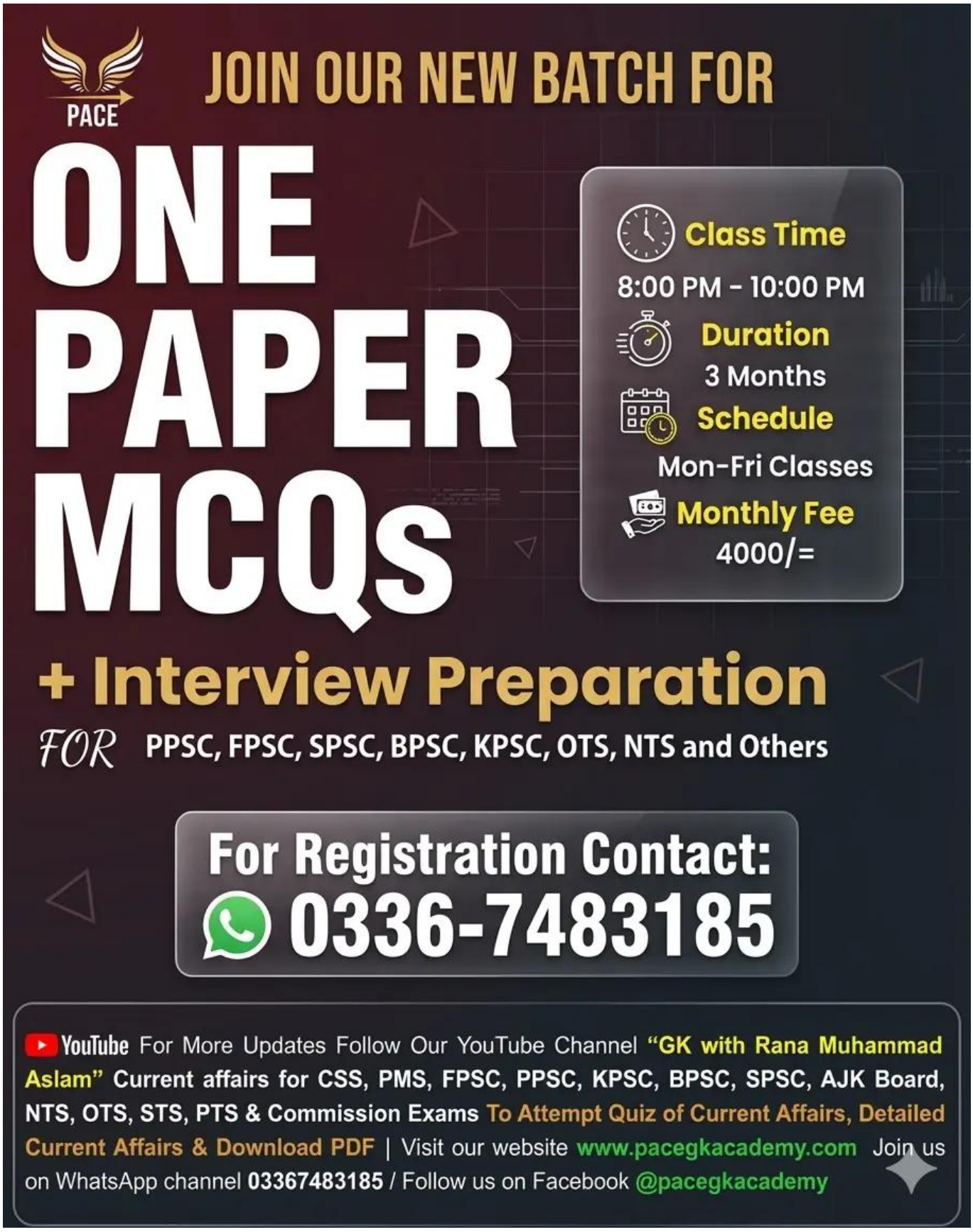
Math Model Paper 4

(Miscellaneous)



Math Model Paper 4

Q.1: The banker's gain on a sum due 3 years hence at 12% per annum is Rs.270. The banker's discount is:
A. **Rs.1020**
B. Rs.1050
C. Rs.1080
D. Rs.1250

Q.2: How many times in a day, are the hands of a clock in a straight line but opposite in direction?
A. 15
B. **22**
C. 24
D. 27

Q.3: The present worth of a sum due sometime hence is Rs.576 and the bankers gain is Rs. 16. The true discount is:
A. Rs.30
B. Rs.48
C. **Rs96**
D. Rs M20

