



# MATHS

## BOOKS - MAXIMUM PUBLICATION

### MODEL PAPER 1

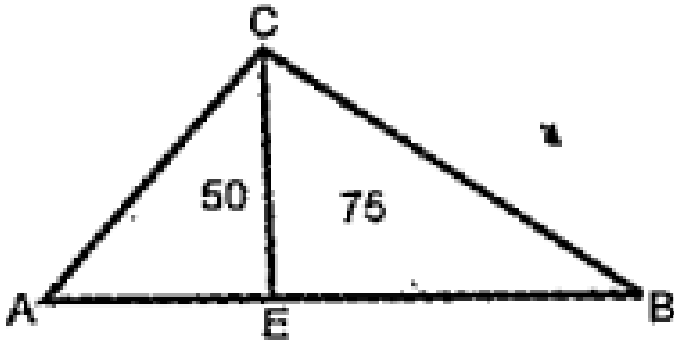
#### Example

1. In the figure, the area of

$\triangle AEC$  and  $\triangle ECB$  are  $50\text{cm}^2$  and  $75\text{cm}^2$

.  $AB = 15$  cm.

What is the area of  $\triangle ABC$



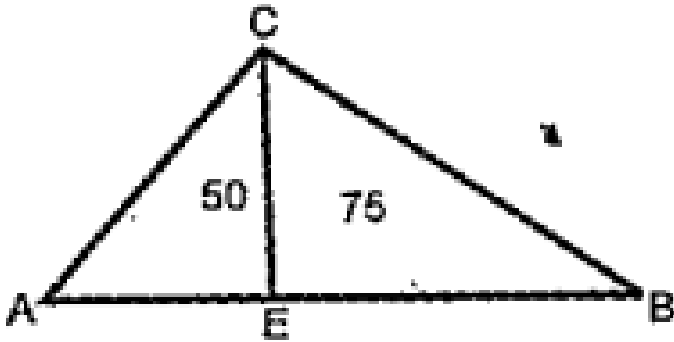
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2. In the figure, the area of

$\triangle AEC$  and  $\triangle ECB$  are  $50\text{cm}^2$  and  $75\text{cm}^2$

.  $AB = 15$  cm.

What is the length of  $\triangle A E$



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3. Find value

$$\sqrt{5} \times x = 5. \text{ Find the value of } x.$$

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#### 4. Find value

$\sqrt{3} + 2 + y = 4$ . Find the value of  $y$ .



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#### 5. Write the decimal form of sums of

$$\frac{1}{4} + \frac{1}{25}.$$



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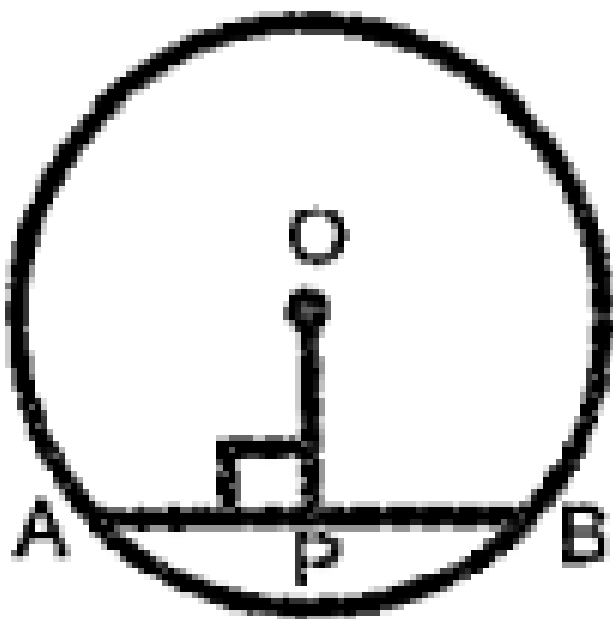
#### 6. Write the decimal form of sums of

$$\frac{2}{5} + \frac{3}{5^2} + \frac{4}{5^3}$$



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7. In the figure  $O$  is the center. Radius = 5cm.  
 $AB = 8$  cm. what is the perpendicular distance  
from the center of the circle to  $AB$ .





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8. The sum of two numbers is 54 and their difference is 6 . Which are the numbers ?



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9. 15 can be written as the difference of squares of two consecutive numbers. Find the numbers.



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**10.** Draw a square of area

$$15\text{cm}^2$$



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**11.** Write 0.72 in fractional form.



