

1. The price of a certain book is Rs 32. If a Rs 50 note is tendered to the trader after buying that book, what will be the balance received?

2. Express 2.5 kilometres in metres.. The price of a pencil is 4.5. What is the price of 6 such pencil?

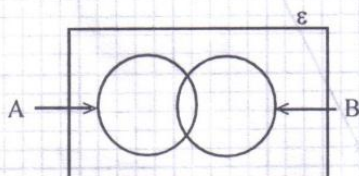
4. Write an equivalent fraction of $\frac{1}{3}$ 5. If $x + 2 = 5$ find the value of x

6. If the price of one kilogramme of suger is Rs 38, what is the price of 500 grammes of suger?

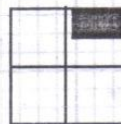
7. Find the value of x in the given diagram. 8. What is the mode of the following scores ? 3, 4, 4, 6, 7, 8

9. The capacity of the vessel shown in the diagram is 1 litre. According to the given information what is the volume of the liquid in the vessel?

10. Shade the region which indicates the set $A \cap B$ in the given venn diagram



11. What fraction of the whole diagram is the part shaded?



12. factorize ; $2a - a^2$

13. A man invests Rs 30 000 to buy Rs 10 shares of a company at Rs 12, which pays an annual dividend of 8%

- i. How many shares will he be able to buy?
ii. Find the nominal value of these shares..

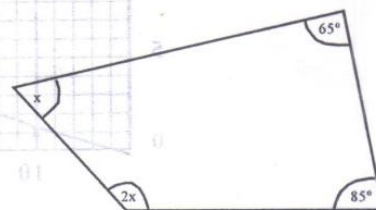
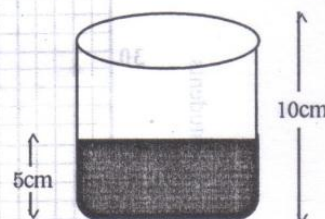
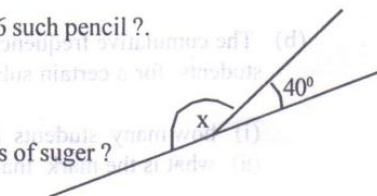
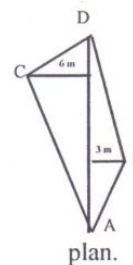
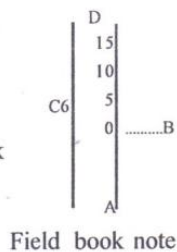
14. According to the information given in the diagram; find the value of x

15. If $\lg x - \lg 2 = \lg 3 + \lg 5$, find the value of x , without using logarithmic tables.

16. simplify; $\frac{2}{x-y} + \frac{1}{y-x}$

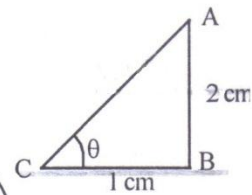
17. A note from a field book of a surveyor and the relevant plan are shown here. some measurements are not shown in the plan.

- (i.) The number associated with B in the field book note is illegible. what should be the number?
(ii.) What is the distance in metres, the straight line AD in the plan represents?

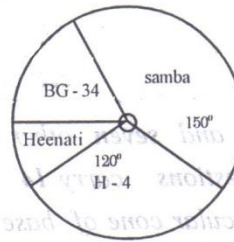


18. If x is a positive interger, write **two** values of x which satisfies the inequality $x + 2 \leq 6$

19. According to the information given in the digaram, find the value of $\sin \theta$. (Simplification of the answer is **not** necessary.)



20. The given pie chart shows information about four varieties of paddy grown in a certain region.



(i) If the variety H-4 is grown in an extent of land twice the extent of land in which the variety BG-34 is grown, find the value of the angle in the sector that represents BG-34 ?

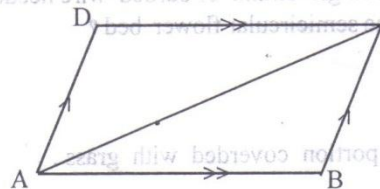
(ii) If the variety H-4 is grown in 240 ha of land, find the extent of land in which the variety samba is grown.

21. Using the formula find the sum of the first 22 terms of the progression 4, 7, 10,

22. The area of a square of side a is a^2 . Find, using factors, the difference between the area of a square of side 21 cm and that of a square of side 19 cm.

23. A man borrows Rs 25000 at 10% simple interest per annum. Find the amount that he should pay in order to settle the loan at the end of 2 years.

24. The diagonal AC of the parallelogram ABCD bisects $\angle DAB$. Shown below with some blanks is a response given by a student to prove that ABCD is a rhombus. Fill in the blanks.



$\angle DAC = \angle CAB$ (AC bisects $\angle DAB$)

$\angle DAC = \dots\dots\dots$ (Alternate angles)

$\angle CAB = \angle ACB$

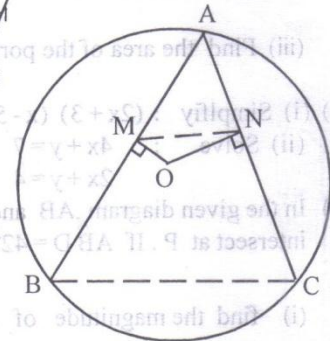
$AB = \dots\dots\dots$ (In a triangle sides opposite equal angles are equal.)

ABCD is a rhombus. (Because.....)

25. 8 men took 6 days to complete $\frac{1}{3}$ of a certain job of work.

(i) How many man days of work have they completed ?

(ii) How many days will 12 men need to complete the remaining part of the job ?

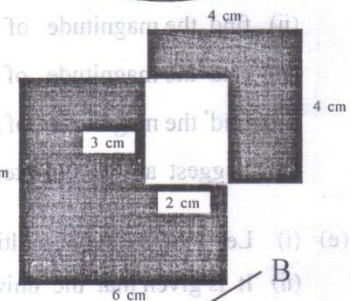


26. In the given diagram, AB and AC are two chords of the circle whose centre is O. From O, OM is drawn perpendicular to AB and ON is drawn perpendicular to AC.

(i) Give reasons why M is the mid point of AB.

(ii) Write down a geometrical relation between the line segments MN and BC.

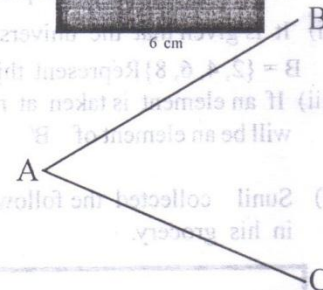
27. Using the information given in the diagram, calculate the area of the shaded portion.



28. Make x the subject of the formula $I + x = \sqrt{a^2 + x^2}$

29. In the given sketch AB and AC represent two boundary lines of a block of land.

A post is to be fixed inside the block of land such that it will be equidistant from the two boundary lines and will be a distance of 6 m from AB. Using your knowledge of loci show in the given sketch itself, the place where the post should be fixed and the method of obtaining it.



30. The ratio of the number of students in two groups A and B is 2:1. when a student from group A joins group B, the ratio will be 3:2. what is the total number of students in the two groups ?