MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

MENSURATION-1

Others

1. Find the area, in square metres, of a rectangle whose (i) Length = $4.5\,m$, breadth =

1. $6\ m$ (ii) Length = $720\ cm$, breadth = $25\ cm$ (iii) Length = $3\ dm\ 6\ cm$, breadth = $2\ dm\ 9\ cm$.

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2. Find the area, in square centimetres, of a square whose side is $2.\ 4\ dm$ (ii) $20\ mm$

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3. Find the area, in hectare, of a field whose length is 240 m and breadth $110\ m$.

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4. Find the area of a rectangular plot one side of which is 48 m and its diagonal 50 m.

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5. The length and the breadth of a rectangular piece of land are 500 m and 300 m respectively. Find (i) its area (ii) the cost of the land, if 1 m2 of the land costs Rs 10,000.

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6. Find the area of a square park whose perimeter is 320 m.

A. 6500 sq.m

B. 6400 sq. m

C. 6800 sq.m

D. 6700 sq.m

Answer: B

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7. Find the breadth of a rectangular plot of land, if its area is 440 meter square and length is 22 m.

A. 30 m

B. 20 m

C. 40 m

D. 50 m

Answer: B

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8. The perimeter of a rectangular sheet is 100 cm. If the length is 35 cm, find its breadth. Also find the area

A. 525 cm

B. 625 cm

C. 425 cm

D. 825 cm

Answer: A

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9. The area of a square and a rectangle are equal.If the side of the square is 40 cm and the breadth of the rectangle is 25 cm,find the

length of the rectangle. Also,find the perimeter of the rectangle.

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10. Anu wants to fence the garden in front of her house (Fig 11.5), on three sides with lengths 20 m, 12 m and 12 m. Find the cost of fencing at the rate of Rs 150 per metre

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11. A wire is in the shape of a square of side 10 cm. If the wire is rebent into a rectangle of length 12 cm, find its breadth. Which encloses more area, the square or the rectangle?

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12. A door of length 1 m and breadth 0.5 m is on a wall. The length of the wall is 4.5 m and the breadth is 3.6 m as shown in Fig. 5. Find

the cost of white washing the wall if the rate of white washing the wall is Rs 20 per m^2.

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13. A wall $4.84\,m$ long and $3.1\,m$ high is covered with rectangular tiles of size $22\,cm$ by $10\,cm$. Find the total cost of the tiles at the rate of Rs. 1.50 per tile.

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14. A black board of sides $5\,m\,20\,cm$ and $3\,m\,40\,cm$ is to be painted, find the cost at the rate of $Rs\cdot 12$ per square metre.

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15. Find the height of the wall whose length is $4\,m$ and which can be covered by 2400 tiles of size $25\,cm$ by $20\,cm$.

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16. Find the area, in square meters, of a rectangle whose Length = 5.5 m, breadth = 2.4 m Length = 180 cm, breadth = 150 cm

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17. Find the area, in square centimetres, of a square whose side is (i) 2.6 cm (ii) 1.2 dm

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18. Find in square metres, the area of a square of side 16.5 dam.

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19. Find the area of a rectangular field in acres whose sides are: 200 m and 125 m (ii) 75 m 5 dm and 120 m

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20. Find the area of a rectangular field in hectares whose sides are:

(a) 125 m and 400 m

(a) 75 m 5 dm and 120 m

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21. A door of dimensions $3m \times 2m$ is on the wall of dimension $10m \times 10m$. Find the cost of painting the wall if rate of painting is Rs 2. 50 $per\ sq{\cdot}metre$.

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22. A wire is in the shape of a rectangle. Its length is 40 cm and breadth is 22 cm. If the same wire is rebent in the shape of a square, what will be the measure of each side? Also find which shape encloses more area?

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23. How many square metres of glass will be required for a window, which has 12 panes,

each pane measuring 25 cm by 16 cm?

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24. A marble tile measures $10\ cm\ \times\ 12\ cm$ How many tiles will be required to cover a wall of size $3\ m\ \times\ 4\ m\ ?$ Also, find the total cost of the tiles at the rate of Rs 2 per tile.