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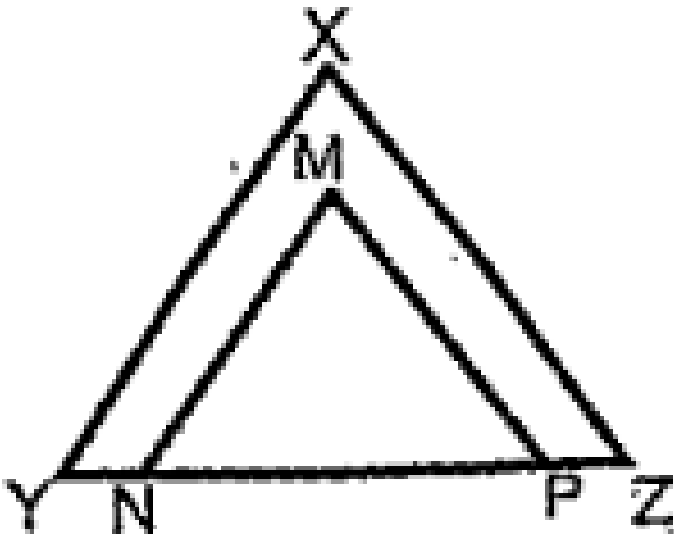
**12.** If a two digit number is divided by another two digit number, we get 3.125. which are the

numbers ?



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13. In the figure  $XY \parallel MN$ ,  $XZ \parallel MP$ ,  
 $XY = 9$  cm,  $XZ = 10$  cm,  $NP = 4$  cm,  
 $MN = 4.5$ . Find the length to  $MP$  and  $YZ$ .







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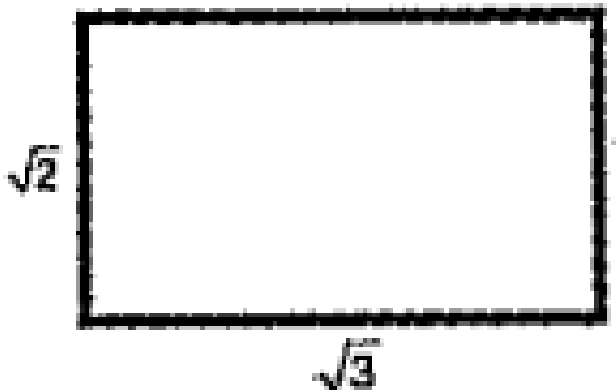
14. Write the decimal forms equal to  $\frac{1}{5}$ ,  $\frac{1}{8}$ ,  $\frac{3}{4}$ .



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15. If the length is  $\sqrt{3}$  cm and breadth  $\sqrt{2}$  cm

What will be the perimeter ?

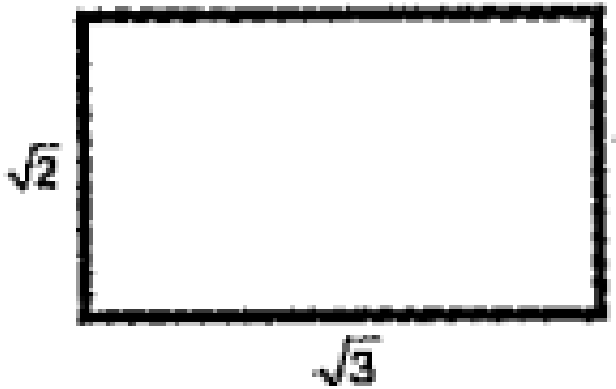




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16. If the length is  $\sqrt{3}$  cm and breadth  $\sqrt{2}$  cm

What will be the area ? ( $\sqrt{2} = 1.4$ ,  $\sqrt{3} = 1.7$ )



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17. Complete the following

$$32.5 = \underline{\quad} / 10$$



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18. Complete the following

$$3 \times \frac{1}{10} + 7 \times \frac{1}{100} + 5 \times \frac{1}{1000} = \underline{\hspace{2cm}}$$



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**19.** Complete the following

$$\frac{1}{20} = \frac{\quad}{100}$$



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**20.** Complete the following

$$\frac{3}{\quad} = \frac{12}{100}$$



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21. perimeter of a rectangle is 40 cm.

What is its length + breadth = \_\_\_\_\_



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22. perimeter of a rectangle is 40 cm.

If the length is 6 cm more than the breadth  
and if length is  $x$  cm. What is its breadth ?



