



# WIN MATHS TUITION

## STANDARD – VIII

### One Marks

#### Objective Type Questions

The number which is subtracted from  $\frac{-6}{11}$  to get  $\frac{8}{9}$  is \_\_\_\_\_.

- (A)  $\frac{34}{99}$  (B)  $\frac{-142}{99}$  (C)  $\frac{142}{99}$  (D)  $\frac{-34}{99}$

Which of the following pairs is equivalent?

- (A)  $\frac{-20}{12}, \frac{5}{3}$  (B)  $\frac{16}{-30}, \frac{-8}{15}$  (C)  $\frac{-18}{36}, \frac{-20}{44}$  (D)  $\frac{7}{-5}, \frac{-5}{7}$

$\frac{-5}{4}$  is a rational number which lies between \_\_\_\_\_.

- (A) 0 and  $\frac{-5}{4}$  (B) -1 and 0 (C) -1 and -2 (D) -4 and -5

Which of the following rational numbers is the greatest?

- (A)  $\frac{-17}{24}$  (B)  $\frac{-13}{16}$  (C)  $\frac{7}{-8}$  (D)  $\frac{-31}{32}$

The sum of the digits of the denominator in the simplest form of  $\frac{112}{528}$  is \_\_\_\_\_.

- (A) 4 (B) 5 (C) 6 (D) 7

The standard form of the sum  $\frac{3}{4} + \frac{5}{6} + \left(\frac{-7}{12}\right)$  is \_\_\_\_\_.

- (A) 1 (B)  $\frac{-1}{2}$  (C)  $\frac{1}{12}$  (D)  $\frac{1}{22}$

$\left(\frac{3}{4} - \frac{5}{8}\right) + \frac{1}{2} =$  \_\_\_\_\_.

- (A)  $\frac{15}{64}$  (B) 1 (C)  $\frac{5}{8}$  (D)  $\frac{1}{16}$

$\frac{3}{4} \div \left(\frac{5}{8} + \frac{1}{2}\right) =$  \_\_\_\_\_.

- (A)  $\frac{13}{10}$  (B)  $\frac{2}{3}$  (C)  $\frac{3}{2}$  (D)  $\frac{5}{8}$

$\frac{3}{4} \times \left(\frac{5}{8} + \frac{1}{2}\right) =$  \_\_\_\_\_.

- (A)  $\frac{5}{8}$  (B)  $\frac{2}{3}$  (C)  $\frac{15}{32}$  (D)  $\frac{15}{16}$

Which of these rational numbers which have additive inverse?

- (A) 7 (B)  $\frac{-5}{7}$  (C) 0 (D) all of these

Closure property is not true for division of rational numbers because of the number

- (A) 1 (B) -1 (C) 0 (D)  $\frac{1}{2}$

$\frac{1}{2} - \left(\frac{3}{4} - \frac{5}{6}\right) \neq \left(\frac{1}{2} - \frac{3}{4}\right) - \frac{5}{6}$  illustrates that subtraction does not satisfy the \_\_\_\_\_ property for rational numbers.

- (A) commutative (B) closure (C) distributive (D) associative

Which of the following illustrates the inverse property for addition?

- (A)  $\frac{1}{8} - \frac{1}{8} = 0$  (B)  $\frac{1}{8} + \frac{1}{8} = \frac{1}{4}$  (C)  $\frac{1}{8} + 0 = \frac{1}{8}$  (D)  $\frac{1}{8} - 0 = \frac{1}{8}$

$\frac{3}{4} \times \left(\frac{1}{2} - \frac{1}{4}\right) = \frac{3}{4} \times \frac{1}{2} - \frac{3}{4} \times \frac{1}{4}$  illustrates that multiplication is distributive over

- (A) addition (B) subtraction (C) multiplication (D) division

\_\_\_\_\_ is added to  $24^2$  to get  $25^2$ .

