1 vii Maths

Multiple Choice Questions (MCQs)

(for 3rd Term)

CLASS: VII

SUBJECT: MATHEMATICS

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Chapter – 9

Question 1) $\frac{3}{4}$ as rate percent is
(a) 7.5% (b) 75% (c) 0.75% (d) none of these

Question 2) 50% of a certain number is 450, find the number
(a) 900 (b) 1000 (c) 800 (d) 500

Question 3) What percentage is Rs.19.75 of Rs.25 ?
(a) 80% (b) 79% (c) 81% (d) 78%

Question 4) Express 26% as fraction
(a) $\frac{13}{50}$ (b) $\frac{26}{50}$ (c) $\frac{25}{100}$ (d) $\frac{30}{100}$

Question 5) Out of 2500 people, only 60% have the saving habbit. If 30% save with the bank 32% with the post office and the rest with shares. The number of share holders are
(a) 450 (b) 570 (c) 950 (d) 1250

Question 6) If 40% of $\frac{4}{5}$ of $\frac{3}{4}$ of a number is 48, then what is 1% of the same number?
(a) 20 (b) 12 (c) 2 (d) 1

Question 7) Find the error percent in taking the area of a rectangular park which is 50m wide and 70m long as 3800m^2
(a) $92\frac{2}{19}$% (b) $7\frac{17}{19}$% (c) $8\frac{4}{7}$% (d) $11\frac{1}{7}$ %

Question 8) An increase from 1 to 3 is what percent of the increase
(a) 66.7% (b) 100% (c) 200% (d) 300%

Question 9) A number reduced by 25% becomes 225. What percent should it be increased so that it becomes 375?
(a) 25% (b) 30% (c) 35% (d) 75%

Question 10) If the cost price of an article is 80% of its selling price. Then profit percent is
(a) 20% (b) $22\frac{1}{2}$ % (c) 24% (d) 25%

Question 11) A man sells 320 mangoes at the cost price of 400 mangoes. His gain percent is
(a) 15 (b) 20 (c) 25 (d) 10

Question 12) The cost price and selling price of an article is in the ratio a:b if b is 200% of a, then the percentage.
(a) 75% (b) 125% (c) 100% (d) 200%

Question 13) The catalogue price of an article is Rs.16, but the retailer is allowed a trade discount of 25%. At what price must the retailer sell it to gain 25% of what he pays for it?
(a) Rs.20 (b) Rs.14 (c) Rs.15 (d) Rs.18

Question 14) How long will it take Rs.100 to triple itself at 5% simple interest?
(a) 10 Years (b) 5 Years (c) 20 Years (d) 40 years

Question 15) Rs.7000 left in a bank for 10 years at simple interest amounts to Rs.9800. What would this amount, amount to after another 5 years at the same rate?
(a) Rs.8400 (b) Rs.11760 (c) Rs.10800 (d) Rs.14400

Question 16) Divide Rs.2500 into two parts such that the simple interest on one at 4% for 5 years is double that of the other at 5% for 3 years.
(a) Rs.1200, Rs.1300 (b) Rs.1000, Rs.1500 (c) Rs.2000, Rs.500 (d) Rs.800, Rs.1700

Question 17) What percent of $\frac{2}{7}$ is $\frac{1}{35}$?
(a) 25% (b) 20% (c) 15% (d) 10%

Question 18) The ratio 2:5 as rate percent is
(a) 4% (b) 0.4% (c) 40% (d) 14%

Question 19) At same rate of simple interest, A lent Rs.6000 to B for 2 years and Rs.1500 to C for 4 years and received Rs.900 as interest from both of then together, the rate of interest per annum was.
(a) 5% (b) 6% (c) 8% (d) 10%

Question 20) Student secures 90%, 60% and 54% marks in test papers with 100, 150 and 200 respectively as maximum marks. The percentage of his aggregate is.
(a) 64 (b) 68 (c) 70 (d) None of these

Question 21) If the annual rate of simple interest increases from 10% to $12\frac{1}{2}$%, a man's yearly income increases by Rs.1250. His principal (in Rs.) is
(a) 45,000 (b) 50,000 (c) 60,000 (d) 65,000

Question 22) In an examination, 93% of students passed and 259 failed. The total number of students appearing at the examination was
(a) 3700 (b) 3850 (c) 3950 (d) 4200

Question 23) If fares are increased by $12\frac{1}{2}$ %. What is the percent fare when the corresponding earlier fare was Rs.400?
(a) Rs.450 (b) Rs.475 (c) Rs.500 (d) Rs.550

Question 24) If x% of 75=9 then the value of x is
(a) 16 (b) 14 (c) 12 (d) 8

Question 25) What percent of 1 day is 36 minutes
(a) 25% (b) 2.5% (c) 3.6% (d) 0.25%

Chapter – 10

Question 1) The formula of speed is
(a) Distance × Time (b) $\frac{Distance}{Time}$ (c) $\frac{Time}{Distance}$ (d) None of these

Question 2) Convert a speed of 1 km/h in m/sec
(a) $\frac{5}{18}$ m/sec (b) $\frac{18}{5}$ m/sec (c) $\frac{25}{4}$ m/sec (d) None of these

Question 3) An athlete runs 200 meters race in 24 seconds. What is his speed in km/h
(a) 30km/h (b) 25km/h (c) 20km/h (d) 10km/h

Question 4) Sujeet covers a distance in 40 minutes if he drives at a speed of 60km/h on an average. Find the speed at which he must drive to reduce the time of journey by 25%?
(a) 50km/h (b) 70km/h (c) 75km/h (d) 80km/h

Question 5) A and B are two stations 560km/ apart. A train starts from A at 7a.m and travel towards B at 80 km/h. Another train starts from B at 9a.m and travel towards A at 120km/h. When will they meet each other?
(a) 10a.m (b) 10:30a.m (c) 11a.m (d) 11:30a.m