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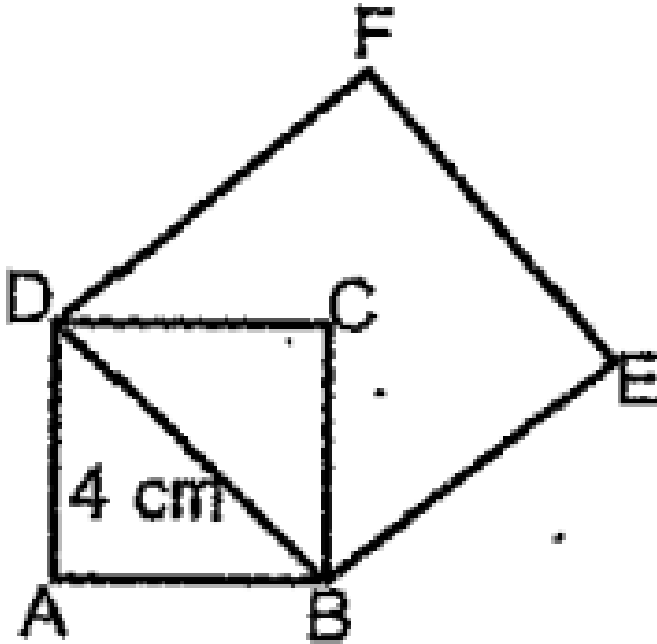
**23.** ABCD is a square. Its diagonal = 4 cm. BDFE is a square. what is the area of BDEF ?



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**24.** ABCD is a square. Its diagonal = 4 cm. BDFE is a square.

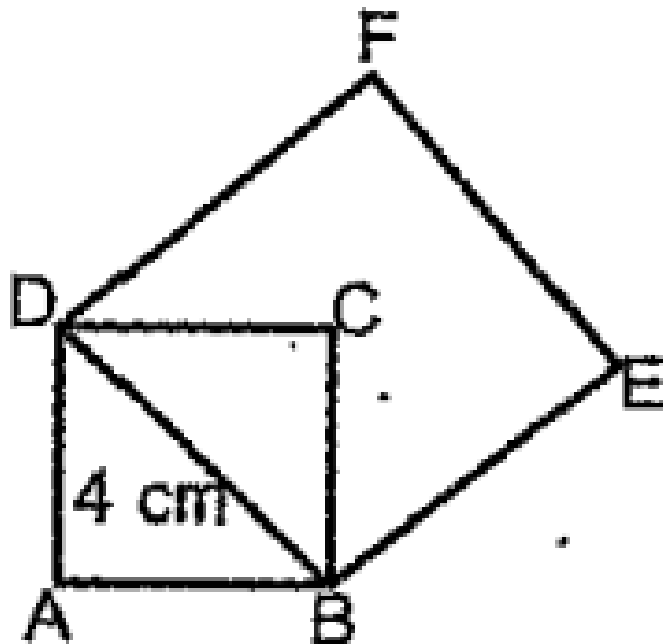
Find the area of ABCD



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25. ABCD is a square. Its diagonal = 4 cm. BDFE is a square.

Find the area of ABCD



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26. To find the decimal form of  $\frac{1}{7}$  :-

$$\frac{10}{7} = 1 + \frac{3}{7} \rightarrow 1$$



$$\frac{30}{7} = 4 + \frac{2}{7} \rightarrow 4$$

Through this process we get the first two digits. By continuing this process find the next 4 digits.



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27. If 3 times of Raju's age is added with fathers age, it is 72. if 2 times of father's age is added with Raju's, it is 74. Find this ages.



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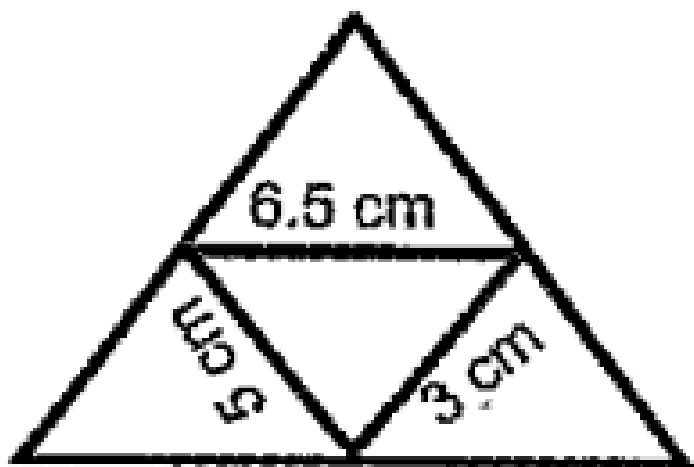
**28.** Draw a triangle with sides 6 cm, 8 cm, 9 cm.  
Divide triangle into 4 equal triangles having  
the same area.



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**29.** In the figure small triangles are drawn  
joining the mid points of large triangle.