- (A)  $4^2$  (B)  $5^2$  (C)  $6^2$  (D)  $7^2$

$\sqrt{48}$  is approximately equal to \_\_\_\_\_.

- (A) 5 (B) 6 (C) 7 (D) 8 (D) 3

$\sqrt{128} - \sqrt{98} + \sqrt{18} =$  \_\_\_\_\_.

- (A)  $\sqrt{2}$  (B)  $\sqrt{8}$  (C)  $\sqrt{48}$  (D)  $\sqrt{32}$

The number of digits in the square root of 123454321 is \_\_\_\_\_.

- (A) 4 (B) 5 (C) 6 (D) 7

By what number should  $(-4)^{-1}$  be multiplied so that the product becomes  $10^{-1}$ ?

- (A)  $\frac{2}{3}$  (B)  $\frac{-2}{5}$  (C)  $\frac{5}{2}$  (D)  $\frac{-5}{2}$

$(-2)^{-3} \times (-2)^{-2} =$  \_\_\_\_\_.

- (A)  $\frac{-1}{32}$  (B)  $\frac{1}{32}$  (C) 32 (D) -32

Which is not correct?

- (A)  $\left(\frac{-1}{4}\right)^2 = 4^{-2}$  (B)  $\left(\frac{-1}{4}\right)^2 = \left(\frac{1}{2}\right)^4$  (C)  $\left(\frac{-1}{4}\right)^2 = 16^{-1}$  (D)  $-\left(\frac{1}{4}\right)^2 = 16^{-1}$

If  $\frac{10^x}{10^{-3}} = 10^9$ , then x is \_\_\_\_\_.

- (A) 4 (B) 5 (C) 6 (D) 7

0.000000002020 in scientific form is \_\_\_\_\_.

- (A)  $2.02 \times 10^9$  (B)  $2.02 \times 10^{-9}$  (C)  $2.02 \times 10^{-8}$  (D)  $2.02 \times 10^{-10}$

**Objective Type Questions**

The product of  $7p^3$  and  $(2p^2)^2$  is

- (A)  $14p^{12}$  (B)  $28p^7$  (C)  $9p^7$  (D)  $11p^{12}$

The missing terms in the product  $-3m^3n \times 9(\_) = \_\_\_\_\_\_ m^4n^3$  are

- (A)  $mn^2, 27$  (B)  $m^2n, 27$  (C)  $m^2n^2, -27$  (D)  $mn^2, -27$

If the area of a square is  $36x^4y^2$  then, its side is \_\_\_\_\_

- (A)  $6x^4y^2$  (B)  $8x^2y^2$  (C)  $6x^2y$  (D)  $-6x^2y$

If the area of a rectangle is  $48m^2n^3$  and whose length is  $8mn^2$  then, its breadth is \_\_\_.

- (A)  $6mn$  (B)  $8m^2n$  (C)  $7m^2n^2$  (D)  $6m^2n^2$

If the area of a rectangular land is  $(a^2 - b^2)$  sq.units whose breadth is  $(a - b)$  then, its length is \_\_\_\_\_

- (A)  $a - b$  (B)  $a + b$  (C)  $a^2 - b$  (D)  $(a + b)^2$

If  $x^2 - y^2 = 16$  and  $(x + y) = 8$  then  $(x - y)$  is \_\_\_\_\_

- (A) 8 (B) 3 (C) 2 (D) 1

$$\frac{(a+b)(a^3 - b^3)}{(a^2 - b^2)} = \_\_\_\_\_\_$$

- (A)  $a^2 - ab + b^2$  (B)  $a^2 + ab + b^2$  (C)  $a^2 + 2ab + b^2$  (D)  $a^2 - 2ab + b^2$