Question 6) A 200 m long train crosses a plat form of double its length in 36 seconds. Find the speed of the train in km/h ?
(a) 60km/h (b) 48km/h (c) 64km/h (d) 66km/h

Question 7) A train crosses a plat form 90m long in 30 seconds and a man standing on the platform in 15 seconds find the speed of the train
(a) 12.4km/h (b) 14.6km/h (c) 18.4km/h (d) 21.6km/h

Question 8) An aeroplane covers a certain distance at a speed of 240km/h in 5 hours. To cover the same distance in $1\frac{2}{3}$ hours. It must travel at a speed of
(a) 300km/h (b) 360km/h (c) 600km/h (d) 720km/h

Question 9) A person walks equal distances with speed 3km/h, 4km/h and 5km/h and takes a total time of 47 minutes. The total distance (in km) is
(a) 2 (b) 3 (c) 4 (d) 15

Question 10) A train covers a distance of 12km in 10 minutes. If it takes 6 seconds to pass an electric pole, then the length of the train is
(a) 90m (b) 100m (c) 120m (d) 140m

Question 11) A train passes a station plat form in 36 seconds and a man standing on the plat form in 20 seconds. If the speed of the train is 54km/h, What is the length of the platform?
(a) 120m (b) 240m (c) 300m (d) None of these

Question 12) 1 m/sec convert into km/h
(a) $\frac{5}{18}$ (b) $\frac{18}{5}$ (c) $\frac{100}{5}$ (d) None of these

Question 13) To find the distance what is the formula
(a) Speed × Time (b) $\frac{speed}{time}$ (c) $\frac{time}{speed}$ (d) None of these

Question 14) To find the time what is the formula
(a) $\frac{Distance}{Speed}$ (b) Distance × Speed (c) $\frac{Speep}{Distance}$ (d) None of these

Question 15) A 270 m long express train is running at 81km/h How much time will it take to cross a pole
(a) 12sec (b) 20sec (c) 25sec (d) 10sec

Question 16) The distance covered by the body in Unit time is called
(a) speed (b) time (c) None of these (d) Distance

Question 17) Express 45m/sec in km/h
(a) 150km/h (b) 162km/h (c) 45km/h (d) None of these

Question 18) A car covers a distance of 108.9km is 1.8 hours what is the average speed of the car?
(a) 60.5km/h (b) 70.5km/h (c) 69.5km/h (d) 61.5km/h

Question 19) Convert 72km/h into m/s is
(a) 20m/sec (b) 30m/sec (c) 40m/sec (d) 50m/sec

Question 20) What is the distance travelled by a car running at a speed of 54km/h in $\frac{1}{2}$ hour
(a) 27km (b) 27m (c) 20km (d) 20m

Question 21) Find the time taken by a cyclist to travel a distance of 5km at a speed 15km/h
(a) $\frac{1}{3}$ hour (b) 3 hour (c) 15 hour (d) 5 hour

Question 22) An express train 440 metres long is running with a speed of 90km/h. In how much time will it pass a tunnel 110 metres long?
(a) 22sec (b) 25sec (c) 30sec (d) 40sec

Question 23) A car travels at a speed of 92km/h. How far can it travel in 4 hours?
(a) 863km (b) 368km (c) 638km (d) 840km

Question 24) The speed of a car is 15m/sec. How far does it travel in 6 hours?
(a) 324km (b) 340km (c) 380km (d) 310km

Question 25) Convert 36km/h in m/sec is
(a) 100m/sec (b) 10m/sec (c) 1000m/sec (d) None of these

Chapter – 18

Question 1) If two geometrical figures fit exactly on each other are called
(a) same (b) different (c) congruent (d) None of these

Question 2) Two triangles are congruent if they have
(a) same shape and size (b) different size (c) same size (d) different size

Question 3) The symbol $\cong$ means
(a) equal (b) different (c) congruent (d) None of these

Question 4) By the method of _____, that is, by placing one figure on to another.
(a) superposition (b) identical (c) different (d) None of these

Question 5) If all sides of the congruent triangle are equal the condition is
(a) S.A.S (b) S.S.S (c) A.S.A (d) R.H.S

Question 6) When two triangles have two corresponding sides equal and the angle included between them also equal are called the condition.
(a) S.A.S (b) S.S.S (c) R.H.S (d) A.S.A

Question 7) If two triangles have one side equal and two corresponding angles equal, the two triangles are congruent under condition.
(a) S.A.S (b) S.S.S (c) R.H.S (d) A.S.A

Question 8) When the hypotenuse and one side of a right angled triangle are equal to the hypotenuse and one side another right angled triangle under condition.
(a) S.A.S (b) S.S.S (c) R.H.S (d) A.S.A

Question 9) Corresponding parts of congruent triangles are congruent under
(a) CPCT (b) R.H.S (c) S.A.S (d) A.S.A

Question 10) The triangles drawn are of same shape but not same size are called.
(a) similar (b) congruent (c) Not similar (d) None of these

Question 11) Two line segments are congruent if they have.
(a) same length (b) different length (c) different size (d) None of these

Question 12) If $\Delta ABC \cong \Delta LKM$ then side of ΔLKM equal to side AC of ΔABC is
(a) LK (b) KM (c) LM (d) None of these

Question 13) If $\Delta ABC \cong \Delta ACB$, then ΔABC is isosceles with
(a) AB=AC (b) AB=BC (c) AC=BC (d) None of these

Question 14) In ΔABC and ΔPQR if AB=QP, $\angle B = \angle P$ and BC=PR. Which congruent condition applies
(a) S.A.S (b) A.S.A (c) S.S.S (d) R.H.S

Question 15) If $\Delta PQR \cong \Delta EFD$ then ED =
(a) PQ (b) QR (c) PR (d) None of these