Q.4: The banker's discount on Rs. 1600 at 15% per annum is the same as true discount on Rs.1680 for the same time and at the same rate. The time is:
A. **4 months**
B. 6 months
C. 7 months
D. 8 months

Q.5: HOW much does a watch lose per day, if its hands coincide every 64 minutes?
A. **32 *8/11 minutes**
B. 35 *1/2 minutes
C. 36* 1/2 minutes
D. 40 minutes

Q.6: The bankers discount on a sum of money for 1.5 years is Rs.558 and the true discount on the same sum for 2 years is Rs.600. The rate percent is:
A. 5%
B. 9%
C. **12%**
D. 15%

Q.7: At what time ,in minutes between 3 0'clock and 4 0'clock, both the needles will coincide each other?
A. 5
B. 12
C. **16**
D. 17

Q.8: The banker's discount of a certain sum of money is Rs.72 and the true discount on the same sum for the same time is Rs.60. The sum due is:
A. Rs.200
B. **Rs.360**
C. Rs.400
D. Rs.425

Q.9: At what time between 9 and 10 0'clock will the hands of a watch be together?
A. 45 minutes
B. **49 1/11 minute past 9**
C. 47 ,omits
D. 52 minutes past 7

Q.10: At what time between 7 and 8 0'clock will the hands of a clock e In the same straight line but not together?
A. 5 5/11 minutes past 4
B. **5 minutes past 7**
C. 5 2/11 minutes past 7
D. 5 % minutes past 5

Q.11: The fraction 101*27/100000 in decimal form is:
A. .01026
B. ,10127
C. **101.00027**
D. 10.02710

Q.12: When .36 is written in simplest fractional form, the sum of the numerator and the denominator is
A. **15**
B. 45
C. 115
D. 136

Q.13: What decimal of an hour is a second?
A. .0025
B. .0255
C. **00027**
D. .02500

Q.14: What is the difference between the biggest and the smallest fraction among 2/3.3/4,4/5and 5/6 ?
A. 1/4
B. **1/6**
C. 1/13
D. 12/7

Q.15: Which of the following fractions is the smallest?
A. **15/9**
B. 7/8
C. 17/12
D. 13/16

Q.16: Which of the following fractions is greater than3/4 and less than6/10
A. 1/2
B. **4/5**
C. 2/3
D. 10/11

Q.17: Vöch fractions is than7/8 and greater than 1/3?
A. 1/4
B. 23/24
C. **17/24**
D. 13/25

Q.18: Which of the following numbers does not lie between 4/5 and 7/13?
A. **1/2**
B. 2/3
C. 3/4
D. 4/5

Q.19: Find the products: 337.62 + 8.591 + 34.4 =?
A. 380611
B. **380.611**
C. 426.97
D. 369.70

Q.20: Evaluate: 3405 + 240.016 + 23.98 = ?
A. **298046**
B. 289.496
C. 390.976
D. 892.456

Q.21: Evaluate: 48.95 -- 32.006?
A. 15660
B. **16.944**
C. 16.350
D. 14.570

Q.22: Evaluate: 892.7 573.07 -- 95.007 =?
A. **224623**
B. 225.776
C. 223.650
D. 233.50

Q.23: 83268 - 24231 779.84=?
A. **189.57**
B. 180.65
C. 182.76
D. 192.98

Q.24: Which of the 'following is equal to 3.14 x 106?
A. 314
B. 3140
C. **3140000**
D. 41300

Q.25: How many digits will be there to the right of the decimal point in the product of 95.75 and .02554?
A. 4
B. 5
C. **6**
D. 9

Q.26: Which is the closest approximation to the product 0.333 x 0.25 x 0.499 x 0.125 x 24?I
A. 3/4
B. **1/8**
C. 3/8
D. 5/7

Q.27: Evaluate: 0.213 + 000213 = ?
A. 1
B. 10
C. **100**
D. 1000

Q.28: 4.036 divided by 0.04 gives:
A. 1.009
B. 10.09
C. **100.9**
D. 10.90

Q.29: 1/0.04 is equal to:
A. 1/40
B. 2/5
C. 2.5
D. **25**

Q.30: The rational number for the recurring decimal 0.125125 is:
A. 63/486
B. **125/999**
C. 119/663
D. 46/99

