FACTS TO REMEMBER (TEST)

1) A _____ is a line segment connecting two non-consecutive vertices of a polygon.
2) Number of diagonals in a polygon of n sides = _____
3) A polygon having all sides equal and all angles equal is called a _____.
4) The sum of all interior angles of a n sided polygon is _____ right angles = _____
5) Each interior angle of a regular polygon of n sides is _____
6) The sum of the exterior angles of a polygon is _____
7) The measure of each exterior angle of an n sided regular polygon is _____
8) The sum of the angles of a quadrilateral is _____
9) In a parallelogram : (i) _____
   (ii) _____
   (iii) _____
   (iv) _____
10) In a rhombus : (i) _____
    (ii) _____
11) In a square : (i) _____
    (ii) _____
    (iii) _____
    (iv) _____
12) In a rectangle : (i) _____
    (ii) _____
    (iii) _____
    (iv) _____
13) An equation in which highest exponent of the variable is one is called a _____
14) Any number which can be expressed in the form $\frac{p}{q}$; where p and q are integers and $q \neq 0$ is called a _____.
15) The integer zero is a rational number (T/F)?
16) The same number can be added or subtracted from both sides of the equation. (T/F)?
17) The HCF of a rational number in its lowest form is _____

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18) Every fraction as well as every integer is a rational number (T/F)?

19) There are _____ rational numbers between two given rational numbers.

20) If x and y are two rational numbers, then _____ is a rational number between them.

21) If x and y are two rational numbers, then $\frac{x}{y}$ will also be a rational number (T/F)?

22) Name the property: (i) $x+y = y+x$

(ii) $x \times y = y \times x$

(iii) $x+(y+z) = (x+y)+z$

(iv) $x \times (y \times z) = (x \times y) \times z$

(v) $x \times (y+z) = (x \times y)+(x \times z)$

23) _____ is the multiplicative identity of rational numbers.

24) _____ is the additive identity of rational numbers.

25) The additive inverse of a rational number $\frac{a}{b}$ is _____

26) The multiplicative inverse of $\frac{a}{b}$ is _____

27) Product of a number and its reciprocal is _____

28) * $a^m \times a^n$ = _____ * $a^m \times b^m$ = _____

* $a^m \div a^n$ = _____ * a^0 = _____

* $(a^m)^n$ = _____ * $\frac{a^m}{b^m}$ = _____

* $\left(\frac{a}{b}\right)^{-n}$ = _____

29) The number ending with 2, _____, _____ or _____ cannot be a perfect square

30) Square of an odd number is always an _____

31) Square of an even number is always an _____

32) * $\sqrt{a \times b}$ = _____

* $\sqrt{\frac{a}{b}}$ = _____

33) A number ending with an _____ number of zeroes is never a perfect square

34) Square of a proper fraction is _____ than the fraction.

35) A symbol which can take various numerical values is called a _____

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36) A combination of variables and constants connected by four basic operations (+, −, ×, ÷) is called an _____
37) Algebraic expression can have one or more terms known as _____
38) In polynomials, variables involved have only _____ integral powers.
39) The _____ of a polynomial in one variable is the highest exponent of the variable in various terms.
40) The degree of a constant term is _____
41) _____ contains one term, a _____ two terms and a _____ three terms.
42) An _____ is an equality which is true for all values of the variable in it.
43) Dividend = (_____ × _____) + _____
44) To construct a quadrilateral uniquely, _____ elements must be known.
45) Area of a △ =
46) Area of a rhombus =
47) area of a parallelogram =
48) area of a trapezium =
49) Bodies having definite shape are called ___
50) The space occupied by a solid body is called its _____
51) 1 cm^3 is the volume of space occupied by a cube, each of whose edges is ___ long.
52) Surface area of a solid is the _____ of areas of its faces.
53) Cuboid : volume =
Lateral surface area =
Total surface area =
length of diagonal =
54) Cube : volume =
length of diagonal =
Lateral surface area =
Total surface area =
55) Cylinder : volume =
Curved surface area =
Total surface area =
56) 1 cm^3 = ___ ml ; 1 l = ___ cm^3 ; 1 m^3 = ___ l = ___ kl

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57) The observations in an unorganized form are called _____

58) The difference between the highest and the lowest values of the observations is called _____

59) _____ means the number of times a particular observation occurs.

60) The difference between upper class limit and lower class limit is called the _____ or _____ of the class.

61) The average of upper class limit and lower class limit ie, the mid-value is called the _____

62) A graphical representation of the grouped data is called _____.

63) _____ is a vertical bar graph but with no spacing between bars.

64) Pie-chart is also called _____.

65) _____ shows the relationship between a whole and its part.

66) _____ is one whose outcome cannot be predicted in advance

67) Probability of an event = _____

68) The set of all possible outcomes of the experiment is called _____

69) When outcomes of an experiment have same chances of occurrence, then the outcomes are called _____

70) P(E) + P(not E) = _____

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FACTS TO REMEMBER (TEST)