$(p+q)(p^2 - pq + q^2)$  is equal to \_\_\_\_\_

- (A)  $p^3 + q^3$  (B)  $(p+q)^3$  (C)  $p^3 - q^3$  (D)  $(p-q)^3$

1.  $(a-b)=3$  and  $ab=5$  then  $a^3 - b^3 =$  \_\_\_\_\_

- (A) 15 (B) 18 (C) 62 (D) 72

∴  $a^3 + b^3 = (a+b)^3 -$  \_\_\_\_\_

- (A)  $3a(a+b)$  (B)  $3ab(a-b)$  (C)  $-3ab(a+b)$  (D)  $3ab(a+b)$

Factors of  $9x^2 + 6xy$  are

- (A)  $3y, (x+2)$  (B)  $3x, (3x+3y)$  (C)  $6x, (3x+2y)$  (D)  $3x, (3x+2y)$

Factors of  $4 - m^2$  are

- (A)  $(2+m)(2+m)$  (B)  $(2-m)(2-m)$  (C)  $(2+m)(2-m)$  (D)  $(4+m)(4-m)$

$(x+4)$  and  $(x-5)$  are the factors of \_\_\_\_\_

- (A)  $x^2 - x + 20$  (B)  $x^2 - 9x - 20$  (C)  $x^2 + x - 20$  (D)  $x^2 - x - 20$

The factors of  $x^2 - 5x + 6$  are  $(x-2)(x-p)$  then the value of  $p$  is \_\_\_\_\_

- (A) -3 (B) 3 (C) 2 (D) -2

The factors of  $1 - m^3$

- (A)  $(1+m), (1+m+m^2)$  (B)  $(1-m), (1-m-m^2)$   
(C)  $(1-m), (1+m+m^2)$  (D)  $(1+m), (1-m+m^2)$

One factor of  $x^3 + y^3$  is

- (A)  $(x - y)$  (B)  $(x + y)$  (C)  $(x + y)^3$  (D)  $(x - y)^3$

Sum of a number and its half is 30 then the number is \_\_\_\_\_.

- (A) 15 (B) 20 (C) 25 (D) 40

The exterior angle of a triangle is  $120^\circ$  and one of its interior opposite angle  $58^\circ$ , then the other opposite interior angle is \_\_\_\_\_.

- (A)  $62^\circ$  (B)  $72^\circ$  (C)  $78^\circ$  (D)  $68^\circ$

What sum of money will earn ₹500 as simple interest in 1 year at 5% per annum?

- (A) 50000 (B) 30000 (C) 10000 (D) 5000

The product of LCM and HCF of two numbers is 24. If one of the number is 6, then the other number is \_\_\_\_\_.

- (A) 6 (B) 2 (C) 4 (D) 8

The largest number of the three consecutive numbers is  $x+1$ , then the smallest number is

- (A)  $x$  (B)  $x+1$  (C)  $x+2$  (D)  $x-1$

**Objective Type Questions**

12% of 250 litre is the same as \_\_\_\_\_ of 150 litre.

- (A) 10% (B) 15% (C) 20% (D) 30%

If three candidates A, B and C in a school election got 153,245 and 102 votes respectively, then the percentage of votes got by the winner is \_\_\_\_\_.

- (A) 48% (B) 49% (C) 50% (D) 45%

15% of 25% of 10000 = \_\_\_\_\_.

- (A) 375 (B) 400 (C) 425 (D) 475

When 60 is subtracted from 60% of a number to give 60, the number is

- (A) 60 (B) 100 (C) 150 (D) 200

If  $48\%$  of  $48 = 64\%$  of  $x$ , then  $x =$

- (A) 64 (B) 56 (C) 42 (D) 36

A fruit vendor sells fruits for ₹200 gaining ₹40. His gain percentage is

- (A) 20% (B) 22% (C) 25% (D)  $16\frac{2}{3}\%$

By selling a flower pot for ₹528, a woman gains 20%. At what price should she sell it to gain 25%?

- (A) ₹500 (B) ₹550 (C) ₹553 (D) ₹573

A man buys an article for ₹150 and makes overhead expenses which are 12% of the cost price. At what price must he sell it to gain 5%?

- (A) ₹180 (B) ₹168 (C) ₹176.40 (D) ₹88.20

What is the marked price of a hat which is bought for ₹210 at 16% discount?