Question 16) If $\Delta PQR \cong \Delta EFD$ then $\angle E$ =
(a) $\angle P$ (b) $\angle Q$ (c) $\angle R$ (d) None of these

Question 17) Two circle are congruent if their radius is
(a) same (b) different (c) smaller (d) None of these

Question 18) Two squares are congruent if their sides are
(a) different (b) same (c) None of these

Question 19) Two triangles are congruent if and only if one of them can be made to
(a) superpose (b) congruent (c) identical (d) None of these

Question 20) Two line segment are congruent if and only
(a) lengths are equal (b) length are different (c) None of these

Question 21) Which of the following is not a criterion for congruence of triangle?
(a) S.A.S (b) S.S.A (c) A.S.A (d) S.S.S

Question 22) If $\Delta ABC \cong \Delta PQR$ and ΔABC is not congruent to ΔRPQ then which of the following is not true.
(a) BC=PQ (b) AC=PR (c) AB=PQ (d) QR=BC

Question 23) Sides opposite to equal angles of a triangle are
(a) different (b) equal (c) both a and b (d) None of these

Question 24) Two figures are congruent if they are of the
(a) same shape (b) different size (c) same size (d) both a and c

Question 25) Two angles are congruent if they have
(a) same measurement (b) same arm (c) different measurement (d) None of these

Chapter – 19

Question 1) A _____ is a change in a figure's position or size
(a) Reflection (b) Transformation (c) Images (d) none of these

Question 2) The concept of _____ is a familiar one
(a) Reflection (b) Image (c) Transformation (d) none of these

Question 3) A _____ flips a figure across a line to create its mirror image.
(a) Reflection (b) Images (c) none of these (d) Transformation

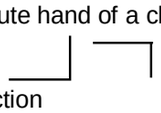
Question 4) The image is of the same size but it is a reflection of the _____ shape
(a) change (b) original (c) final (d) none of these

Question 5) Images are as for behind the mirror line as the _____ are in front.
(a) object (b) Images (c) reflection (d) none of these

Question 6) A _____ reflection is a reflection in which a plane figure flips over vertically.
(a) horizontal (b) vertical (c) Transformation (d) none of these

Question 7) A _____ reflection is a reflection in which a plane figure flips over horizontally.
(a) Transformation (b) vertical (c) horizontal (d) none of these

Question 8) Which of the following daily life situation best describes rotation?
(a) Opening a sliding glass door (b) Flipping a page in a book
(c) closing a drawer in the desk (d) Turning the minute hand of a clock to adjust time

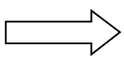
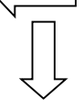
Question 9) Which transformation best describes the figure on the right 

(a) 90^0 clockwise rotation (b) Horizontal reflection
(c) 90^0 counter clockwise rotation (d) vertical reflection

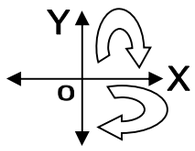
Question 10) Which transformation best describes the figure on the right?

(a) Horizontal reflection (b) 180^0 counter-clockwise rotation
(c) 90^0 counter-clockwise rotation (d) vertical reflection

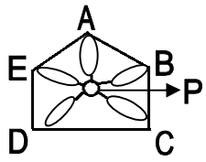
Question 11) Which is a horizontal reflection of the given arrow?

(a)  (b)  (c)  (d) 

Question 12) Which choice best describes the transformation shown on the right
(a) Reflection in the x-axis (b) Reflection in the y-axis
(c) Rotation (d) none of these



Question 13) The five blades of a ceiling fan form a regular pentagon. Which clockwise rotation about point P maps point B to point D ?
(a) 60^0 (b) 120^0 (c) 72^0 (d) 144^0



Question 14) In the figure given below the second figure is the image of the first figure. Which figure shows a horizontal reflection followed by a rotation of 180^0 ?
(a) A (b) B (c) C (d) D

Question 15) A rotation turns a shape through an angle about a fixed point called the _____ of rotation.
(a) corner (b) axis (c) centre (d) none of these

Question 16) The clock hand, the scissors blade and the bird turn through an _____ about a fixed point
(a) corner (b) centre (c) angle (d) none of these

Question 17) Rotations are described by the angle and _____ of rotations either clockwise or anticlockwise.
(a) corner (b) direction (c) angle (d) centre

Question 18) A minute hand of a clock rotates about a _____ near one of its ends.
(a) point (b) centre (c) angle (d) none of these

Question 19) Ferris wheels and merry-go-rounds are.
(a) Transformation (b) rotations (c) angle (d) none of these

Question 20) The image of trees on a lake represents a –
(a) rotation (b) reflection (c) transformation (d) none of these

Question 21) When you are on an amusement park ride, you are undergoing a _____.
(a) Rotation (b) Transformation (c) Reflection (d) none of these

Question 22) If A' is the image of A after reflection in the line m then the point A is called the _____ of the point
(a) pre-image (b) mirror image (c) refection (d) none of these

Question 23) When you move towards the mirror, your image also sums to come.
(a) farther (b) closer (c) both a and b (d) none of these

Question 24) A _____ reflection has a vertical line of symmetry
(a) vertical (b) horizontal (c) none of these (d) perpendicular

Question 25) A _____ reflection has a horizontal axis of reflection.
(a) horizontal (b) vertical (c) none of these (d) images

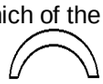
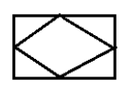
Chapter – 20

Question 1) If you can fold a figure so that both halves fit exactly on one another the figure is
(a) Reflection (b) Symmetrical (c) Rotation (d) none of these

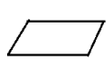
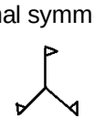
Question 2) Neha watched a butterfly land on the ground and then fold its wings. Which type of symmetry is
(a) line (b) point (c) Rotational (d) none of these