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25. A table top is 9 dm 5 cm long 6 dm 5 cm broad. What will be the cost to polish it at the rate of 20 paise per square centimetre?

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26. A room is 9.68 m long and 6.2 m wide. Its floor is to be covered with rectangular tiles of size 22 cm by 10 cm. Find the total cost of the tiles at the rate of Rs 2.50 per tile.

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27. One side of a square field is 179 m. Find the cost of raising a lawn on the field at the rate of Rs 1.50 per square metre.

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28. A rectangular field is measured 290 m by 210 m. How long will it take for a girl to go two times round the field, if she walks at the rate of $1.5\ m/sec$?

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29. A corridor of a school is 8 m long and 6 m wide. It is to be covered with canvas sheets. If the available canvas sheets have the size $2m \times 1m$, find the cost of canvas sheets required to cover the corridor at the rate of Rs 8 per sheet.

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30. The length and breadth of a playground are 62 m 60 m and 25 m 40 m respectively. Find the cost of turfing it at Rs 2.50 per square metre.

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31. A lane 180 m long and 5 m wide is to be paved with bricks of length 20 cm and breadth 15 cm. Find the cost of bricks that are required, at the rate of Rs 750 per thousand.

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32. How many envelopes can be made out of a sheet of paper 125 cm by 85 cm; supposing one envelope requires a piece of paper of size 17 cm by 5 cm?

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33. The width of a cloth is 170 cm. Calculate the length of the cloth required to make 25

diapers, if each diaper requires a piece of cloth of size 50 cm by 17 cm.

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34. The carpet for a room 6.6 m by 5.6 m costs Rs 3960 and it was made from a roll 70 cm wide. Find the cost of the carpet per metre.

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35. A room is 9 m long, 8 m broad and 6.5 m high. It has one door of dimensions $2m \times 1.5m$ and three windows each of dimensions $1.5m \times 1m$. Find the cost of white washing the walls at Rs 3.80 per square metre.

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36. A hall 36 m long and 24 m broad allowing $80\, m^2$ for doors and windows, the cost of

papering the walls at Rs 8.40 per m^2 is Rs 9408. Find the height of the hall.

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37. A rectangular grassy lawn measuring 30m by 28 m is to be surrounded externally by a path which is 2 m wide. Find the cost of levelling the path at the rate of Rs 5 per square metre.

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38. A rectangular park is 45 m long and 30 m wide. A path 2.5 m wide is constructed outside the park. Find the area of the path.

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39. A verandah 1.25 m wide is constructed all along the outside of a room 5.5 m long and 4 m wide. Find the area of the verandah the cost of cementing the floor of the varandah at the rate of Rs 200 per m^2 .

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40. A path 1 m wide is built along the border and inside a square garden of side 30 m. Find: (i) the area of the path (ii) the cost of planting grass in the remaining portion of the garden at the rate of Rs  40{\rm</p> <div class=

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41. A grassy plot is $80\,m \times 60\,m$. two cross paths each 4 m wide are constructed at right

angles through the centre of the field, such that each path is parallel to one of the sides of the rectangles. Find the total area used path. Also, find the cost of gravelling them at Rs. 5 per square metre.

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42. A rectangular lawn is 30 m by 20 m. It has two roads each 2 m wide running in the middle of it one parallel to the length and the other

parallel to the breadth. Find the area of the roads.

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43. A table cover, $4\,m \times 2\,m$, is spread on a meeting table. If 25 cm of the table cover is hanging all around the table, find the cost of polishing the table top at Rs. 2.25 per square metre.

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44. The length and breadth of a park are in the ratio $2:1$ and its perimeter is 240 m. a path of 2 m wide runs inside it, along boundary. Find the cost of paving the path at Rs.3 per m^2 .

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45. A rectangular grassy lawn measuring 30m by 28 m is to be surrounded externally by a path which is 2 m wide. Find the cost of levelling the path at the rate of Rs 5 per square metre.

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46. One metre wide path is built inside a square park of side 30 m along its sides. The remaining part of the park is covered by grass. If the total cost of covering by grass is Rs 1176, find the rate per square metre at which the park is covered by the grass.