- (A) ₹243 (B) ₹176 (C) ₹230 (D) ₹250

The single discount in % which is equivalent to two successive discounts of 20% and 25% is

- (A) 40% (B) 45% (C) 5% (D) 22.5%

The number of conversion periods in a year, if the interest on a principal is compounded every two months is \_\_\_\_\_.

- (A) 2 (B) 4 (C) 6 (D) 12

The time taken for ₹4400 to become ₹4851 at 10%, compounded half yearly is \_\_\_\_\_.

- (A) 6 months (B) 1 year (C) 1 years (D) 2 years

The number of conversion periods in a year, if the interest on a principal is compounded every two months is \_\_\_\_\_.

- (A) 2 (B) 4 (C) 6 (D) 12

The time taken for ₹4400 to become ₹4851 at 10%, compounded half yearly is \_\_\_\_\_.

- (A) 6 months (B) 1 year (C) 1 years (D) 2 years

The cost of a machine is ₹18000 and it depreciates at  $16\frac{2}{3}\%$  annually. Its value after 2 years will be \_\_\_\_\_.

- (A) ₹12000 (B) ₹12500 (C) ₹15000 (D) ₹16500

The sum which amounts to ₹2662 at 10% p.a in 3 years, compounded yearly is \_\_\_\_\_.

- (A) ₹2000 (B) ₹1800 (C) ₹1500 (D) ₹2500

The difference between compound and simple interest on a certain sum of money for 2 years at 2% p.a is ₹1. The sum of money is \_\_\_\_\_.

- (A) ₹2000 (B) ₹1500 (C) ₹3000 (D) ₹2500

### Objective Type Questions

Two similar triangles will always have \_\_\_\_\_ angles

- (A) acute (B) obtuse (C) right (D) matching

If in triangles PQR and XYZ,  $\frac{PQ}{XY} = \frac{QR}{YZ}$  then they will be similar if

- (A)  $\angle Q = \angle Y$  (B)  $\angle P = \angle Y$  (C)  $\angle Q = \angle X$  (D)  $\angle P = \angle Z$

A flag pole 15 m high casts a shadow of 3 m at 10 a.m. The shadow cast by a building at the same time is 18.6 m. The height of the building is

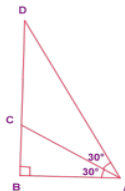
- (A) 90 m (B) 91 m (C) 92 m (D) 93 m

If  $\triangle ABC \sim \triangle PQR$  in which  $\angle A = 53^\circ$  and  $\angle Q = 77^\circ$ , then  $\angle R$  is

- (A)  $50^\circ$  (B)  $60^\circ$  (C)  $70^\circ$  (D)  $80^\circ$

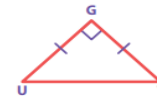
In the figure, which of the following statements is true?

- (A)  $AB = BD$  (B)  $BD < CD$  (C)  $AC = CD$  (D)  $BC = CD$



If  $\triangle GUT$  is isosceles and right angled, then  $\angle TUG$  is \_\_\_\_\_.

- (A)  $30^\circ$  (B)  $40^\circ$  (C)  $45^\circ$  (D)  $55^\circ$



The hypotenuse of a right angled triangle of sides 12cm and 16cm is \_\_\_\_\_.

- (A) 28 cm (B) 20 cm (C) 24 cm (D) 21 cm

The area of a rectangle of length 21cm and diagonal 29cm is \_\_\_\_\_.

- (A)  $609 \text{ cm}^2$  (B)  $580 \text{ cm}^2$  (C)  $420 \text{ cm}^2$  (D)  $210 \text{ cm}^2$

The sides of a right angled triangle are in the ratio 5:12:13 and its perimeter is 120 units then, the sides are \_\_\_\_\_.