Question 3) Another name which describes reflection is
(a) to flip (b) point (c) line (d) none of these

Question 4) The number of letters in the word SNAIL that have symmetry is
(a) 0 (b) 1 (c) 2 (d) 3

Question 5) Which of the following does not have a line of symmetry
(a)  (b) 3 (c) 69 (d) 

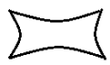
Question 6) Which of the following has a line of symmetry?
(a) The capital letter S in the English alphabet
(b) A parallelogram (c) The figure 
(c) The figure 8 (eight)

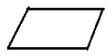
Question 7) Which of the following shapes does not have rotational symmetry?
(a)  (b)  (c)  (d) 

Question 8) The order of rotational symmetry for the given flower is 
(a) 4 (b) 6 (c) 8 (d) 2

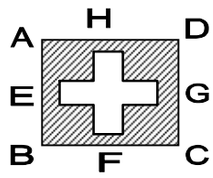
Question 9) Which of the following letters does not have a line symmetry, but has a rotational symmetry.
(a) H (b) I (c) Z (d) X

Question 10) What is the number of lines of symmetry and order of rotational symmetry for a regular hexagon?
(a) 2,6 (b) 4,3 (c) 4,6 (d) 6,6

Question 11) Which of these has ifinite lines of symmetry and an infinite order rotational symmetry and a point symmetry.
(a) semi circle (b)  (c) a circle (d) 

Question 12) Manish designed a garden plot that has rotational symmetry, but not line symmetry. Which of these could be the shape of the plot?
(a)  (b)  (c)  (d) 

Question 13) Use the flag Switzerland from Q13 to Q16 and answer the following lines would NOT be a line of symmetry?
(a) EG (b) AC (c) HF (d) EH



Question 14) How many lines of symmetry does the flag have
(a) 2 (b) 4 (c) 6 (d) 8

Question 15) Which lists all lines of symmetry of the flag?
(a) AC, BD (b) EG, HF (c) EG, HF, AC, BD (d) EH, GF, AC, BD

Question 16) Which describes the centre of rotation?
(a) Intersection of HF and EG (b) Intersection of AC and EH (c) A (d) there is no centre of rotation

Question 17) A scalene triangle has
(a) no line of symmetry (b) one line of symmetry (c) two lines of symmetry (d) three lines of symmetry

Question 18) A rectangle is symmetrical about
(a) each one of its sides (b) each one of its diagonals
(c) a line joining the mid points of its opposite sides (d) none of these

Question 19) A square has _____ line of symmetry
(a) one (b) two (c) three (d) four

Question 20) A circle has _____ line of symmetry
(a) No (b) one (c) two (d) unlimited

Question 21) The letter of O of the English alphabet has
(a) no line of symmetry (b) one line of symmetry (c) two line of symmetry (d) None of these

Question 22) The letter Z of English alphabet has _____ line of symmetry
(a) No (b) one (c) two (d) none of these

Question 23) A _____ is symmetrical about each one of its diagonals.
(a) parallelogram (b) Rhombus (c) rectangle (d) circle

Question 24) A circle is symmetrical about each on of its
(a) diagonals (b) diameters (c) chord (d) none of these

Question 25) A line segment is symmetrical about _____ bisector
(a) perpendicular (b) Chord (c) diagonal (d) None of these

Chapter – 21

Question 1) A solid is any enclosed _____ shape
(a) 2D (b) 3D (c) enclosed (d) none of these

Question 2) Three dimensions means.
(a) length, breadth (b) length, breadth, height (c) height, length (d) none of these

Question 3) A _____ is formed by two parallel, congruent polygonal faces called bases connected by faces that are parallelogram.
(a) Prism (b) Pyramid (c) Triangle (d) None of these

Question 4) A _____ is formed by a polygon base and triangular faces that meet at a common vertex.
(a) Prism (b) Pyramid (c) Triangle (d) none of these

Question 5) Two dimension means.
(a) length, height (b) length × breadth (c) length, breadth, height (d) none of these

Question 6) The name of the base decides the name of the _____
(a) Pyramid (b) Prism (c) Triangle (d) None of these

Question 7) The shape of the base decides the name of the _____
(a) Pyramid (b) Prism (c) Triangle (d) None of these

Question 8) Each flat surface of a solid is called a
(a) face (b) base (c) vertex (d) none of these

Question 9) Each corner of a solid where the faces meet is called a
(a) face (b) base (c) vertex (d) none of these

Question 10) The line segment that is the intersection of two faces is called an
(a) vertex (b) edge (c) corner (d) none of these

Question 11) A _____ is a solid that is enclosed by polygons
(a) Cylinder (b) Triangle (c) polyhedron (d) none of these

Question 12) _____ was a famous mathematician who discovered a rule about solids.
(a) Leonhard Euler (b) Aryabhata (c) J.C Bose (d) Kautilya

Question 13) Three- dimensional shapes can be visualised on a 2-D surface, that is, on paper with the help of
(a) Nets (b) folder (c) Model (d) None of these

Question 14) A _____ of a solid is the outline of its faces joined together from which a model of the solid can be made.
(a) folder (b) Nets (c) Model (d) None of these

Question 15) Which of these solids has the maximum number of vertices?
(a) Cone (b) Cylinder (c) Cuboid (d) Pyramid

Question 16) If F=6 and V=4 then the value of E using Euler's formula is
(a) 10 (b) 8 (c) 2 (d) 4

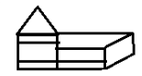
Question 17) Euler's rule states that for each polyhedron, equals formula
(a) F+E-V=2 (b) F+V-E=2 (c) F-2+V=E (d) None of these

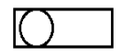
Question 18) There are three parts of a solid.
(a) Face, edge, vertex (b) Volume, Edge, vertex (c) Vertex, Vertex, Edge (d) Face, Vertex, Face

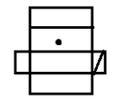
Question 19) Which of the following solids is a polyhedron?
(a) sphere (b) cone (c) Pyramid (d) cylinder

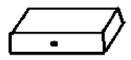
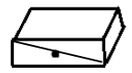
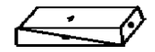
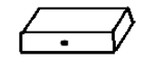
Question 20) Which shape best represents a hexagonal prism when viewed from the top?
(a)  (b)  (c)  (d) 

Question 21) The cross section obtained after giving a horizontal cut to a square pyramid is a
(a) triangle (b) rectangle (c) circle (d) square

Question 22) Which drawing best shows the plan view of the solid shown?