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47. Through a rectangular field of sides $90\ m \times 60\ m$, two roads are constructed which are parallel to the sides and cut each other at right angles through the centre of the field. If the width of the roads is 3 m, find the total area covered by the two roads.

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48. From a rectangular sheet of tin, of size 100 cm by 80 cm, are cut four squares of side 10 cm

from each corner. Find the area of the remaining sheet.

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49. A picture is painted on a cardboard 8 cm long and 5 cm wide such that there is a margin of 1.5 cm along each of its sides. Find the total area of the margin.

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50. Rakesh has a rectangular field of length 80 m and breadth 60 m. In it, he wants to make a garden 10 m long and 4 m broad at one of the corners and at another corner, he wants to grow flowers in two floor-beds each of size 4 m by 1.5 m. In the remaining part of the field, he wants to apply manures. Find the cost of applying the manures at the rate of Rs 300 per area.

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51. Each side of a square flower bed is 2 m 80 cm long. It is extended by digging a strip 30 cm wide all around it. Find the area of the enlarged flower bed and also the increase in the area of the flower bed.

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52. A room 5 m long and 4 m wide is surrounded by a verandah. If the verandah occupies an area of $22m^2$, find the width of the varandah.

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53. A square lawn has a 2 m wide path surrounding it. If the area of the path is 136 m^2 , find the area of the lawn.

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54. A poster of size 10 cm by 8 cm is pasted on a sheet of cardboard such that there is a margin of width 1.75 cm along each side of the poster. Find (a) The total area of the margin (b) The cost

of the cardboard used at the rate of Re 0.60 per cm^2

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55. In the given figure a rectangular field is 50 m by 40 m. It has two roads through its centre, running parallel to its sides. The widths of the longer and shorter roads are 1.8 m and 2.5 m respectively. Find the area of the roads and the area of the remaining portion of the field.

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56. There is a rectangular field of size $94\,m \times 32\,m$. Three roads each of 2 m width pass through the field such that two roads are parallel to the breadth of the field and the third is parallel to the length. Calculate: (a) Area of the field covered by the three roads (b) Area of the field not covered by the roads.

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57. A school has a hall which is 22 m long and 15.5 m broad. A carpet is laid inside the hall leaving all around a margin of 75 cm from the walls. Find the area of the carpet and the area of the strip left uncovered. If the width of the carpet is 82 cm, find the cost at the rate of Rs 18 per metre.

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58. Two cross roads, each of width 5 m, run at right angles through the centre of a rectangular park of length 70 m and breadth 45 m and parallel to its sides. Find the area of the roads. Also find the cost of constructing the roads at the rate of

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59. The length and breadth of a rectangular park are in the ratio $5:2$. A 2.5 m wide path running

all around the outside the park has an area 305 m^2. Find the dimensions of the park.

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60. A square lawn is surrounded by a path 2.5 m wide. If the area of the path is 165 m^2 , find the area of the lawn.

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61. Find the area of a parallelogram with base 5 cm and altitude 4.2 cm.

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62. Find the area in square metres of the parallelogram whose base and altitudes are as under:

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63. Find the altitude of parallelogram whose area is 2.25 m^2 and base is 25 dm.

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64. The side of a rhombus is 6.5 cm and its altitude is 4 cm. Find its area.

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65. The area of a rhombus is $72cm^2$. If its perimeter is 32 cm, find its altitude.

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66. In the given figure, $ABCD$ is a parallelogram $CM \perp AB$ and $BL \perp AD$.

(a) If $AB = 16\,cm,\ AD = 12\,cm,$ $CM = 10\,cm,$ find BL

(b) If $AD = 10cm,\ CM = 8cm,\ BL = 12\,cm,$ find AB .

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67. A field in the form a parallelogram has base 15 dam and altitude 8 dam. Find the cost of watering the field at the rate of 50 paise square metre.

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68. The area of a parallelogram is $338m^2$. If its altitude is twice the corresponding base determine the base and the altitude.

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69. The base of a parallelogram is thrice its height . If the area is 867 cm^2 find the base and height of the parallelogram.

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70. Find the area of a rhombus having each side equal to 13 cm and one of whose diagonals is 24 cm.

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71. If the area of a rhombus is $24cm^2$ and one of its diagonals is 4 cm, find the perimeter of the rhombus.