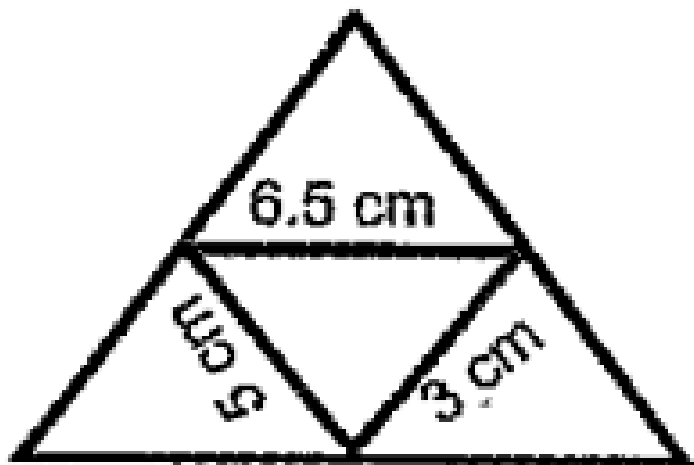
Find the length of sides of large triangle.



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**30.** In the figure small triangles are drawn joining the mid points of large triangle.

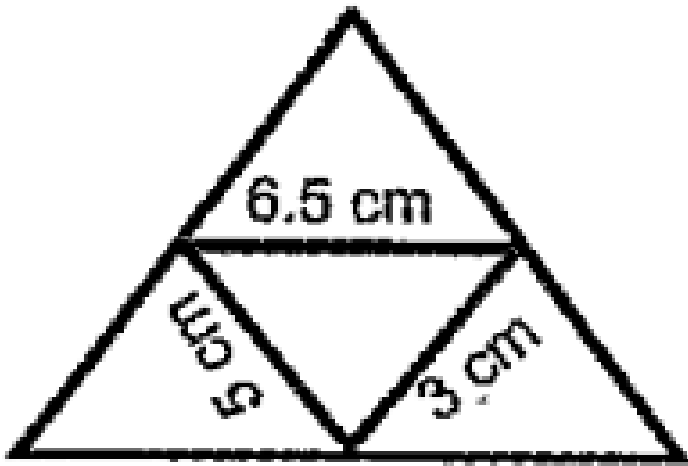
Find the perimeter of large triangle.



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**31.** In the figure small triangles are drawn joining the mid points of large triangle.

What is the specialty of small triangles ?

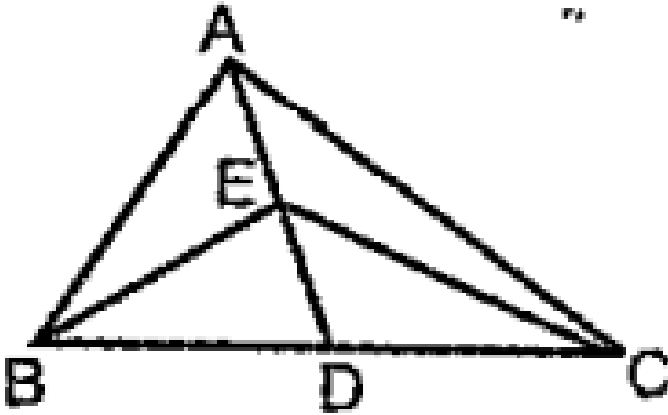


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**32.** In the figure D is the midpoint of BC.  $AE:ED$

$= 2:1$ . Area of  $\triangle BDE = 15\text{cm}^2$ .

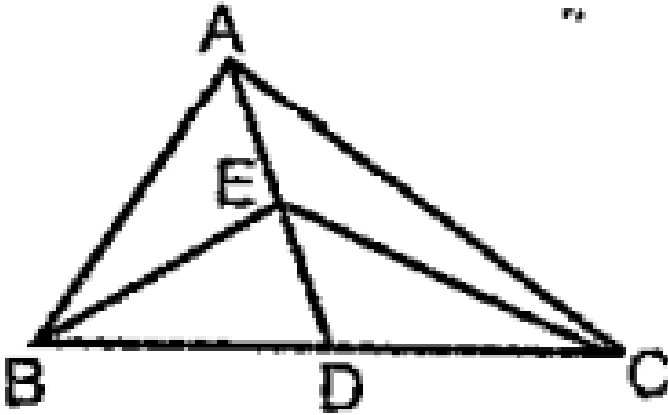
What is the area of  $\triangle BEA$



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**33.** In the figure D is the midpoint of BC.  $AE:ED = 2:1$ . Area of  $\triangle BDE = 15\text{cm}^2$ .

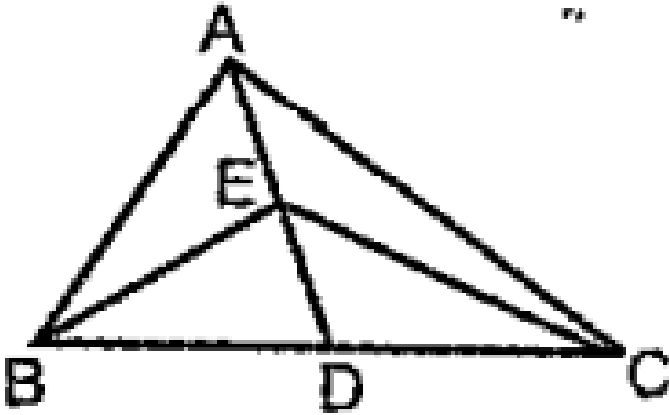
What is the area of  $\triangle ADC$



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**34.** In the figure D is the midpoint of BC.  $AE:ED = 2:1$ . Area of  $\triangle BDE = 15\text{cm}^2$ .