(a)  (b)  (c)  (d) 

Question 23) Which 3D figure does the given net represent?


(a)  (b)  (c)  (d) 

Question 24) A _____ has two circular bases
(a) Triangle (b) Pyramid (c) cylinder (d) none of these

Question 25) The top view of a solid is called its
(a) plan view (b) faces (c) vertex (d) none of these

Chapter – 27

Question 1) An _____ is an equality which is true for all values of variables.
(a) Identity (b) Factor (c) Cofficient (d) None of these

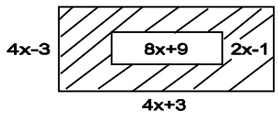
Question 2) $x^2+(a+b)x+ab$ equals
(a) (x+a) (x+b) (b) x(a+b) (c) $(a+b)x^2$ (d) None of these

Question 3) $(a+b)^2$ equals
(a) $a^2-2ab+b^2$ (b) $a^4+b^4+2a^2b^2$ (c) a^2+b^2+2ab (d) None of these

Question 4) $(a-b)^2$ equals.
(a) a^2+b^2-2ab (b) a^2-b^2-2ab (b) a^2+b^2+2ab (d) None of these

Question 5) (a+b) (a-b) equals
(a) (a^2-b^2) (b) a^2+b^2 (c) $(a-b)^2$ (d) $(a+b)^2$

Question 6) The area of the shaded region is
(a) $16x^2$ (b) 26x
(c) 81 (d) -10x



Question 7) A square has sides of length (x-4). A rectangle has a length of (x+4) and a width of (x-4). What is the total area of the square and the rectangle.
(a) $2x^2-8x+32$ (b) $2x^2+8x$ (c) $2x^2-8x-32$ (d) $2x^2-8x$

Question 8) $198^2-98^2=74p^2$ find p (using algebraic identify)
(a) 40 (b) 30 (c) 37 (d) 20

Question 9) The value of $\frac{(6.4)^2-(5.4)^2}{(8.9)^2+8.9\times2.2+(1.1)^2}$ is
(a) 0.236 (b) 0.118 (c) 0.059 (d) 118

Question 10) The value of $\frac{1.49\times1.49-0.51\times0.51}{(1.49+0.51)}$ equals
(a) 0.2 (b) 0.98 (c) 2 (d) 0.02

Question 11) $(a-b)^2+4ab$ equals
(a) a^2-b^2 (b) $(a+b)^2$ (c) $(a-2b)^2$ (d) a^2+b^2

Question 12) Evaluate $(103)^2$ using the identify $(a+b)^2=a^2+2ab+b^2$ equals
(a) 10,609 (b) 10,906 (c) 10,096 (d) 10,069

Question 13) Find the value of $36x^2+49y^2+84xy$ when x=1 y=2
(a) 300 (b) 200 (c) 400 (d) 500

Question 14) $(2.09\times2.09) - (2\times2.09\times1.09) + (1.09\times1.09)$ equal
(a) 0 (b) 1 (c) 2 (d) 3

Question 15) Square of (2x+3y) is equal to
(a) $6x^2+9y^2+12xy$ (b) $4x^2+9y^2+12xy$ (c) $9x^2+4y^2+12xy$ (d) $4x^2-9y^2+12xy$

Question 16) The value of $(99)^2$ is
(a) 9899 (b) 9289 (c) 9801 (d) 9729

Question 17) (x+y) (y-x) equal to
(a) x^2-y^2 (b) x^2+y^2-2xy (c) (y^2-x^2) (d) x^2+y^2

Question 18) $(2x-y)^2$ is equal to
(a) $4x^2+y^2$ (b) $4x^2+y^2+8xy$ (c) $4x^2+y^2-6xy$ (d) $4x^2+y^2-4xy$

Question 19) The length and breadth of a rectangle are (x+8) and (x-9) units respectively. Then area of rectangle is
(a) $x^2-17x+72$ (b) x^2-x-72 (c) x^2-x+72 (d) $x^2+17x-72$

Question 20) $\left(4x+\frac{7}{2}\right)^2$ equals
(a) $16x^2+28x+\frac{49}{4}$ (b) $16x^2-28x-\frac{49}{4}$ (c) $16x^2-28x+\frac{49}{4}$ (d) None of these

Question 21) $(97)^2$ equals
(a) $(100+3)^2$ (b) $(100-3)^2$ (c) $(100+4)^2$ (d) $(100-4)^2$

Question 22) $\left(3p^9+\frac{1}{P^9}\right)^2$ equals
(a) $9P^{18}+6+\frac{1}{P^{18}}$ (b) $9P^{18}-6\frac{-1}{P^{18}}$ (c) $6-9P^{18}+\frac{1}{P^{18}}$ (d) None of these

Question 23) (2x+7y) (2x+7y) equals
(a) $(2x+7y)^2$ (b) $(2x-7y)^2$ (c) $(2x)^2+(7y)^2$ (d) None of these

Question 24) $(95)^2$ equals
(a) $(90+5)^2$ (b) $(90-5)^2$ (c) (90+5) (90-5) (d) None of these

Question 25) (x+4) (x-4) equals
(a) (x^2-16) (b) (x^2+16) (c) $(x+16)^2$ (d) $(x-16)^2$