Q.31: The banker's discount on a certain sum due 2 years hence is 11/10 of the true discount. The rate percent is :
A. **5%**
B. 9%
C. 12%
D. 15%

Q.32: When 0 47 is converted into a fraction, the result is:
A. **47/99**
B. 46/99
C. 45/99
D. 42/83

Q.33: Evaluate:4.2*4.2-1.9/2.3*6.1=?
A. 0.5
B. **1**
C. 3
D. 7

Q.34: Simplify :5.32*56+5.32*44/(7.66)2-(2.34)2:
A. 7.2
B. 8.3
C. **10**
D. 12.7

Q.35: Evaluate:0.002*0.5=?
A. 0.0101
B. **0.001**
C. 0.01
D. 0.1

Q.36: Simplify:0.014*0.014=?
A. **0.000196**
B. 0.196000
C. 0.001960
D. 19.6

Q.37: The length of a room is 5.5 m and width is 3.75 m. Find the cost of paving the floor by slabs at the rate of Rs.800 per sq. meter.
A. Rs.15000
B. Rs.15550
C. Rs.15600
D. **Rs.16500**

Q.38: The bankers gain on a certain sum due 1 *1/2 years hence is 3/25 of the banker's discount. The rate percent is:
A. 7.5%
B. **9 119%**
C. 106%
D. 13%

Q.39: The length of a rectangle is 18 cm and its breadth is 10 cm. When the length is increased to 25 cm,what will be the breadth of the rectangle if the area remains the same?
A. 7 cm
B. 7.1 cm
C. **7.2 cm**
D. 7.3 cm

Q.40: A rectangular plot, measuring 90 meters by 50 meters is to be enclosed by wire fencing. If the poles Of the fence are kept 5 meters apart, how many poles will be needed?
A. 55
B. **56**
C. 57
D. 58

Q.41: The length of a rectangular plot is 60% more than its breadth. If the difference between the length and the breadth of that rectangle is 24 cm, what is the area of that rectangle?
A. 2400 sq. cm
B. 2480 sq. cm
C. **2560 sq. cm**
D. Data inadequate

Q.42: The breadth of a rectangular field is 60% of its length. If the perimeter of the field is 800 m, area of the field?
A. 18750 sq.m
B. **37500 sq. m**
C. 40000 sq. m
D. 48000 sq. m

Q.43: The length of a rectangular hall is 5 m more than its breadth. The area of the hall is 750 m2 The length of the hall is:
A. 15 m
B. 22.5 m
C. 25 m
D. **30 m**

Q.44: The ratio between the length and the breadth of a rectangular park is 3 2. If a man cycling along the boundary of the park at the speed of 12 Km/hr completes one round in 8 minutes, then the area of the park(in sq.m) is.
A. 15360
B. **153600**
C. 30720
D. 307200

Q.45: A farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30 m barbed wire, he fences three sides of the garden letting his house compound wall at as the fourth said fencing. The dimension of the garden is:
A. 15 m x 6.67 m
B. **20 m x 5m**
C. 30 m x 3.33 m
D. 40 m x 2.5 m

Q.46: A large field Of 700 hectares is divided into two parts. The difference Of the areas of the two parts is one-fifth of the average of the two areas, What is the area of the smaller part in hectares?
A. 225
B. 280
C. 300
D. **315**

Q.47: A rectangular paper, w en folded into two congruent parts, had a perimeter of 34 cm for each part folded along one set of sides and the same is 38 cm when folded along the other set of sides. What is the area of the paper?
A. **140 cm**
B. 240 cm2
C. 560 cm2
D. 580 cm2

Q.48: A courtyard 25 m long and 16 m broad is to be paved with bricks of dimensions 20 cm by 10 cm. The total number of bricks required is:
A. 18000
B. **20000**
C. 25000
D. None of these

Q.49: The cost of carpeting a room 18 m long with a carpet 75 cm wide at Rs.460 per meter is Rs.810. The breadth of the room is:
A. 7m
B. **7.5 m**
C. 8m
D. 8.5 m

Q.50: A rectangular carpet has an area of 120 sq. meters and a perimeter cf 46 meters. The length of its diagonal is:
A. 15 m
B. 16m
C. **17 m**
D. 20m

Q.51: A took 15 seconds to cross a rectangular field diagonally walking at the rate of 52 m/min and B took the same time to cross the same field along its sides walking at the rate of 68 m/min. The area of the field is:
A. 30 m2
B. 40 m2
C. 50 m2
D. **60 m2**