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72. If the area of a rhombus be $48\ cm^2$ and one of its diagonals is 6 cm, find its altitude.

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73. If the side of a square is 4 m and it is converted into a rhombus whose major diagonal is 6 m, find the other diagonal and the area of the rhombus.

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74. Find the area of a parallelogram with base 8 cm and altitude 4.5 cm.

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75. Find the area in square metres of the parallelogram whose base and altitudes are as under:

(a) Base $= 15\,dm,$ altitude $= 6.4\,dm$

(b) Base $= 1\,m\,40\,cm,$ altitude $= 60\,cm$

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76. Find the altitude of a parallelogram whose area is $54\,dm^2$ and base is $12\,dm.$

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77. The area of a rhombus is $28\, m^2$. If its perimeter be 28 m, find its altitude.

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78. In Figure, $ABCD$ is a parallelogram, $DL \perp AB$ and $DM \perp BC$. If $AB = 18\, cm$, $BC = 12\, cm$ and $DM = 9.3\, cm$, find DL.

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79. The longer side of a parallelogram is 54 cm and the corresponding altitude is 16 cm. If the altitude corresponding to the shorter side is 24 cm, find the length of the shorter side.

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80. In Fig. 21, $ABCD$ is a parallelogram, $DL \perp AB$. If $AB = 20\,cm$, $AD = 13\,cm$ and area of the parallelogram is 100 cm^2 find AL.

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81. In Fig. 21, if $AB = 35\,cm,\ AD = 20\,cm$ and area of the parallelogram is 560 cm^2 find LB.

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82. The adjacent sides of a parallelogram are 10 m and 8 m. If the distance between the longer sides is 4 m, find the distance between the shorter sides.

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83. The base of a parallelogram is twice its height. If its area is $512\ cm^2$, then the length of base is

(a)16 cm

(b) 32 cm

(c)48 cm

(d) 64 cm

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84. Find the area of a rhombus having each side equal to 15 cm and one of whose diagonals is 24 cm.

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85. Find the area of a rhombus, each side of which measures 20 cm and one of whose diagonals is 24 cm.

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86. The length of a side of a square field is 4 m. What will be the altitude of the rhombus, if the area of the rhombus is equal to the square field and one of its diagonals is 2 m?

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87. Two sides of a parallelogram are 20 cm and 25 cm. If the altitude corresponding to the sides of length 25 cm is 10 cm, find the altitude corresponding to the other pair of sides.

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88. The base and corresponding altitude of a parallelogram are 10 cm and 12 cm respectively. If the other altitude is 8 cm, find the length of the other pair of parallel sides.

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89. A floral design on a floor is made up of 16 tiles which are triangular, the sides of the triangle being 9 cm, 28 cm and 35 cm (see Fig.

12.18). Find the cost of polishing the tiles at the rate of $50p \; per \; cm^2$.

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90. Find the area in square centimetres of the triangle whose base and altitude are as under: (i) Base = 15 cm, altitude = 8 cm (ii) Base = 1.5 m, altitude = 0.8 m

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91. Find the altitude of a triangle whose base is 20 cm and area is 150 cm^2 .

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92. The area of a right triangle is 50 m^2 . If one of the legs is 20 m, find the length of the other leg.

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93. Find the area of an isosceles right triangle. If one of the equal sides is 20 cm long.

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94. The area of a triangle is equal to that of a square whose each side measures 60 metres. Find the side of the triangle whose corresponding altitude is 90 metres.

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95. A field in the form of a parallelogram has one of its diagonals 42 m long the perpendicular distance of this diagonal from either of the outlying vertices is 10.8 m. Find the area of the field.

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96. Find the area of an equilateral triangle having each side 4 cm.

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97. Find the area of an isosceles triangle having the base 6 cm and the length of each equal side 5 cm.

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98. Find the area of a right angled triangle with base $BC = 7\,cm$ and hypotenuse $AC = 25\,cm$.

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99. The base of an isosceles triangle is 12 cm and its perimeter is 32 cm. Find the area of the triangle.