Chapter – 28

Question 1) Which is the complete factorisation of $24x^3-12x^2$?
(a) $6(4x^3-2x^2)$ (b) $12(12x^3-x^2)$ (c) $12x(2x^2-x)$ (d) $12x^2(2x-1)$

Question 2) Which is not a factor of $18y^2+36y$?
(a) 1 (b) 4y (c) y+2 (d) 18y

Question 3) The area of a rectangle is represented by the polynomial $x^2+3x-6x-18$ which of the following could represent the length and width of the rectangle?
(a) l = x+3, b=x+6 (b) l = x-3, b=x-6 (c) l = x+3, b=x-6 (d) l = x-3, b=x+6

Question 4) Which of the following polynomials is not completely factorised.
(a) $2x(4-x^3)$ (b) (3x+5) (2x-7) (c) 4m (m+1) (m-1) (d) $5x^2(n^2-16)$

Question 5) On dividing p $(4p^2-16)$ by 4p (p-2) we get
(a) 2p+4 (b) p+2 (c) p-2 (d) 2p-4

Question 6) When an expression is the product of two or more expression then each of these expression is called a _____ of the given expression
(a) Factor (b) Cofficient (c) product (d) None of these

Question 7) The process of writing a given algebric expression as the product of two or more factors is called
(a) Cofficient (b) factorisation (c) product (d) None of these

Question 8) A _____ may be factorised by taking out the greatest common factor of the two terms of the binomial
(a) monomial (b) binomial (c) polynomial (d) trinomial

Question 9) Greatest common factor of $16x^4y^9$ and $24x^7y^5$ is
(a) 8xy (b) $8x^2y$ (c) $8x^4y^5$ (d) 8

Question 10) x and a+b are factors of
(a) (a+b) (b) x (c) x (a+b) (d) 1

Question 11) a^2-b^2 is equal to
(a) (a+b) (a-b) (b) a^2+b^2+2ab (c) a^2+b^2-2ab (d) a^2-b^2-2ab

Question 12) 24×16 is equal to
(a) (20+4) (20-4) (b) $(20+4)^2$ (c) $(20-4)^2$ (d) 20^2+4^2

Question 13) a^4-b^4 is equal to
(a) $(a)^2-(b)^2$ (b) $(a^2-b^2)^2$ (c) a^3a-b^2 (d) $(a^2)^2-(b^2)^2$

Question 14) (x-4) is a factor of
(a) x^2-16 (b) x^2+16 (c) x^3-16 (d) None of these

Question 15) a^4b-ab^4 can be simplified as
(a) $ab(a^2-b^2)$ (b) $ab(a^3-b^3)$ (c) $ab(a^3+b^3)$ (d) $a^2b^2(a^2-b^2)$

Question 16) Factorise x(x-3) -7 (3-x). Which is correct
(a) (x+3) (x-7) (b) (x-3) (x+7) (c) (x-3) (x-7) (d) (x+3) (x+7)

Question 17) Factorise $3x^3-15x^2+10-2x$. Which is correct
(a) (x+5) $(2+3x^2)$ (b) (x-5) $(3x^2-2)$ (c) (x-5) $(3x^2+2)$ (d) (x+5) $(4x^2+3)$

Question 18) Sometimes the terms of the given polynomial need to be _____ in suitable groups so that each group has a common factor.
(a) arranged (b) not arranged (c) remain same (d) None of these

Question 19) Factorise $\frac{16}{81}m^2-121$
(a) $\left(\frac{4}{9}m-11\right)\left(\frac{4}{9}m+11\right)$ (b) $\left(\frac{4}{9}m-11\right)^2$ (c) $\left(\frac{4}{9}m+11\right)^2$ (d) None of these

Question 20) If the given expression is the difference of two squares we use the formula
(a) $(a-b)^2$ (b) a^2-b^2 (c) a^3-b^3 (d) None of these

Question 21) Factorise $a^2+bc+ab+ac$
(a) (a+b) (b+c) (b) (a+c) (b+c) (c) (a+b) (a+c) (d) None of these

Question 22) Which is the factor of $5-20x^2$

(a) 5(1-2x) (1-4x) (b) 5(1-2x) (5+2x) (c) 5(1-2x) (1+2x) (d) None of these

Question 23) Which is the factor of x^3-x
(a) $x(x^2-1)$ (b) $x^2(x-1)$ (c) $x^3(x-1)$ (d) None of these

Question 24) Factorise $(x-2)^2 +9 (x-2)$
(a) (x+2) (x+7) (b) (x-2) (x+9) (c) (x-2) (x+7) (d) None of these

Question 25) Factorise $\frac{3b-3a}{7a-7b}$ equals
(a) $\frac{-3}{7}$ (b) $\frac{7}{3}$ (c) $\frac{4}{7}$ (d) $\frac{7}{4}$

Chapter – 31

Question 1) A _____ is a simple closed curve all of whose points are at a constant distance from a fixed point in the same plane.
(a) Radius (b) Circle (c) Centre (d) None of these

Question 2) The fixed point is called the _____ of the circle
(a) Radius (b) Circle (c) Centre (d) None of these

Question 3) A line segment joining the centre of a circle with any point on it is called a _____ of that circle.
(a) Radius (b) Centre (c) None of these (d) Chord

Question 4) All radii of a circle are
(a) different (b) equal (c) None of these (d) Not equal

Question 5) A line segment which passes through the centre of a circle and has the end points on the circle is called
(a) Radius (b) Diameter (c) Chord (d) None of these

Question 6) A line segment joining any two points on a circle is called a
(a) Radius (b) Chord (c) Diameter (d) Centre

Question 7) The distance around the circle is called its
(a) Radius (b) Chord (c) Circumference (d) Centre

Question 8) If you run around a circle, you will cover a distance equal to its _____
(a) Circumference (b) Radius (c) Centre (d) Chord

