} = 6300$

Hence, the number = 6300//

27) C.P = Rs 550

tax % = 5%

∴ Bill amount = 550 + 5% of 550

$= 550 + \frac{\cancel{5}^{1}}{\cancel{100}_{20}} \times \cancel{550}^{27.5}$

= Rs 577.5

28) Let the original price be Rs x

Then x + 15% of x = 1725

$x + \frac{15}{100} \times x = 1725$

$\frac{115x}{100} = 1725$

$x = \frac{\cancel{1725}^{75} \times \cancel{100}^{20}}{\cancel{115}_{23_{1}}} = 1500$

∴ Increased amount = 1725 − 1500 = Rs 225//

29) $C.P = \frac{S.P \times 100}{100 + \text{gain}\%}$

$= \frac{112000 \times 100}{100 + 40} = \frac{11200000}{140}$

$= Rs\ 80,000$ //

30) $\text{loss} = C.P - S.P$

$= 12000 - 8000 = Rs\ 4000$

$\text{loss}\% = \frac{\text{loss}}{C.P} \times 100 = \frac{4000}{12000} \times 100$

$= 33.33\%$ //

31) original value = 2400

new value = 2800

$\%\ \text{increase} = \frac{\text{new value} - \text{original value}}{\text{original value}} \times 100$

$= \frac{2800 - 2400}{2400} \times 100$

$= \frac{400}{24} = 16.67\%$ //

32) Present population $= 55500\left(1 - \frac{5}{100}\right)^1$

$= 55500 \times \frac{95}{100}$

$= 52,725$ //