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100. Triangle ABC is right angled at $A\dot{A}D$ is perpendicular to BC. If $AB = 5\,cm,\ BC = 13\,cm$ and $AC = 12\,cm$. Find the area of ABC. Also, find the length of AD.

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101. Triangle ABC is isosceles with $AB = AC = 7.5\,cm$ *and* $BC = 9\,cm$. The height from A to BC i.e, AD is 6 cm. Find the area of ABC. what will be the height from C to AB?

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102. Find the area in square centimetres of a triangle whose base and altitude are as follows:

base =18 cm, altitude = 3.5 cm base = 8 dm, altitude =15 cm

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103. Find the altitude of a triangle whose area is 42 cm^2 and base is 12 cm.

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104. The area of a triangle is 50 cm^2 If the altitude is 8 cm, what is its base?

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105. Find the area of a right angled triangle whose sides containing the right angle are of lengths 20.8 m and 14.7 m.

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106. The area of a triangle, whose base and the corresponding altitude are 15 cm and 7 cm, is equal to area of a right triangle whose one of

the sides containing the right angle is 10.5 cm. Find the other side of this triangle.

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107. A rectangular field is 48 m long and 20 m wide. How many right triangular flower beds, whose sides containing the right angle measure 12 m and 5 m can be laid in this field?

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108. In Figure, $ABCD$ is a quadrilateral in which diagonal $AC = 84\,cm$; $DL \perp AC,\ BM \perp AC,\ DL = 16.5\,cm$ and $BM = 12\,cm$. Find the area of quadrilateral $ABCD$.

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109. Find the area of the quadrilateral $ABCD$ given in Figure. The diagonals AC and BD

measure 48 m and 32 m respectively and are perpendicular to each other.

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110. In Fig 31, $ABCD$ is a rectangle with dimensions 32 m by 18 m. ADE is a triangle such that $EF \perp AD$ and $EF = 14\,cm$. Calculate the area of the shaded region.

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111. In Fig. 32, $ABCD$ is a rectangle of length $AB = 40\,cm$ and breadth $BC = 25\,cm$. If P, Q, R, S be the mid-points of the sides AB, BC, CD and DA respectively, find the area of the shaded region.

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112. Calculate the area of the quadrilateral $ABCD$ as shown in Fig.33, given that

$BD = 42\,cm$, $AC = 28\,cm$, $OD = 12\,cm$ and $AC \perp BD$.

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113. Find the area of a figure formed by a square of side 8 cm and an isosceles triangle with base as one side of the square and perimeter as 18 cm.

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114. Calculate the area of quadrilateral field $ABCD$ as shown in Fig.35, by dividing it into a rectangle and a triangle.

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115. Calculate the area of the pentagon $ABCDE$, where $AB = AE$ and with dimensions as shown in Fig.36.

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116. The base of a triangular field is three times its altitude. If the cost of cultivating the field at Rs 24.60 per hectare is Rs 332.10, find its base and height.

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117. A wall is 4.5 m long and 3 m high. It has two equal windows, each having form and dimensions as shown in Fig.37. Find the cost of painting the wall (leaving windows) at the rate of Rs 15 per m^2 .

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118. If the area of a square is $225\, m^2$, then its perimeter is

(a)15 m

(b) $60\, m$

(c)$225\, m$

(d) $30\, m$

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119. If the perimeter of a square is 16 cm, then its area is

(a)4 cm^2

(b) 8 cm^2

(c)16 cm^2

(d) 12 cm^2

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120. The length of a rectangle is 8 cm and its area is 48 cm^2. The perimeter of the rectangle is

(a)14 cm

(b) 24 cm

(c)12 cm

(d) 28 cm

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121. The area of a square and that of a square drawn on its diagonal are in the ratio (a) $1:\sqrt{2}$ (b) $1:2$ (c) $1:3$ (d) $1:4$

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122. The length of the diagonal of a square is d units. The area of the square is (a)d^2 (b) $\frac{1}{2}d^2$ (c) $\frac{1}{4}d^2$ (d) $2d^2$

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123. The ratio of the areas of two squares, one having its diagonal double that of the other , is (a) $2:1$ (b) $3:1$ (C) $3:2$ (d) $4:1$