Question 9) The end points of the diameter of a circle divide the circumference of the circle into two equal
(a) Radius (b) arcs (c) Centre (d) None of these

Question 10) An _____ is a part of a circle included between two points on the circle
(a) arc (b) Radius (c) segment (d) None of these

Question 11) A _____ of a circle is a region bounded by two radii of circle and their intercepted arc.
(a) sector (b) arc (c) segment (d) None of these

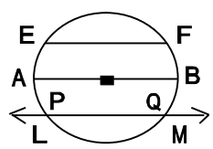
Question 12) A line which intersects a circle at two distinct points is called a
(a) sector (b) secant (c) segment (d) None of these

Question 13) _____ are coplanar circle with the same centre.
(a) Concentric (b) Solid (c) segment (d) None of these

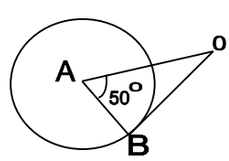
Question 14) A _____ is a line in the same plane as a circle that intersects it at exactly one point.
(a) Secant (b) Tangent (c) segment (d) Circumference

Question 15) Which of the following pairs of lines can be parallel?
(a) Two tangents to a circle (b) Two diameters of a circle
(c) A chord of a circle and a tangent to a circle (d) Two chords of a wcircle
Select the correct answer :
(a) 1,2,3 (b) 2,3 and 4 (c) 1,3 and 4 (d) 1,2 and 4

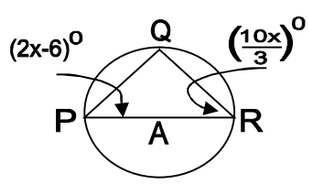
Question 16) What describes $\overline{PQ}$
(a) Chord (b) radius
(c) secant (d) diameter



Question 17) In the figure, OB is a tangent to circle with centre A Find ∠AOB
(a) 50^0 (b) 30^0
(c) 40^0 (d) 95^0



Question 18) In figure, ∠QRP is
(a) 50^0 (b) 30^0
(c) 60^0 (d) 45^0



Question 19) A chord of a circle divides the circular region into two parts. Each part is called a
(a) sector (b) segment (c) circumference (d) None of these

Question 20) Smaller part which does not contain the centre is called the _____ of the circle.
(a) a minor (b) major (c) circumference (d) None of these

Question 21) The bigger part containing the centre of the circle is called the _____ segment of the circle.
(a) minor (b) major (c) circumference (d) None of these

Question 22) Two tangents can be drawn to a circle from a point _____ the circle.
(a) inside (b) boundary (c) outside (d) None of these

Question 23) Tangent is _____ on the radius through the point of contact.
(a) perpendicular (b) parallel (c) None of these (d) unequal

Question 24) Angle in semicircle is
(a) 60^0 (b) 30^0 (c) 90^0 (d) 45^0

Question 25) Diameter is the biggest _____ of a circle?
(a) segment (b) Chord (c) sector (d) Radius

Chapter – 32

Question 1) The length breadth and height of a cuboid are 15cm 12cm and 4.5cm respectively. Its volume is.
(a) 243cm^3 (b) 405cm^3 (c) 810cm^3 (d) 603cm^3

Question 2) A cuboid is 12cm long, 9cm broad and 8 cm height Its total surface area is
(a) 864cm^2 (b) 552cm^2 (c) 432cm^2 (d) 276cm^2

Question 3) The length breadth and height of cuboid are 15cm, 6cm and 5dm. The lateral surface area of cuboid is.
(a) 45m^2 (b) 21m^2 (c) 201m^2 (d) 90m^2

Question 4) A beam 9m long, 40cm wide and 20cm heigh is made up of Iron which weighs 50kg per cubic m. The weight of the bean is
(a) 27kg (b) 48kg (c) 36kg (d) 56kg

Question 5) The length of the longest rod that can be placed in a room of dimensions (10m×10m×5m) is
(a) 15m (b) 16m (c) $10\sqrt{5}$ m (d) 12m

Question 6) What is the maximum length of the pencil that can be places in a rectangular box of dimensions (8cm×6cm×5cm) (Give $\sqrt{5}$=2.24)
(a) 8cm (b) 9.5cm (c) 19cm (d) 11.2cm

Question 7) The number of planks of dimensions (5m×25cm×10cm) can be stored in a pit which is 20m long, 6m wide and 50cm deep?
(a) 480 (b) 450 (c) 320 (d) 360

Question 8) How many bricks will be required to construct a wall 8m long 6m heigh and 22.5cm thick if each brick measures (25cm×11.25cm×6cm)?
(a) 4800 (b) 5600 (c) 6400 (d) 5200

Question 9) How many persons can be accommodated in a dining hall of dimensions (20m×15m×4.5m) assuming that each person require 5m^3 of air?
(a) 250 (b) 270 (c) 320 (d) 300

Question 10) A river 1.5m deep 30m wide is flowing at the rate of 3km per hour. The volume of water that runs into the sea per minute is
(a) 2000m^3 (b) 2250m^3 (c) 2500m^3 (d) 2750m^3

Question 11) Surface area of cube is
(a) 5(side)^2 (b) 4(side)^2 (c) 6(side)^2 (d) 7(side)^2

Question 12) Area of 4 walls is
(a) 2(h+b)×l (b) 2(l+b)×h (c) 3(l+b)×h (d) none of these

Question 13) Surface area of cuboid is
(a) 2(lb+bh+hl) (b) 3(lb+bh+hl) (c) 4(lb+bh+hl) (d) None of these

Question 14) Sum of the area of all six faces of a cube is its
(a) Volume (b) Cuboid (c) T.S.A (d) None of these

Question 15) 1 litre = _____cm3
(a) 10,000cm^3 (b) 100cm^3 (c) 1000cm^3 (d) 1cm^3

