ST. LAWRENCE HIGH SCHOOL

27, BALLYGUNGE CIRCULAR ROAD

Class : 9 **Subject : MATHEMATICS** **Term : FIRST TERM** **Max Marks : 60**

Q 1 : A shirt is sold at Rs 360 and there is a loss of 10%. The C.P of the shirt is **Marks :** 1

1 . Rs 380

2 . Rs 400 (This Answer is Correct)

3 . Rs 420

4 . Rs 450

Q 2 : If the ratio of the C.P and the S.P be 25 : 26, then find the percentage of profit? **Marks :** 1

1 . 4% (This Answer is Correct)

2 . 3%

3 . 1%

4 . 20%

Q 3 : The marked price of a thing is Rs 80. If the discount on marked price be 10%, then the S.P will be **Marks :** 1

1 . Rs 88

2 . Rs 90

3 . Rs 72 (This Answer is Correct)

4 . Rs 70

Q 4 : AD and BE are the two medians of the triangle ABC. The straight line through the pt. D parallel to BE intersect EC at point F. If AC = 8 cm, then the length of the line segment EF is **Marks :** 1

1 . 4 cm

2 . 2 cm (This Answer is Correct)

3 . 1 cm

4 . 2.5 cm

Q 5 : In equilateral triangle ABC, the midpoints of BC , CA and AB are D , E and F respectively. Then the fig AEDF is **Marks :** 1

1 . rhombus (This Answer is Correct)

2 . square

3 . trapezium

4 . parallelogram

Q 6 : D and E are the midpoints of the sides AB and AC of ∆ ABC and O is any point on the side BC. O is joined to A. If P and Q are midpoints of OB and OC respectively, then DEQP is **Marks :** 1

1 . square

2 . rectangle

3 . rhombus

4 . parallelogram ☑ (This Answer is Correct)

Q 7 : The quadrilateral formed by joiniing the midpoints of the sides of a quadrilateral PQRS, taken in order is a rectangle if **Marks :** 1

1 . PQRS is a prallelogram

2 . PQRS is a rectangle

3 . the diagonals of PQRS are perpendicular to each other ☑ (This Answer is Correct)

4 . the diagonals of PQRS are equal.

Q 8 : The quadrilateral formed by joiniing the midpoints of the sides of a quadrilateral ABCD, taken in order is a rhombus if **Marks :** 1

1 . ABCD is a prallelogram

2 . ABCD is a rhombus

3 . the diagonals of ABCD are equal. ☑ (This Answer is Correct)

4 . the diagonals of ABCD are perpendicular to each other

Q 9 : The figure formed by joiniing the midpoints of the sides of a quadrilateral ABCD, taken in order is a square if **Marks :** 1

1 . ABCD is a rhombus

2 . the diagonals of ABCD are equal.

3 . the diagonals of ABCD are perpendicular to each other

4 . the diagonals of ABCD are equal and perpendicular to each other ☑ (This Answer is Correct)

Q 10 : The permiter of a parallelogram is 21 cm. The height of it with respect to the base PS is 4 cm, and the heigth with respect to SR is 3 cm. Then its area is **Marks :** 1

1 . 12 sq. cm

2 . 18 sq.cm ☑ (This Answer is Correct)

3 . 24 sq.cm

4 . 30 sq. cm

Q 11 : A median of a triangle divides it into two **Marks :** 1

1 . ∆s of equal area (This Answer is Correct)

2 . congruent ∆s

3 . right ∆s

4 . isosceles ∆s

Q 12 : A diagonal of a prallelogram divides it into two _____ of equal areas. **Marks :** 1

1 . squares

2 . rectangles

3 . triangles (This Answer is Correct)

4 . none of these

Q 13 : If d is the diamter of a circle then its area is **Marks :** 1

1 . πd^2

2 . $\pi d^2/2$

3 . $\pi d^2/4$ (This Answer is Correct)