1) A diagonal is a line segment connecting two non-consecutive vertices of a polygon.
2) Number of diagonals in a polygon of n sides = $\frac{n(n-3)}{2}$
3) A polygon having all sides equal and all angles equal is called a regular polygon
4) The sum of all interior angles of a n sided polygon is $(2n-4)$ right angles = $(n-2)\times 180^\circ$
5) Each interior angle of a regular polygon of n sides is $\frac{(n-2)\times 180^\circ}{n}$
6) The sum of the exterior angles of a polygon is 360°
7) The measure of each exterior angle of an n sided regular polygon is $360^\circ/n$
8) The sum of the angles of a quadrilateral is 360°
9) In a parallelogram : (i) opposite sides are equal
   (ii) opposite angles are equal
   (iii) adjacent angles are supplementary
   (iv) diagonals bisect each other
10) In a rhombus : (i) all sides are equal
    (ii) diagonals bisect each other at 90°
11) In a square : (i) all sides are equal
    (ii) each angle measures 90°
    (iii) diagonals are equal
    (iv) diagonals bisect each other at 90°
12) In a rectangle : (i) opposite sides are equal
    (ii) each angle measures 90°
    (iii) diagonals are equal
    (iv) diagonals bisect each other
13) An equation in which highest exponent of the variable is one is called a linear
14) Any number which can be expressed in the form $\frac{p}{q}$; where p and q are integers and $q \neq 0$ is called a rational number
15) The integer zero is a rational number (T/F)? True
16) The same number can be added or subtracted from both sides of the equation. (T/F)? True
17) The HCF of a rational number in its lowest form is 1

18) Every fraction as well as every integer is a rational number (T/F)? True

19) There are infinitely many rational numbers between two given rational numbers.

20) If x and y are two rational numbers, then $\frac{x+y}{2}$ is a rational number between them.

21) If x and y are two rational numbers, then $\frac{x}{y}$ will also be a rational number (T/F)? False ; y cannot be zero

22) Name the property: (i) $x+y=y+x$ commutative property of addition

(ii) $x \times y = y \times x$ commutative property of multiplication

(iii) $x+(y+z)=(x+y)+z$ associative property of addition

(iv) $x \times (y \times z) = (x \times y) \times z$ associative property of multiplication

(v) $x \times (y+z) = (x \times y) + (x \times z)$ distributive property over addition

23) 1 is the multiplicative identity of rational numbers.

24) 0 is the additive identity of rational numbers.

25) The additive inverse of a rational number $\frac{a}{b}$ is $\frac{-a}{b}$

26) The multiplicative inverse of $\frac{a}{b}$ is $\frac{b}{a}$

27) Product of a number and its reciprocal is 1

28) $*\ a^m \times a^n = a^{m+n}$ $\quad *\ a^m \times b^m = (ab)^m$

$*\ a^m \div a^n = a^{m-n}$ $\quad *\ a^0 = 1$

$*\ (a^m)^n = a^{mn}$ $\quad *\ \frac{a^m}{b^m} = \left(\frac{a}{b}\right)^m$

$*\ \left(\frac{a}{b}\right)^{-n} = \left(\frac{b}{a}\right)^n$

29) The number ending with 2, 3, 7 or 8 cannot be a perfect square

30) Square of an odd number is always an odd number

31) Square of an even number is always an even number

32) $*\ \sqrt{a \times b} = \sqrt{a} \times \sqrt{b}$

$*\ \sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$

33) A number ending with an odd number of zeroes is never a perfect square

34) Square of a proper fraction is less than the fraction.

35) A symbol which can take various numerical values is called a variable.

36) A combination of variables and constants connected by four basic operations (+, −, ×, ÷) is called an algebraic expression
37) Algebraic expression can have one or more terms known as Polynomials
38) In polynomials, variables involved have only non-negative integral powers.
39) The degree of a polynomial in one variable is the highest exponent of the variable in various terms.
40) The degree of a constant term is 0.
41) Monomial contains one term, a binomial two terms and a trinomial three terms.
42) An identity is an equality which is true for all values of the variable in it.
43) Dividend = (divisor × quotient) + remainder
44) To construct a quadrilateral uniquely, 5 elements must be known.
45) Area of a $\triangle = \frac{1}{2} \times b \times h$
46) Area of a rhombus = $\frac{1}{2} \times d_1 \times d_2$
47) area of a parallelogram = $b \times h$
48) area of a trapezium = $\frac{1}{2}(a+b) \times h$
49) Bodies having definite shape are called solids
50) The space occupied by a solid body is called its volume
51) $1\ cm^3$ is the volume of space occupied by a cube, each of whose edges is 1cm long.
52) Surface area of a solid is the sum of areas of its faces.
53) Cuboid : volume = $l \times b \times h$
Lateral surface area = $2h(l+b)$
Total surface area = $2(lb+bh+hl)$
length of diagonal = $\sqrt{l^2+b^2+h^2}$
54) Cube : volume = a^3
length of diagonal = $\sqrt{3}\,a$
Lateral surface area = $4a^2$
Total surface area = $6a^2$
55) Cylinder : volume = $\pi r^2 h$
Curved surface area = $2\pi rh$
Total surface area = $\pi r^2 h$
56) $1\ cm^3$ = 1 ml ; 1 l = 1000 cm^3 ; $1\ m^3$ = 1000 l = 1 kl

57) The observations in an unorganized form are called Raw data

58) The difference between the highest and the lowest values of the observations is called Range

59) Frequency means the number of times a particular observation occurs.

60) The difference between upper class limit and lower class limit is called the Class size or Class width of the class.

61) The average of upper class limit and lower class limit ie, the mid-value is called the class mark

62) A graphical representation of the grouped data is called Histogram.

63) Histogram is a vertical bar graph but with no spacing between bars.

64) Pie-chart is also called circle graph

65) Pie chart shows the relationship between a whole and its part.

66) Random experiment is one whose outcome cannot be predicted in advance

67) Probability of an event = $\frac{\text{no. of favourable outcomes}}{\text{Total no. of outcomes}}$

68) The set of all possible outcomes of the experiment is called Sample space

69) When outcomes of an experiment have same chances of occurrence, then the outcomes are called equally likely outcomes

70) P(E) + P(not E) = 1