Q.52: The ratio between the length and the breadth of a rectangular field is 3.:2. If only the length is increased by 5 meters, the new area of the field will be 2600 sq. meters. What is the breadth of the rectangular field?
A. **40 meters**
B. 60 meters
C. 65 meters
D. Cannot be determined

Q.53: The length of a blackboard is 8 cm more than its breadth. If the length is increased by 7 cm and the breadth is decreased by 4 cm, the area remains the same. The length and breadth of the blackboard (in cm) will be:
A. **28, 20**
B. 34, 26
C. 40, 32
D. 56, 48

Q.54: If the length and breadth of a rectangular room are each increased by 1 m, then the area of the floor is increased by 21 sq. m. If the length is increased by 1 m and the breadth is decreased by 1 m, then the area is decreased by 5 sq. m. The perimeter of the floor is:
A. 30 m
B. 32 m
C. 36 m
D. **40 m**

Q.55: A typist uses a sheet measuring 20 cm by 30 cm lengthwise. If a margin of 2 cm is left on each side and a 3 cm margin on top and bottom, then percent of the page used for typing is:
A. 40
B. 60
C. **64**
D. 72

Q.56: 2 meters broad pathway is to be constructed around a rectangular plot on the inside. The area of the Plot is 96 sq. m. The rate of construction is Rs.50 per square meter. Find the total cost of the construction.
A. Rs.2400
B. Rs.4000
C. Rs.4800
D. **Data inadequate**

Q.57: Within a rectangular garden 10 m wide and 40 m long, we wish to pave a walk around the border Uniform width so as to leave an area of 96 m for flowers. How wide should the walk be?
A. 1m
B. **2m**
C. 2.1 m
D. 2.5 m

Q.58: A rectangular lawn 55 m by 35 m has two roads each 4 m wide running in the middle of it, one parallel to the length and the other parallel to the breadth. The cost of graveling the roads at 75 paise per sq. meter is:
A. Rs.254.50
B. **Rs.258**
C. Rs.262.50
D. Rs.270

Q.59: A rectangular park 60 m long and 40 m wide has two concrete crossroads running in the middle of the Part and rest of the park has been used as a lawn. The area of the lawn is 2109 sq. m, then what is the width of the road?
A. 2.91 m
B. **3m**
C. 5.82 m
D. 7m

Q.60: T he length and breadth of the floor of the room are 20 feet and 10 feet respectively. Square tiles of 2 feet length of different colo•urs are to be laid on the floor. Black tiles are laid in the first row on all sides. If White tiles are laid in the one-third of the remaining and blue tiles in the rest, how many blue tiles will be there?
A. **16**
B. 24
C. 32
D. 48

Q.61: The cost Of fencing a square field @ Rs.20 per meter is Rs.10080. How much will it cost to lay a three-meter Wide pavement along the fencing inside the field @ Rs.50 per sq. meter?
A. Rs.37350
B. **Rs.73800**
C. Rs.77400
D. Rs.90800

Q.62: Find the angle between the hour hand and the minute hand of a clock when the time is 3.25:
A. **47**
B. 45
C. 44
D. 43

Q.63: A Park Square in shape has a 3-meter wide road inside it running along its sides. The area occupied by the road is 1764 square meters. What is the perimeter along the outer edge of the road?
A. 576 meters
B. **600 meters**
C. 640 meters
D. Data inadequate

Q.64: The length of a rectangle is 20% more than its breadth. What will be the ratio of the area of the rectangle to that of a square whose side is equal to the breadth of the rectangle?
A. 2:1
B. 5:6
C. **6:5**
D. Data inadequate

Q.65: The length of one pair of opposite sides of a square is increased by 5 cm on each side, the ratio of the length and the breadth of the newly formed rectangle becomes 3 : 2. What is the area of the original square?
A. 25 sq. cm
B. 81 sq. cm
C. **100 sq. cm**
D. 225 sq. cm

Q.66: A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:
A. 150°
B. **155°**
C. 160°
D. 165°

Q.67: The difference of the areas of squares drawn on two line segments of different lengths is 32 sq. cm. Find the length of the greater line segment if one is longer than the other by 2 cm.
A. 7 cm
B. **9cm**
C. 11cm
D. 16 cm