4 . $2 \pi d^2$

Q 14 : A circle circumscribes a square. The length of side of square is 5 cm. Then the length of diameter of circle is **Marks :** 1

1 . $5\sqrt{2}$ cm (This Answer is Correct)

2 . $10\sqrt{2}$ cm

3 . 5 cm

4 . 10 cm

Q 15 : The numerical values of the circumference and area of a circle are equal. The length of the side of a square inscribed in that circle is **Marks :** 1

1 . $\sqrt{2}$ units

2 . 2 units

3 . 4 units

4 . $2\sqrt{2}$ units (This Answer is Correct)

Q 16 : Two copper wires of same length are taken. One is bent to a circle and the other to a square. If area of circle is y sq. units and area of square is x sq. units, then which of the following is the value of x : y? **Marks :** 1

1 . 2 : 3

2 . 7 : 22

3 . 11 : 14 (This Answer is Correct)

4 . 11 : 7

Q 17 : If the radius of a circle is increased by 1 mtr, its area increases by 8 π sq. mtrs. The radius of the circle is **Marks :** 1

1 . 1 mtr

2 . 2 mtr

3 . 3 mtr

4 . 3.5 mtr (This Answer is Correct)

Q 18 : If the radius of a circle is increased by 10%, then its area increases by **Marks :** 1

1 . 10%

2 . 20%

3 . 21% (This Answer is Correct)

4 . 50%

Q 19 : If the length of a diagonal of a quadrilateral is 10 cm and lengths of the perpendiculars on it from opposite vertices are 4 cm and 6 cm, then area of quadrilateral is **Marks :** 1

1 . 100 cm^2

2 . 200 cm^2

3 . 50 cm^2 (This Answer is Correct)

4 . none of these

Q 20 : If a book is purchased at Rs 25 and sold at Rs 20, then find the percentage of loss. **Marks :** 1

1 . 10%

2 . 15%

3 . 20% (This Answer is Correct)

4 . 25%

Q 21 : The S.P of a book is Rs 40 after allowing a discount of 20 %. Find the marked price. **Marks :** 1

1 . Rs 40

2 . Rs 55

3 . Rs 30

4 . Rs 50 (This Answer is Correct)

Q 22 : If the rate of loss is 20%, then the ratio of C.P and the S.P is **Marks :** 1

1 . 5 : 4 (This Answer is Correct)

2 . 3 :2

3 . 4 : 5

4 . 5 : 3

Q 23 : The ratio of the S.P and loss of a thing is 4 : 1. Then the loss % is **Marks :** 1

1 . 25%

2 . 22%

3 . 5%

4 . 20% ☑ (This Answer is Correct)

Q 24 : The amount of profit on C.P of Rs 100 is called the _____ percent **Marks :** 1

1 . Loss

2 . Loss %

3 . Profit ☑ (This Answer is Correct)

4 . Profit %

Q 25 : The extra expenses for an article after purchasing should also be calculated as _____ **Marks :** 1

1 . Profit

2 . Loss

3 . S.P

4 . C.P ☑ (This Answer is Correct)

Q 26 : The join of midpoints of any two sides of a triangle is parallel to the third side and _____ the third side. **Marks :** 1

1 . twice

2 . half ☑ (This Answer is Correct)

3 . double

4 . equal

Q 27 : In ∆ ABC, AB = 3cm, BC = 4cm and CA = 5cm. If D and E are the midpoiints of AB and BC respectively then the length of DE is **Marks :** 1

1 . 1.5 cm

2 . 2 cm

3 . 2.5 cm ☑ (This Answer is Correct)

4 . 3.5 cm

Q 28 : In the right angled ∆ ABC, /B = 90°, and if base BC = 15cm, hypotenuse AC = 17 cm, then area of the triangle is **Marks :** 1

1 . 60 sq. mtrs ☑ (This Answer is Correct)

2 . 40 sq. mtrs

3 . 120 sq. mtrs

4 . 30 sq. mtrs

Q 29 : Between the same base and same parallels, the area of the triangle will be _____ of the area of the parallelogram. **Marks :** 1