- (A) 25, 36, 59 (B) 10, 24, 26 (C) 36, 39, 45 (D) 20, 48, 52

### Objective Type Questions

Data is a collection of \_\_\_\_\_

- (A) numbers (B) words (C) measurements (D) all the three

The number of times an observation occurs in the given data is called \_\_\_\_\_

- (A) tally marks (B) data (C) frequency (D) none of these

The difference between the largest value and the smallest value of the given data is \_\_\_\_\_

- (A) range (B) frequency (C) variable (D) none of these

The data that can take values between a certain range is called \_\_\_\_\_

- (A) ungrouped (B) grouped (C) frequency (D) none of these

Inclusive series is a \_\_\_\_\_ series.

- (A) continuous (B) discontinuous (C) both (D) none of these

In a class interval the upper limit of one class is the lower limit of the other class. This is \_\_\_\_\_ series.

- (A) Inclusive (B) exclusive (C) ungrouped (D) none of these

The graphical representation of ungrouped data is \_\_\_\_\_

- (A) histogram (B) frequency polygon (C) pie chart (D) all the three

Histogram is a graph of a \_\_\_\_\_ frequency distribution.

- (A) continuous (B) discontinuous (C) discrete (D) none of these

A \_\_\_\_\_ is a line graph for the graphical representation of the continuous frequency distribution.

- (A) frequency polygon (B) histogram (C) pie chart (D) bar graph

The graphical representation of grouped data is \_\_\_\_\_

- (A) bar graph (B) pictograph (C) pie chart (D) histogram

In a class there are 26 boys and 15 girls. The teacher wants to select a boy or a girl to represent a quiz competition. In how many ways can the teacher make this selection?

- (A) 41 (B) 26 (C) 15 (D) 390

How many outcomes can you get when you toss three coins once?

- (A) 6 (B) 8 (C) 3 (D) 2

In how many ways can you answer 3 multiple choice questions, with the choices A, B, C and D?

- (A) 4 (B) 3 (C) 12 (D) 64

How many 2 digit numbers contain the number 7 ?

- (A) 10 (B) 18 (C) 19 (D) 20

### Objective Type Questions

What is the eleventh Fibonacci number?

- (a) 55 (b) 77 (c) 89 (d) 144

If  $F(n)$  is a Fibonacci number and  $n=8$ , which of the following is true?

- (a)  $F(8) = F(9)+F(10)$  (b)  $F(8) = F(7)+F(6)$  (c)  $F(8) = F(10)\times F(9)$  (d)  $F(8) = F(7)-F(6)$

Every 3rd number of the Fibonacci sequence is a multiple of \_\_\_\_\_

- (a) 2 (b) 3 (c) 5 (d) 8

Every \_\_\_\_\_ number of the Fibonacci sequence is a multiple of 8

- (a) 2<sup>nd</sup> (b) 4<sup>th</sup> (c) 6<sup>th</sup> (d) 8<sup>th</sup>

The difference between the 18<sup>th</sup> and 17<sup>th</sup> Fibonacci number is

- (a) 233 (b) 377 (c) 610 (d) 987

Common prime factors of 30 and 250 are

- (a)  $2 \times 5$  (b)  $3 \times 5$  (c)  $2 \times 3 \times 5$  (d)  $5 \times 5$

Common prime factors of 36, 60 and 72 are

- (a)  $2 \times 2$  (b)  $2 \times 3$  (c)  $3 \times 3$  (d)  $3 \times 2 \times 2$

Two numbers are said to be co-prime numbers if their HCF is

- (a) 2 (b) 3 (c) 0 (d) 1

In questions (i) and (ii), there are four groups of letters in each set. Three of these sets are alike in some way while one is different. Find the one which is different.

- (i). (A) C R D T (B) A P B Q (C) E U F V (D) G W H X  
(ii). (A) H K N Q (B) I L O R (C) J M P S (D) A D G J

A group of letters are given. A numerical code has been given to each letter. These letters have to be unscrambled into a meaningful word. Find out the code for the word so formed from the 4 answers given.