What is the area of  $\triangle ABC$

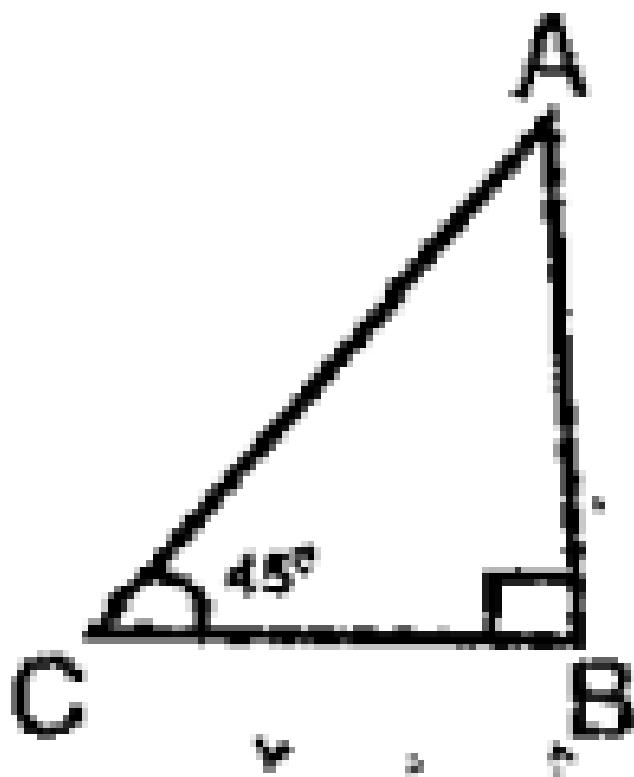


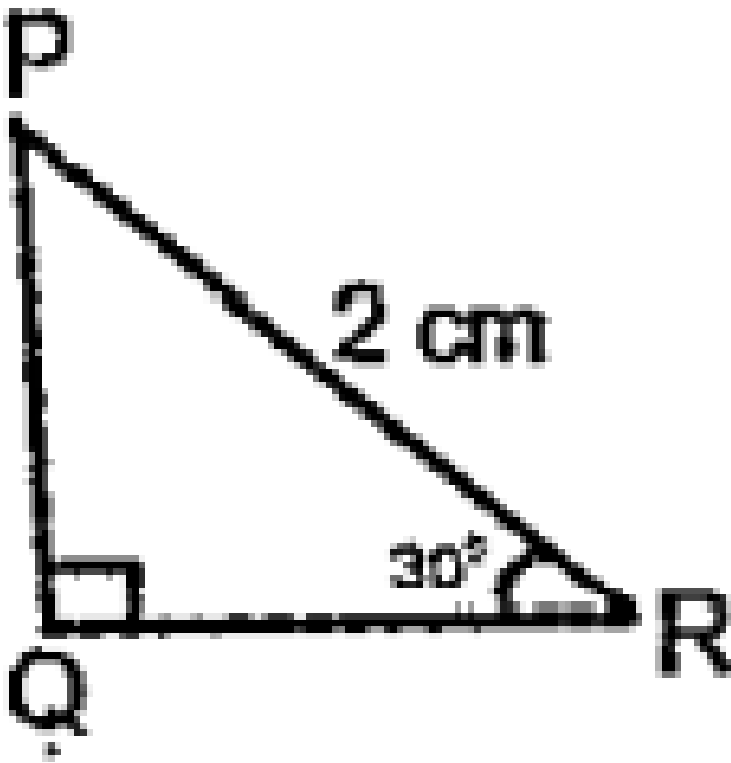
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35. In the figure  $AB = PQ$ ,  $PR = 2$  cm