1 . thrice

2 . double

3 . equal

4 . half (This Answer is Correct)

Q 30 : Between the same base and same parallels, the area of a square and the area of a rhombus are _____. **Marks :** 1

1 . triple

2 . double

3 . equal (This Answer is Correct)

4 . half

Q 31 : Two parallelograms are on equal bases and between the same parallels. The ratio of their areas is **Marks :** 1

1 . 1 : 2

2 . 1 : 1 (This Answer is Correct)

3 . 2 : 1

4 . 3 : 1

Q 32 : If a triangle and a parallelogram are on same base and between the same parallels, then the ratio of area of the triangle to the area of parlallelogram is **Marks :** 1

1 . 1 : 3

2 . 1 : 2 (This Answer is Correct)

3 . 3 : 1

4 . 1 : 4

Q 33 : If two figures are congruent then the areas enclosed by these figures are _____ **Marks :** 1

1 . unequal

2 . equal (This Answer is Correct)

3 . more than the other

4 . less than the other

Q 34 : A circular ring is 5 cm wide. The difference of outer and inner radius is **Marks :** 1

1 . 5 cm (This Answer is Correct)

2 . 2.5 cm

3 . 10 cm

4 . none of these

Q 35 : Perimeter of semicircle is 36 cm. What is the length of diameter? **Marks :** 1

1 . 12 cm

2 . 14 cm (This Answer is Correct)

3 . 20 cm

4 . 28 cm

Q 36 : If the difference between the circumference and diameter of a circle is 60 units , then the radius of the circle is **Marks :** 1

1 . 7 units

2 . 14 units (This Answer is Correct)

3 . 28 units

4 . 3.5 units

Q 37 : An arc of a circle of radius 21 cm produces an angle 60°, at the centre. The area of the sector formed by the two radii adjacent to the angle and the arc is **Marks :** 1

1 . 228 sq.cm

2 . 230 sq.cm

3 . 231 sq.cm (This Answer is Correct)

4 . 232 sq.cm

Q 38 : The circumference of a circle is 22 cm. The length of the diagnonal of a square circumscribing the circle is **Marks :** 1

1 . 7 cm

2 . 14 cm

3 . $7\sqrt{2}$ cm (This Answer is Correct)

4 . $14\sqrt{2}$ cm

Q 39 : The radius of a circle is r units. Area of the second circle is twice the area of the first circle. Radius of the second circle is **Marks :** 1

1 . 2 r units

2 . $\sqrt{2}$ r units (This Answer is Correct)

3 . r2 units

4 . 4 r units

Q 40 : The ratio of perimeter and diamter of a semi circle is **Marks :** 1

1 . π : 1

2 . π : 2

3 . (π + 1) : 1

4 . (π + 2) : 2 (This Answer is Correct)

Q 41 : If the circumference of a circular park is 44 mtrs., then its area will be **Marks :** 1

1 . 154 sq.m (This Answer is Correct)

2 . 126 sq.m

3 . 145 sq.m

4 . 176 sq.m

Q 42 : Area of a triangle is 30 cm². If its base is 10 cm, the its height is **Marks :** 1

1 . 5 cm

2 . 6 cm (This Answer is Correct)

3 . 7 cm

4 . 8 cm

Q 43 : If the perimeter of a square is 80 cm, then its area is **Marks :** 1

1 . 800 cm²

2 . 600 cm²

3 . 400 cm² (This Answer is Correct)

4 . 200 cm²

Q 44 : Area of a parallelogram is 48 cm². If its height is 6 cm, then its base is **Marks :** 1

1 . 8 cm (This Answer is Correct)

2 . 4 cm

3 . 16 cm

4 . none of these

Q 45 : If the area of a trapezium is 64 cm², and the distance between parallel sides is 8 cm, then sum of its parallel sides is **Marks :** 1

1 . 8 cm

2 . 4 cm

3 . 32 cm

4 . 16 cm (This Answer is Correct)