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124. If the ratio of the areas of two square is $9:1,$ then the ratio of their perimeters is (a) $2:1$ (b) $3:1$ (c) $3:2$ (d) $4:1$

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125. The ratio of the area of a square of side a and that of an equilateral triangle of side $a,$ is (a) $2:1$ (b) $2:\sqrt{3}$ (c) $4:3$ (d) $4:\sqrt{3}$

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126. On increasing each side of a square by 25%, the increase in area will be (a) 25% (b) 55% (c) 55.5% (d) 56.25%

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127. The area of a square is 50 cm^2 . The length of its diagonal is

(a)$5\sqrt{2}\,cm$

(b) 10 cm

(c) $10\sqrt{2}\ cm$

(d) $8\ cm$

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128. Each diagonal of a square is 14 cm. Its area is

(a) $196\ cm^2$

(b) $88\ cm^2$

(c) $98\ cm^2$

(d) $148\ cm^2$

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129. The area of a square field is $64\ m^2$. A path of uniform width is laid around and outside of it. If the area of the path is $17\ m^2$, then the width of the path is

(a)1 m

(b) 1.5 m

(c) 0.5 m

(d) 2 m

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130. A path 1 m wide is built inside a square park of side 30 m along its sides. Find the area of the path. Calculate the cost of constructing the path at the rate of Rs 70 per m^2

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131. The length and breadth of a rectangle are $(3x+4)cm$ and $(4x-13)cm$. If the perimeter of the rectangle is 94 cm, then $x=$

(a)4

(b) 8

(c)12

(d) 6

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132. In Fig.38, $ABCD$ and $PQRC$ are square such that $AD = 22\,cm$ and $PC = y\,cm$. If the area of the shaded region is $403\,cm^2$, then the value of y is (a)3 (b) 6 (c)9 (d) 10

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133. The length and breadth of a rectangle are $(3x + 4)cm$ and $(4x - 13)cm$ respectively. If the perimeter of the rectangle is 94 cm, then its area is

(a)$532\ cm^2$

(b) $512\ cm^2$

(c)$40\ cm$

(d) $120\ cm$

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134. If the length of a diagonal of a rectangle of length 16 cm is 20 cm, then its area is

(a)$192\ cm^2$

(b) $320\ cm^2$

(c)$160\ cm^2$

(d) $156\ cm^2$

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135. The area of a rectangle 144 cm long is same as that of a square of side 84 cm. The width of

the rectangle is

(a)7 cm

(b) 14 cm

(c)49 cm

(d) 28 cm

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136. The length and breadth of a rectangular field are in the ratio $5:3$ and its perimeter is $480\ m$. The area of the field is (a) $7200\ m^2$ (b) $13500\ m^2$ (c)$15000\ m^2$ (d) $54000\ m^2$

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137. The length of a rectangular field is thrice its breadth and its perimeter is 240 m. The length of the field is

(a)30 m

(b)120 m

(c)90 m

(d)80 m

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138. If the diagonal of a rectangle is 17 cm and its perimeter is 46 cm, the area of the rectangle is

(a)$100cm^2$ (b) $110cm^2$ (c)$120\ cm^2$ (d) $240\ cm^2$

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139. The length and breadth of a rectangular field are 4 m and 3 m respectively. The field is divided into two parts by fencing diagonally. The cost of fencing at the rate of Rs 10 per metre is

(a)Rs 50

(b) Rs 30

(c)Rs 190

(d) Rs 240

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140. The area of a parallelogram is $100\,cm^2$. If the base is 25 cm, then the corresponding height is

(a)4 cm

(b) 6 cm

(c)10 cm

(d) 5 cm

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141. The base of a parallelogram is twice its height. If its area is $512\ cm^2$, then the length of base is (a)16 cm (b) 32 cm (c)48 cm (d) 64 cm

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142. The lengths of the diagonals of a rhombus are 36 cm and 22.5 cm. Its area is (a)810 cm^2 (b) 405 cm^2 (c)202. 5 cm^2 (d) 1620 cm^2

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143. The length of the diagonals of a rhombus is 16 cm. If its area is 96 cm^2, then the length of other diagonal is (a)6 cm (b) 8 cm (c)10 cm (d) 18 cm