Find the length of  $PQ$ ,  $AB$



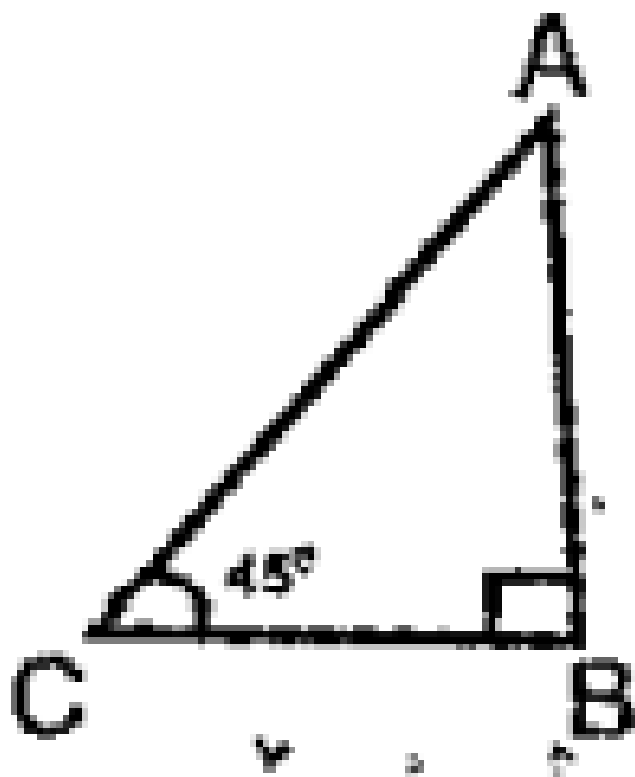


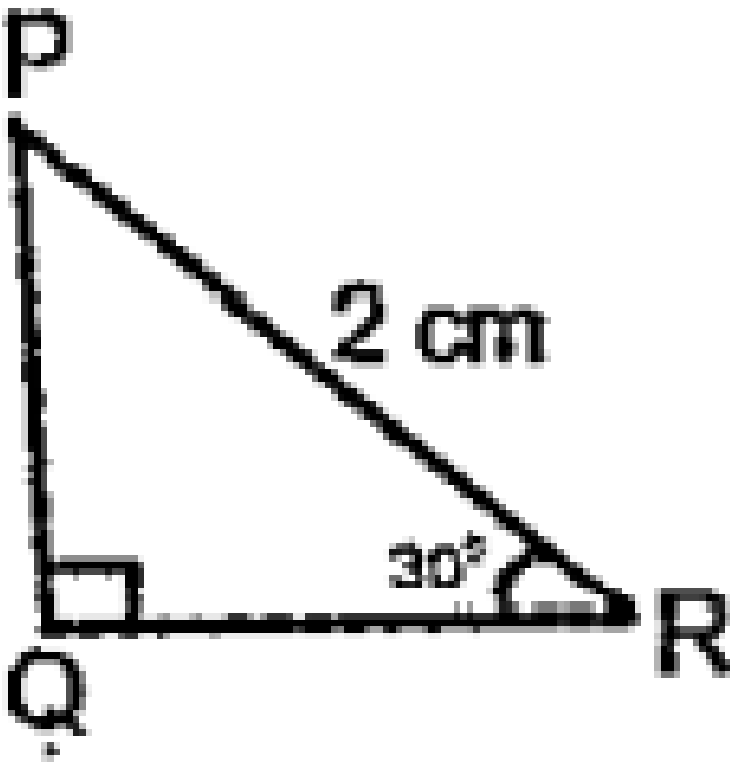


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36. In the figure  $AB = PQ$ ,  $PR = 2\text{ cm}$

Find the length of  $QR$ .