Q.68: The dimensions of a room are 10 m x 5 m. There are 2 doors and 3 windows in the room. The dimensions of the doors are 1 m x 3 m. One window is of side 2 m x 1.5 m and the other two windows are of size 1 mx 1.5 m. The cost of painting the walls at Rs.3 perm is:
A. **Rs.474**
B. Rs.578.50
C. Rs.684
D. Rs.894

Q.69: The cost of papering the four walls of a room is Rs.475. Each one of the length, breadth, and height of another room is double that of this room. The cost of papering the walls of this new room is:
A. Rs.712.50
B. Rs.950
C. Rs.1425
D. **Rs.1900**

Q.70: The ratio of height of a room to its semi-perimeter is 2 : 5. It costs Rs.260 to paper the walls of the room with paper 50 cm wide at Rs.2 per meter allowing an area of 15 sq. m for doors and windows. The height of the room is:
A. 2.6 m
B. 3.9 m
C. **4m**
D. 4.2 m

Q.71: The perimeter of a triangle, is 30 cm and its area is 30 cm If the largest side measures 13 cm, then what is the length of the smallest side of the triangle?
A. 3cm
B. 4 cm
C. **5 cm**
D. 6 cm

Q.72: What will be the ratio between the area of a rectangle and the area of a triangle with one of the sides of the rectangle as base and a vertex on the opposite side of the rectangle?
A. 1:2
B. **2:1**
C. 3:1
D. Date inadequate

Q.73: One diagonal of a parallelogram is 70 cm and the perpendicular distance of this diagonal from either of the outlying vertices is 27 cm. The area of the parallelogram (in sq. cm) is:
A. 1800
B. 1836
C. **1890**
D. 1980

Q.74: f a parallelogram with area P, a rectangle with area R and a triangle with area T are all constructed the same base and all have the same altitude, then which of the following statements is false?
A. P=R
B. **P +T=2R**
C. P = 2T
D. T = (1/2) R

Q.75: The area of a field in the shape of a trapezium measures 1440 m2. The perpendicular distance between its parallel sides is 24 m. If the ratio of the parallel sides is 5 : 3, the length of the longer parallel side is:
A. 45 m
B. 60 m
C. **75 m**
D. 120 m

Q.76: The cross-section of a canal is trapezium in shape. The canal is 12 m wide at the top and 8 m wide at the bottom. If the area of the cross-section is 840 sq. m. the depth of the canal is:
A. 8.75 m
B. 42 m
C. 63 m
D. **84 m**

Q.77: A cow is tethered in the middle of a field with a 14 feet long rope. If the cow grazes 100 sq. ft per days the approximately what time will be taken by the cow to graze the whole field?
A. 2 days
B. **6 days**
C. 18 days
D. 24 da s

Q.78: Wheels of diameters 7 cm and 14 cm start rolling simultaneously from X and Y, which are. 1980 cm apart, towards each other in opposite directions. Both of them make the same number of revolutions per second. If both of them meet after 10 seconds, the speed of the smaller wheel is:
A. 22 cm/sec
B. 44 cm/sec
C. **66 cm/sec**
D. 132 cm/sec

Q.79: The front wheels of a wagon are 2TT feet in circumference and the rear wheels are 37 feet in circumference. When the front wheels have made 10 more revolutions than the rear wheels, how many feet has the wagon traveled?
A. 301T
B. **60TT**
C. 90Tt
D. 150TT

Q.80: Four equal-sized maximum circular plates are cut off from a square paper sheet of area 784 The circumference of each plate is:
A. 22 cm
B. **44 cm**
C. 66 cm
D. 88 cm

Q.81: ABC is a right-angled triangle with right angle at B. If the semi-circle on AB with AB as diameter encloses an area of 81 sq. cm and the semi-circle on BC with BC as diameter encloses an area of 36 sq.cm.then thg area of the semi-circle on AC with A as diameter will be:
A. **117cm2**
B. 25cm2
C. 50cm2
D. 100cm2

Q.82: A can go around a circular path 8 times in 40 minutes. If the diameter of the circle is increased to 10 times the original diameter, then the time required by A to go around the new path once, traveling at the same speed as before, is:
A. 20 min
B. 25 min
C. **50 min**
D. 100 min

Q.83: A housing society has been allotted a square piece of land measuring 2550.25 sq. m. What is the side of the plot?
A. 50.25 sq. m
B. **50.5 m**
C. 50.65 m
D. None of these

Q.84: The cost of cultivating a square field at the rate of Rs.135 per hectare is Rs.1215 The cost of putting a fence around it at the rate of 75 paisa per meter would be:
A. Rs.360
B. Rs.810
C. **Rs.900**
D. Rs.1800