Question 16) A _____ is a rectangular solid whose all edges are equal
(a) cube (b) cuboid (c) cylinder (d) None of these

Question 17) The measure of the _____ of a solid is the number of cubes contained in it.
(a) T.S.A (b) Volume (c) cuboid (d) None of these

Question 18) The _____ of a solid is called the volume of the solid.
(a) T.S.A (b) Capacity (c) Cuboid (d) None of these

Question 19) Volume of cuboid is
(a) 2lbh (b) 3lbb (c) lbh (d) None of these

Question 20) Volume of cube is
(a) (Side)^3 (b) 2(side)^3 (c) 3(side)^3 (d) None of these

Question 21) The surface area of cube whose edge is 5cm long.
(a) 150cm^2 (b) 140cm^2 (c) 120cm^2 (d) 100cm

Question 22) The volume of cube is 512cm^2 its length of an edge.
(a) 8cm (b) 9cm (c) 10cm (d) 11cm

Question 23) The floor of a room is of size 4m×3m and its height is 3m. The walls and ceiling of a room requires painting. The area to be painted
(a) 66m^2 (b) 54m^2 (c) 43m^2 (d) 33m^2

Question 24) If S is the Total Surface area of cube and V its volume. The which is correct
(a) V^3=216S^3 (b) S^3=216V^3 (c) S^3=6V^2 (d) S^2=36V^3

Question 25) If the area of three adjacent faces of a cuboid are x, y, z respectively. Then the volume of cuboid
(a) xyz (b) 2xyz (c) $\sqrt{xyz}$ (d) 3 $\sqrt{xyz}$

Chapter – 26

Question 1) The average is also called the
(a) Mean (b) Sum of all given quantities (c) Number of given quantities (d) None of these

Question 2) Find the average of the following numbers :
46, 25, 36, 51, 73, 27
(a) 43 (b) 46 (c) 51 (d) 27

Question 3) Average of 10 numbers is 30. Later on it was observed that the numbers 15, 23 are wrongly, written as 51 and 32. The correct average is.
(a) 25.5 (b) 32 (c) 30 (d) 34.5

Question 4) The average marks of 28 students in Mathematics was 50. 8 students left the school, then this average increased by 5. What is the average of marks obtained by the students who left the school?
(a) 50.5 (b) 37.5 (c) 42.5 (d) 45

Question 5) A cricketer scored 180 runs in the first test and 258 runs in the second. How many runs should he score in the third test so that his average score in the three tests would be 230 runs?
(a) 270 (b) 252 (c) 210 (d) 245

Question 6) The mean of 9 observations is 16. One more observation is included and the new mean becomes 17 the 10^{th} observation is
(a) 9 (b) 16 (c) 26 (d) 30

Question 7) A batsman in his 12^{th} innings make a score of 63 runs and thereby increases, his average score by 2. What is his average score after the 12^{th} innings?
(a) 41 (b) 39 (c) 49 (d) 87

Question 8) The average age eleven football players is 20 years if the age of the coach is also included the average age increases by 10%. The age of the coach is.
(a) 48 years (b) 44 years (c) 40 years (d) 36 years

Question 9) Shalini's average marks in 6 subjects was 66. What her total marks?
(a) 693 (b) 396 (c) 400 (d) 300

Question 10) The average height of 5 pupils in a class is 140cm. If the total height of 4 pupils is 590cm. What is the height of the fifth pupil.
(a) 105cm (b) 110cm (c) 104cm (d) 109cm

Question 11) The average age of 30 pupils is 11 years. Find the total age of the pupils.
(a) 340 years (b) 360 years (c) 330 years (d) 350 years

Question 12) Find the average of the prime numbers between 4 and 10
(a) 7 (b) 6 (c) 8 (d) 9

Question 13) If 16a+16b=48 What is the average of a and b
(a) 1 (b) 2 (c) 3 (d) 1.5

Question 14) The sum of five numbers is 555. The average of the first two is 75 and the third number is 115. What is the average of last two numbers?
(a) 130 (b) 145 (c) 140 (d) 120

Question 15) Find the average cost per notebook of 80 notebooks 50 of which cost Rs.30 each and the rest Rs.40 each
(a) Rs.33.75 (b) Rs.34.75 (c) Rs.30.75 (d) Rs.40.75

Question 16) The average height of 6 students is 164cm what is their total height?
(a) 984cm (b) 980cm (c) 981cm (d) 942cm

Question 17) Monika bought 12 erasers at Rs.8.25 each and 8 more at Rs.7.50 each. Find the average cost of each eraser.
(a) 39 (b) 38 (c) 35 (d) 36

Question 18) The average of 10 observations is 3.5. If two observations namely 3.5 and 2.5 are deleated find the new average?
(a) 3.825 (b) 3.725 (c) 3.425 (d) 3.625

Question 19) Find the average of the first five multiples of 2
(a) 3 (b) 4 (c) 6 (d) 2

Question 20) Find the average of first ten odd natural numbers
(a) 7 (b) 8 (c) 9 (d) 10

Question 21) The average of 5 given numbers is 27. If one of the numbers is excluded, the average becomes 25. Find the excluded number.
(a) 35 (b) 45 (c) 25 (d) 55

Question 22) The average age of 5 students in a class is 12 years. If four of than respectively 6,11,13 and 16 years old. Find the age of the fifth student.
(a) 21 years (b) 14 years (c) 12 years (d) 13 years

Question 23) Find the average of 0, -1, -3, 8, 1 are
(a) 4 (b) 1 (c) 2 (d) 3

Question 24) The average of 15 numbers is 25. If 4 is subtracted from every number. What will be the new?
(a) 22 (b) 21 (c) 23 (d) 24

Question 25) Find the average of 1.9, 0.4, 3.4. 8.1
(a) 3.45 (b) 4.35 (c) 5.35 (d) 6.35