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144. The lengths of the diagonals of a rhombus are 8 cm and 14 cm. The area of one of the 4 triangle formed by the diagonal is

(a)12 cm^2

(b) 8 cm^2

(c)16 cm^2

(d) 14 cm^2

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145. The length of a rectangle is 8 cm more than the breadth. If the perimeter of the rectangle is 80 cm, then the length of the rectangle is

(a)16 cm

(b) 24 cm

(c)28 cm

(d) 18 cm

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146. The length of a rectangle is 8 cm more than the breadth. If the perimeter of the rectangle is 80 cm, then the area of the rectangle is (a)192 cm^2 (b) 364 cm^2 (c)384 cm^2 (d) 382 cm^2

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147. The area of a rhombus is 119 cm^2 and its perimeter is 56 cm. The height of the rhombus is

(a)7.5 cm

(b) 6.5 cm

(c)8.5 cm

(d) 9.5 cm

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148. Each side of an equilateral triangle is 8 cm. Its area is

(a)$16\sqrt{3}\ cm^2$

(b) $32\sqrt{3}\ cm^2$

(c)$24\sqrt{3}\ cm^2$

(d) $8\sqrt{3}\ cm^2$

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149. The area of an equilateral triangle is $4\sqrt{3}\,cm^2$. The length of each of its side is

(a)3 cm

(b) 4 cm

(c)$2\sqrt{3}\,cm$

(d) $\frac{\sqrt{3}}{2}\,cm$

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150. The height of an equilateral triangle is $\sqrt{6}\,cm$. Its area is

(a) $3\sqrt{3}\,cm^2$

(b) $2\sqrt{3}\,cm^2$

(c) $2\sqrt{2}\,cm^2$

(d) $6\sqrt{2}\,cm^2$

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151. If A is the area an equilateral triangle of height h, then

(a) $A = \sqrt{3}\,h^2$

(b) $\sqrt{3}A = h$

(c) $\sqrt{3}A = h^2$

(d) $3A = h^2$

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152. If area of an equilateral triangle is $3\sqrt{3}\,cm^2$, then its height is (a)3 cm (b) $\sqrt{3}\,cm$ (c)6 cm (d) $2\sqrt{3}\,cm$

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153. The area of a rhombus is $144\ cm^2$ and one of its diagonal is double the other. The length of the longer diagonal is

(a)12 cm

(b) 16 cm

(c)18 cm

(d) 24 cm

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154. In Fig.39, the value of k is (a) $\frac{77}{8}$ (b) $\frac{73}{8}$ (c) $\frac{71}{8}$ (d) $\frac{75}{8}$

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155. In Fig.40, $ABCD$ is a parallelogram of area 144 cm^2, the value of x is (a) 8 (b) 6 (c) 9 (d) 10

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156. Find the altitude of a parallelogram whose area is $54\ dm^2$ and base is $12\ dm$.

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157. In Fig.42, $ABCD$ is a parallelogram in which $AD = 21\ cm,\ DH = 18\ cm$ and $DK = 27\ cm$. The length of side AB is (a) 63 cm (b) 63.5 cm (c) 31.5 cm (d) 31 cm

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158. In Fig.42, $ABCD$ is a parallelogram in which $AD = 21\,cm,\ DH = 18\,cm$ and $DK = 27\,cm$. The perimeter of the parallelogram is (a) 105 cm (b) 84.5 cm (c) 169 cm (d) 52.5 cm

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159. Find the area of a parallelogram whose base is 8cm and altitude is 4.5cm

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160. A piece of wire of length 12 cm is bent to form a square. The area of the square is

(a)36 cm^2

(b) 144 cm^2

(c)9 cm^2

(d) 12 cm^2

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161. The area of a right isosceles triangle whose hypotenuse is $6\sqrt{2}\,cm$ is (a) 12 cm^2 (b) 15 cm^2 12 cm^2 (d) 18 cm^2

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162. A wire is in the form of a square of side $18\ m$. It is bent in the form of a rectangle, whose length and breadth are in the ratio $3:1$. The area of the rectangle is

(a) $81\ m^2$

(b) $243\ m^2$

(c) $144\ m^2$

(d) $324\ m^2$

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