L I N C P E  
1 2 3 4 5 6

- (A) 2 3 4 1 5 6 (B) 5 6 3 4 2 1 (C) 6 1 3 5 2 4 (D) 4 2 1 3 5 6

Online or television advertisements influence people on spending decisions by

- (a) using special music (c) using attractive pictures  
(b) making them think that they need the item (d) all the above

When I go shopping, I will buy

- (a) something that looks attractive (c) something that I need to purchase  
(b) something my friend has (d) the first thing I see in the store

The best shopping choice is to

- (a) shop at brand name stores always buy (c) the same thing my friends bought  
(b) compare the choices before buying (d) buy at a regular shop always

Fill in the blanks:

- (i)  $\frac{-19}{5}$  lies between the integers \_\_\_\_\_ and \_\_\_\_\_.  
(ii) The decimal form of the rational number  $\frac{15}{-4}$  is \_\_\_\_\_.  
(iii) The rational numbers  $\frac{-8}{3}$  and  $\frac{8}{3}$  are equidistant from \_\_\_\_\_.  
(iv) The next rational number in the sequence  $\frac{-15}{24}, \frac{20}{-32}, \frac{-25}{40}$  is \_\_\_\_\_.  
(v) The standard form of  $\frac{58}{-}$  is \_\_\_\_\_.

The value of  $\frac{-5}{12} + \frac{7}{15} =$  \_\_\_\_\_.

The value of  $\left(\frac{-3}{6}\right) \times \left(\frac{18}{-9}\right)$  is \_\_\_\_\_.

The value of  $\left(\frac{-15}{23}\right) \div \left(\frac{30}{-46}\right)$  is \_\_\_\_\_.

The rational number \_\_\_\_\_ does not have a reciprocal.

The multiplicative inverse of -1 is \_\_\_\_\_.

The ones digit in the square of 77 is \_\_\_\_\_.

The number of non-square numbers between  $24^2$  and  $25^2$  is \_\_\_\_\_.

The number of perfect square numbers between 300 and 500 is \_\_\_\_\_.

If a number has 5 or 6 digits in it, then its square root will have \_\_\_\_\_ digits.

The value of  $\sqrt{180}$  lies between integers \_\_\_\_\_ and \_\_\_\_\_.



The ones digit in the square of 77 is \_\_\_\_\_.

The number of non-square numbers between  $24^2$  and  $25^2$  is \_\_\_\_\_.

The number of perfect square numbers between 300 and 500 is \_\_\_\_\_.

If a number has 5 or 6 digits in it, then its square root will have \_\_\_\_\_ digits.

The value of  $\sqrt{180}$  lies between integers \_\_\_\_\_ and \_\_\_\_\_.

The ones digits in the cube of 73 is \_\_\_\_\_.

The maximum number of digits in the cube of a two digit number is \_\_\_\_\_.

The smallest number to be added to 3333 to make it a perfect cube is \_\_\_\_\_.

The cube root of  $540 \times 50$  is \_\_\_\_\_.

The cube root of 0.000004913 is \_\_\_\_\_.

$(-1)^{\text{even integer}}$  is \_\_\_\_\_.

(iv)  $(-2)^{-7} =$  \_\_\_\_\_.

For  $a \neq 0$ ,  $a^0$  is \_\_\_\_\_.

(v)  $\left(-\frac{1}{3}\right)^{-5} =$  \_\_\_\_\_.

$4^{-3} \times 5^{-3} =$  \_\_\_\_\_.

The ratio between the circumference and diameter of any circle is \_\_\_\_\_.

A line segment which joins any two points on a circle is a \_\_\_\_\_.

The longest chord of a circle is \_\_\_\_\_.

The radius of a circle of diameter 24 cm is \_\_\_\_\_.

A part of circumference of a circle is called as \_\_\_\_\_.

The three dimensions of a cuboid are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

The meeting point of more than two edges in a polyhedron is called as \_\_\_\_\_.

A cube has \_\_\_\_\_ faces.