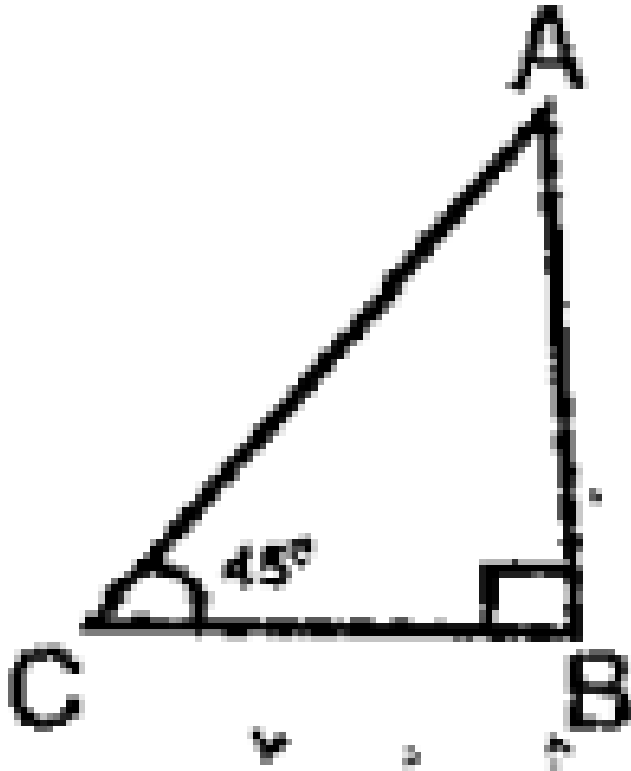


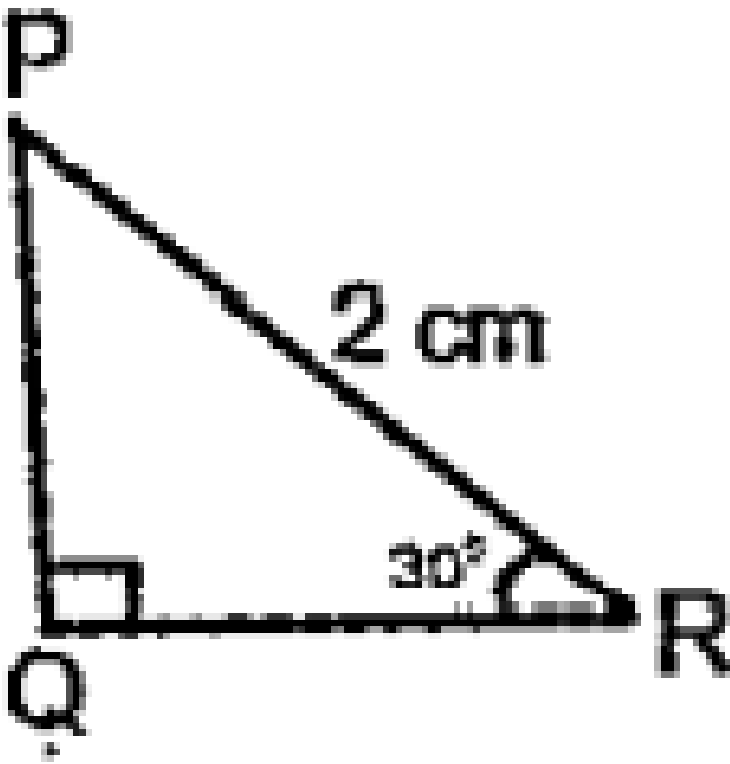
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37. In the figure  $AB = PQ$ ,  $PR = 2\text{ cm}$

Find the area of  $\triangle ABC$  to correct to cm.

$$[\sqrt{2} = 1.41]$$





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38. Prove  $(2 + \sqrt{3})(2 - \sqrt{3}) = 1$

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**39.** Find the value of  $\frac{1}{2 + \sqrt{3}}$  to 2 decimal places.



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**40.** Find the value of  $\frac{1}{2 - \sqrt{3}}$  to 2 decimal places.

$$[\sqrt{3} = 1.73]$$



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**41.** Circle with radius 13 cm is drawn.

Two chords of length 10 cm and 24 cm are drawn parallel on both sides of the center.

Find the distance between the chords.



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**42.** Circle with radius 13 cm is drawn. If AB and CD are two parallel chords of length 24cm and 10cm respectively on the same side of the center, find the distance between them.



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**43.** If the length of a rectangle is increased by 2m and breadth decreased by 1m, the area will decrease by  $6m^2$ . If the length is decreased by 3m and breadth increased by 3m area will increase by  $9m^2$ .

If the length is taken as X , and breadth Y. Find the area of first rectangle.



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**44.** If the length of a rectangle is increased by 2m and breadth decreased by 1m, the area will decrease by  $6m^2$ . If the length is decreased by 3m and breadth increased by 3m area will increase by  $9m^2$ .

Form two equations with X and Y.



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**45.** If the length of a rectangle is increased by 2m and breadth decreased by 1m, the area will

decrease by  $6m^2$ . If the length is decreased by 3m and breadth increased by 3m area will increase by  $9m^2$ .

Find the length and breadth.



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**46.** Draw a line of length 6.5 cm. Divide it in the ratio 3:4.



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$$47. \frac{2}{9} - \frac{2}{10} = a$$

$$\frac{2}{9} - \frac{22}{100} = b$$

$$\frac{2}{9} - \frac{222}{1000} = c$$

Write the decimal form of  $\frac{2}{10}$ ,  $\frac{22}{100}$ ,  $\frac{222}{1000}$



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$$48. \frac{2}{9} - \frac{2}{10} = a$$

$$\frac{2}{9} - \frac{22}{100} = b$$

$$\frac{2}{9} - \frac{222}{1000} = c$$

In a, b, c Which is the smallest value.





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$$49. \frac{2}{9} - \frac{2}{10} = a$$

$$\frac{2}{9} - \frac{22}{100} = b$$

$$\frac{2}{9} - \frac{222}{1000} = c$$

Write the fractional form of a, b, c



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$$50. \frac{2}{9} - \frac{2}{10} = a$$

$$\frac{2}{9} - \frac{22}{100} = b$$

$$\frac{2}{9} - \frac{222}{1000} = c$$

Write the decimal form of  $\frac{2}{9}$ .

