1    $0.\overline{123}$ equal to:

Ans: $\dfrac{41}{333}$

2   Each interior angle of a regular polygon is three times its exterior angle, then the number of sides of the regular polygon is:

Ans: 8

3   If $x = 3 + 2\sqrt{2}$, then the value of $\left(\sqrt{x} - \dfrac{1}{\sqrt{x}}\right)$ is

Ans: 2

4   The ratio of the radii of two circles is $1:2$, then the ratio of their area is:

Ans: $1:4$

5   The average weight of five persons sitting in a boat is 38 kg. The average weight of the boat and the persons sitting in the boat is 52 kg. What is the weight of boat?

Ans: 122 kg

6   A solid wooden toy is in the shape of a right circular cone mounted on a hemisphere. If the radius of the hemisphere is 4.2 cm and the total height of the toy is 10.2 cm, find the volume of the wooden toy (nearly).

Ans: 266 cm³

7   If A. B and C be the angles of a triangle, then of the following the incorrect relation is:

Ans. $\tan\left(\dfrac{A+B}{2}\right) = \sec\dfrac{C}{2}$

8   The allowances of an empolyee Constitute 165% of his basic Pay. If he receives ₹ 11.925 as gross salary, then his basic Pay is (in ₹):

Ans: 4500

9 14 If $a = 23$ and $b = -29$ then the value of $25a^2 + 40ab + 16b^2$ is:

Ans: 1

10 A cistern is normally filled in 8 hours but takes another 2 hours longer to fill because of a leak in its bottom. If the cistern is full, the leak will empty it in:

Ans: 40 hours

11 From four corners of a square sheet of side 4 cm, four pieces, each in the shape of arc of a circle with radius 2 cm. are cut out. The area of the remaining Portion is:
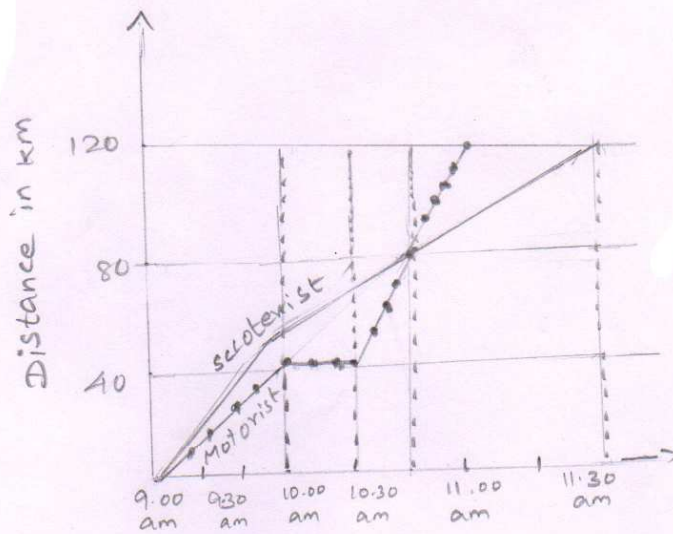
Ans: $(16 - 4\pi)$ sq. cm.

12   Each side of an equilateral triangle is 6 cm. Find its area.

Ans: $9\sqrt{3}$ sq. cm.

Directions   A motorist and a scooterist made a journey of 120 km at the same time and from the same place. The graph shows the progress of the journey made by each person, study the graph and answer the questions.

13   At what time did the motorist meet the scooterist?

Ans: 10.30 am

14   what was the speed of the scooterist during the journey? (in kmph)
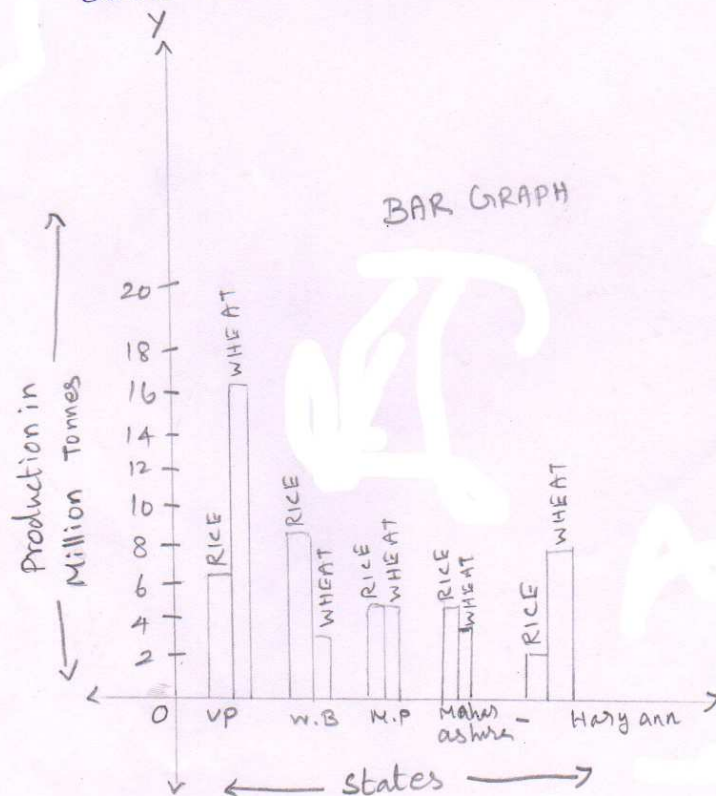
Ans: 48

15   The scooterist completes the journey in (hours):

Ans: $2\frac{1}{2}$

16   How far, from the start, did the motorist meet the scooterist?

Ans: 80

Directions _____ Read the bar graph given below and answer the questions.

BAR GRAPH

17. which of the above states is least producer of wheat?

Ans: W. B

18. which of the above states is the largest producer of rice?

Ans: W. B

19. what fraction of rice is produced by Haryana of the total production of rice by all the above states?

Ans: $\frac{1}{12}$

20. In which of the above states the total production of rice and wheat is the least?

Ans: Maharashtra

21. which of the above states is the largest producer of wheat?

Ans: U. P