Q.85: If the true discount on a certain sum due 6 months hence at 15% is Rs. 120, what is the banker's discount on the same sum for the same time and at the same rate?
A. **Rs.129**
B. Rs.133
C. Rs.136
D. Rs.140

Q.86: An accurate clock shows 8 0'clock in the morning. Through how many degrees will the hour rotate when the clock shows 2 0'clock in the afternoon?
A. 140°
B. 160°°
C. **180°°**
D. 190°

Q.87: At 3:40, the hour hand and the minute hand of a clock from an angle of:
A. 100°
B. 120°
C. **130°**
D. 140°

Q.88: The angle between the minute hand and the hour hand of a clock when the time is 8:30 is:
A. 0°
B. **10°**
C. 13°
D. 15°

Q.89: At what angle the hands of a clock are included at 15 minutes past 5?
A. 50
B. 57
C. **67**
D. 70

Q.90: The reflex angle between the hands of a clock at 10.25 is:
A. 80
B. 86
C. **97**
D. 100°

Q.91: How many times do the hands of a clock coincide in a day?
A. 18
B. **22**
C. 25
D. 24

Q.92: The banker's discount on Rs. 1800 at 12% per annum is equal to the true discount on Rs .1872 for the same time at the same rate. Find the time.
A. 2 months
B. **4 months**
C. 6 months
D. 7 months

Q.93: The true discount on a bill of Rs.540 is Rs 90. The banker's discount is:
A. Rs.90
B. Rs 100
C. **Rs.108**
D. Rs.150

Q.94: The present worth of a certain bill due sometime hence is Rs.800 and the true discount is Rs.36 The banker's discount is:
A. **Rs.37.62**
B. Rs.40.50
C. Rs.42.50
D. Rs.45

Q.95: How many times in a day, the hands of a clock are straight?
A. 22
B. 32
C. **44**
D. 24

Q.96: The present worth of a certain sum due sometime hence is Rs. 1600 and the true discount is Rs.160. The banker's gain is:
A. Rs.10
B. **Rs.16**
C. Rs.18
D. Rs.22

Q.97: The banker's gain of a certain sum due 2 years hence at 10% per annum is Rs.24. The present worth is:
A. **Rs.600**
B. Rs.700
C. Rs.800
D. Rs.900

Q.98: How many times are the hands of a clock at right angle in a day?
A. 32
B. 37
C. **44**
D. 24

Q.99: The banker's gain on a bill due one year hence at 12% per annum is Rs.6. The true discount is:
A. **Rs.50**
B. Rs.60
C. Rs.70
D. Rs.85

Q.100: The banker's discount on a bill due 4 months hence at 15% is Rs.420. The true discount is:
A. Rs.300
B. **Rsaoo**
C. Rs.500
D. 600

Math Model Paper 4
(Answer Key)

1. **A**	2. **B**	3. **C**	4. **A**	5. **A**	6. **C**	7. **C**	8. **B**	9. **B**	10. **B**
11. **C**	12. **A**	13. **C**	14. **B**	15. **A**	16. **B**	17. **C**	18. **A**	19. **B**	20. **A**
21. **B**	22. **A**	23. **A**	24. **C**	25. **C**	26. **B**	27. **C**	28. **C**	29. **D**	30. **B**
31. **A**	32. **A**	33. **B**	34. **C**	35. **B**	36. **A**	37. **D**	38. **B**	39. **C**	40. **B**
41. **C**	42. **B**	43. **D**	44. **B**	45. **B**	46. **D**	47. **A**	48. **B**	49. **B**	50. **C**
51. **D**	52. **A**	53. **A**	54. **D**	55. **C**	56. **D**	57. **B**	58. **B**	59. **B**	60. **A**
61. **B**	62. **A**	63. **B**	64. **C**	65. **C**	66. **B**	67. **B**	68. **A**	69. **D**	70. **C**
71. **C**	72. **B**	73. **C**	74. **B**	75. **C**	76. **D**	77. **B**	78. **C**	79. **B**	80. **B**
81. **A**	82. **C**	83. **B**	84. **C**	85. **A**	86. **C**	87. **C**	88. **B**	89. **C**	90. **C**
91. **B**	92. **B**	93. **C**	94. **A**	95. **C**	96. **B**	97. **A**	98. **C**	99. **A**	100. **B**