The cross section of a solid cylinder is \_\_\_\_\_.

If a net of a 3-D shape has six plane squares, then it is called \_\_\_\_\_.

The value of  $x$  in the equation  $x + 5 = 12$  is \_\_\_\_\_.

The value of  $y$  in the equation  $y - 9 = (-5) + 7$  is \_\_\_\_\_.

The value of  $m$  in the equation  $8m = 56$  is \_\_\_\_\_.

The value of  $p$  in the equation  $\frac{2p}{3} = 10$  is \_\_\_\_\_.

The linear equation in one variable has \_\_\_\_\_ solution.

The solution of the equation  $ax + b = 0$  is \_\_\_\_\_.

If  $a$  and  $b$  are positive integers then the solution of the equation  $ax = b$  has to be always \_\_\_\_\_.

One-sixth of a number when subtracted from the number itself gives 25. The number is \_\_\_\_\_.

If the angles of a triangle are in the ratio 2:3:4 then the difference between the greatest and the smallest angle is \_\_\_\_\_.

In an equation  $a + b = 23$ . The value of  $a$  is 14 then the value of  $b$  is \_\_\_\_\_.

X-axis and Y-axis intersect at \_\_\_\_\_.

The coordinates of the point in third quadrant are always \_\_\_\_\_.

$(0, -5)$  point lies on \_\_\_\_\_ axis.

The x-coordinate is always \_\_\_\_\_ on the y-axis.

\_\_\_\_\_ coordinates are the same for a line parallel to Y-axis.

$y = px$  where  $p \in \mathbb{Z}$  always passes through the \_\_\_\_\_.

The intersecting point of the line  $x = 4$  and  $y = -4$  is \_\_\_\_\_.

If 30% of  $x$  is 150, then  $x$  is \_\_\_\_\_.

2 minutes is \_\_\_\_\_ % to an hour.

If  $x\%$  of  $x = 25$ , then  $x =$  \_\_\_\_\_.

In a school of 1400 students, there are 420 girls. The percentage of boys in the school is \_\_\_\_\_.

0.5252 is \_\_\_\_\_ %.

Loss or gain percentage is always calculated on the \_\_\_\_\_.

A mobile phone is sold for ₹8400 at a gain of 20%. The cost price of the mobile phone is \_\_\_\_\_.

An article is sold for ₹555 at a loss of  $7\frac{1}{2}\%$ . The cost price of the article is \_\_\_\_\_.

A mixer grinder marked at ₹4500 is sold for ₹4140 after discount. The rate of discount is \_\_\_\_\_.

The total bill amount of a shirt costing ₹575 and a T-shirt costing ₹325 with GST of 5% is \_\_\_\_\_.

The compound interest on ₹5000 at 12% p.a for 2 years, compounded annually is \_\_\_\_\_.

The compound interest on ₹8000 at 10% p.a for 1 year, compounded half yearly is \_\_\_\_\_.

The annual rate of growth in population of a town is 10%. If its present population is 26620, then the population 3 years ago was \_\_\_\_\_.

If the compound interest is calculated quarterly, the amount is found using the formula \_\_\_\_\_.

The difference between the C.I and S.I for 2 years for a principal of ₹5000 at the rate of interest 8% p.a is \_\_\_\_\_.

A can finish a job in 3 days whereas B finishes it in 6 days. The time taken to complete the job working together is \_\_\_\_\_ days.

If 5 persons can do 5 jobs in 5 days, then 50 persons can do 50 jobs in \_\_\_\_\_ days.

A can do a work in 24 days. If A and B together can finish the work in 6 days, then B alone can finish the work in \_\_\_\_\_ days.

A alone can do a piece of work in 35 days. If B is 40% more efficient than A, then B will finish the work in \_\_\_\_\_ days.

Fill in the blanks with the correct term from the given list.