Q 46 : Area of a rhombus whose diagonals are 8 cm and 6 cm is **Marks :** 1

1 . 48 cm²

2 . 24 cm² (This Answer is Correct)

3 . 12 cm²

4 . 96 cm²

Q 47 : If the lengths of diagonals of a rhombus is doubled, then area of rhombus will be **Marks :** 1

1 . doubled

2 . tripled

3 . four times (This Answer is Correct)

4 . remains same

Q 48 : Area of rhombus is 90 cm². If the length of one diagonal is 10 cm, then the length of the other diagonal is **Marks :** 1

1 . 18 cm (This Answer is Correct)

2 . 9 cm

3 . 36 cm

4 . 4.5 cm

Q 49 : If the length of each side of an equilateral triangle be 4 cm, then what is the length of each of its medians? **Marks :** 1

1 . 5 cm

2 . 6 cm

3 . 2√2 cm

4 . 2√3 cm (This Answer is Correct)

Q 50 : The perimeter of a rectangle is 40 mtrs and its length is 12 mtrs. Find its breadth. **Marks :** 1

1 . 10 m

2 . 8 m (This Answer is Correct)

3 . 6 m

4 . 4 m

Q 51 : The range of the data 7, 13, 6, 25, 18, 20, 16 is _____ **Marks :** 1

1 . 5

2 . 6

3 . 2

4 . 19 (This Answer is Correct)

Q 52 : In the class interval 35 to 46, the lower limit is _____ **Marks :** 1

1 . 11

2 . 40

3 . 35 (This Answer is Correct)

4 . 46

Q 53 : The class mark of class interval 22 to 29 is _____ **Marks :** 1

1 . 25.5 (This Answer is Correct)

2 . 22

3 . 29

4 . 27.5

Q 54 : _____ tells us how many times does a particular data appear in a given set of data **Marks :** 1

1 . range

2 . class mark

3 . frequency (This Answer is Correct)

4 . class size

Q 55 : If a dozen of oranges is purchased at Rs 75 and each pair is sold at Rs 10, then what will be the profit or loss percentage of the seller? **Marks :** 1

1 . 20% profit

2 . 20% loss (This Answer is Correct)

3 . 25% profit

4 . 25% loss

Q 56 : In the trapezium ABCD, AB II CD and AB = 7cm and DC = 5 cm. The midpoints of AD and BC are E and F resp, then the length of EF is **Marks :** 1

1 . 5 cm

2 . 6 cm (This Answer is Correct)

3 . 7 cm

4 . 12 cm

Q 57 : In triangle ABC, D , E and F are the midpoints of the sides BC, CA and AB. If the perimeter of the triangle ABC is 18 cm, then the perimeter of the triangle DEF is **Marks :** 1

1 . 4.5 cm

2 . 8 cm

3 . 9 cm (This Answer is Correct)

4 . 10 cm

Q 58 : ABCD is a trapezium with parallel sides AB = a cm, and DC = b cm. E and F are midpoints of the non parallel sides. The ratio of area of ABFE and area of EFCD is **Marks :** 1

1 . a : b

2 . (3a+b) : (a+3b) (This Answer is Correct)

3 . (a+3b) : (3a+b)

4 . (2a+b) : (3a+b)

Q 59 : In a trapezium ABCD, AB II DC and AB ≠ DC. If the diagonals AC and BD of the trapezium ABCD intersect at O, then which of the following statements is not true? **Marks :** 1

1 . area of Δ ABC = area of Δ ABD

2 . area of Δ ACD = area of Δ BCD

3 . area of Δ OAB = area of Δ OCD (This Answer is Correct)

4 . area of Δ OAD = area of Δ OBC

Q 60 : In an iron ring there is 66 sq. cm ironplate. If the outer diameter of the ring is 22 cm, then its inner diameter is **Marks :** 1

1 . 14 cm

2 . 16 cm

3 . 10 cm

4 . 20 cm (This Answer is Correct)