- (in proportion, similar, corresponding, congruent, shape, area, equal)
- (i) Corresponding sides of similar triangles are \_\_\_\_\_.
  - (ii) Similar triangles have the same \_\_\_\_\_ but not necessarily the same size.
  - (iii) In any triangle \_\_\_\_\_ sides are opposite to equal angles.
  - (iv) The symbol  $\equiv$  is used to represent \_\_\_\_\_ triangles.
  - (v) The symbol  $\sim$  is used to represent \_\_\_\_\_ triangles.

If in a  $\Delta PQR$ ,  $PR^2 = PQ^2 + QR^2$ , then the right angle of  $\Delta PQR$  is at the vertex \_\_\_\_\_.

If 'l' and 'm' are the legs and 'n' is the hypotenuse of a right angled triangle then,  $l^2 =$  \_\_\_\_\_.

If the sides of a triangle are in the ratio 5:12:13 then, it is \_\_\_\_\_.

The medians of a triangle cross each other at \_\_\_\_\_.

The centroid of a triangle divides each medians in the ratio \_\_\_\_\_.

Data has already been collected by some other person is \_\_\_\_\_ data.

The upper limit of the class interval (25-35) is \_\_\_\_\_.

The range of the data 200, 15, 20, 103, 3, 196, is \_\_\_\_\_.

If a class size is 10 and range is 80 then the number of classes are \_\_\_\_\_.

Pie chart is a \_\_\_\_\_ graph.

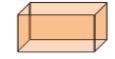
The total area of the histogram is \_\_\_\_\_ to the total frequency of the given data.

A graph that displays data that changes continuously over the periods of time is \_\_\_\_\_.

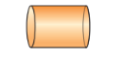
Histogram is a graphical representation of \_\_\_\_\_ data.

**Match the following:**

- (i) Area of a circle - (a)  $\frac{1}{4}\pi r^2$
- (ii) Circumference of a circle - (b)  $(\pi + 2)r$
- (iii) Area of the sector of a circle - (c)  $\pi r^2$
- (iv) Circumference of a semicircle - (d)  $2\pi r$
- (v) Area of a quadrant of a circle - (e)  $\frac{\theta^\circ}{360^\circ} \times \pi r^2$



(a) Cylinder



(b) Cuboid



(c) Triangular Prism



(d) Square Pyramid

Match the following ( a = 00..... Z = 25).

(a) $\frac{x}{2} = 10$	(i) $x = 4$	(i) mathematics	(a) 18 20 01 19 17 00 02 19 08 14 13
(b) $20 = 6x - 4$	(ii) $x = 1$	(ii) addition	(b) 03 08 21 08 18 08 14 13
(c) $2x - 5 = 3 - x$	(iii) $x = 20$	(iii) subtraction	(c) 12 00 19 07 04 12 00 19 08 02 18
(d) $7x - 4 - 8x = 20$	(iv) $x = \frac{8}{3}$	(iv) multiplication	(d) 00 03 03 08 19 08 14 13
(e) $\frac{4}{11} - x = \frac{-7}{11}$	(v) $x = -24$	(v) division	(e) 12 20 11 19 08 15 11 15 02 00 19 08 14 13

**பொருத்துக:**

- 15)  $(2x + 3)(2x - 3)$  - 1
- 16)  $-2xy(5x^2 - 3)$  - மூன்றாம் கால்பகுதி
- 17)  $5^\circ \times 3^\circ$  -  $4x^2 - 9$
- 18)  $(-3, -2)$  -  $\frac{1}{2} \times d \times (h_1 + h_2)$
- 19) நாற்கரத்தின் பரப்பு -  $10x^3y + 6xy$

1. Fill in the blanks (Use Atbash Cipher that is given in code 3)

- (i) GZNR0 = \_\_\_\_\_
- (ii) VMTORHS = \_\_\_\_\_
- (iii) NZGSVNZGRXH = \_\_\_\_\_
- (iv) HXRVMXV = \_\_\_\_\_
- (v) HLXRZO HXRVMXV = \_\_\_\_\_