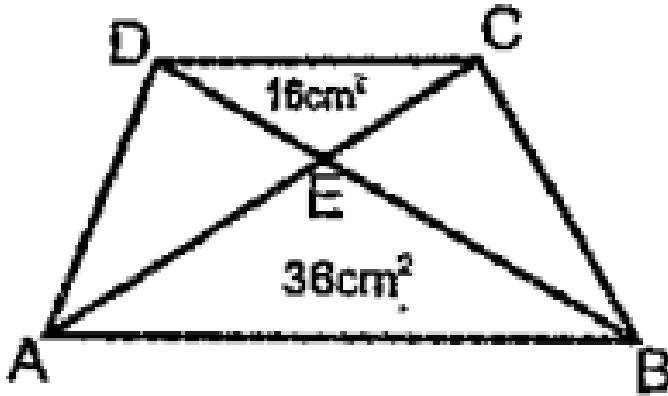


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51. In the figure ABCD is trapezium. Diagonals meet at the point E. Area of  $\triangle CED = 16cm^2$ , Area of  $\triangle AED$  is  $36cm^2$ .

What is the relation between the area of

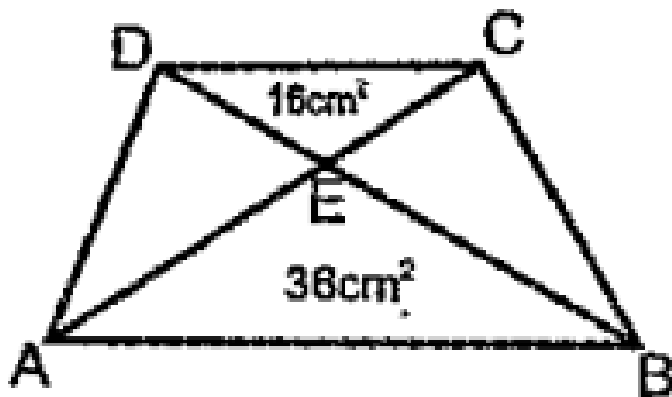
$\triangle AED$  and  $\triangle BEC$



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52. In the figure ABCD is trapezium. Diagonals meet at the point E. Area of  $\triangle CED = 16\text{cm}^2$ , Area of  $\triangle AED$  is  $36\text{cm}^2$ .

In  $\triangle ADC$ ,  $AE:EC = \_$

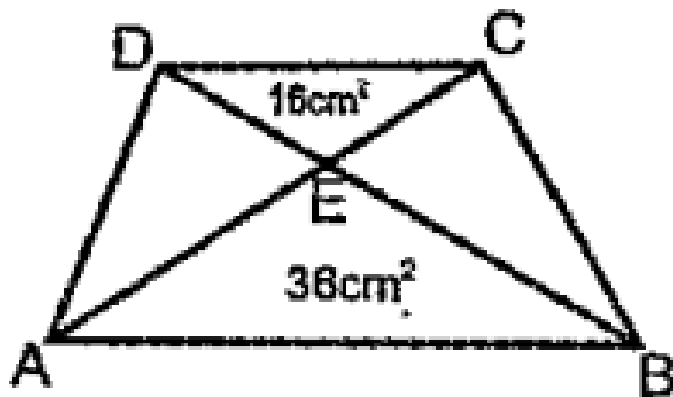


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**53.** In the figure ABCD is trapezium. Diagonals meet at the point E. Area of  $\triangle CED = 16\text{cm}^2$ , Area of  $\triangle AED$  is  $36\text{cm}^2$ .



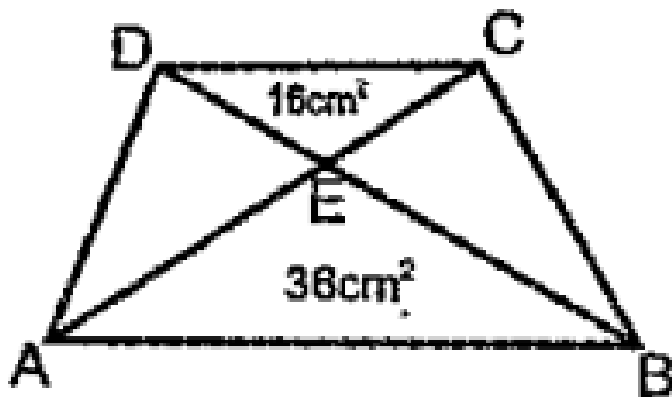
In  $\triangle ABC$ ,  $AE:EC = \_$



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**54.** In the figure ABCD is trapezium. Diagonals meet at the point E. Area of  $\triangle CED = 16\text{cm}^2$ , Area of  $\triangle AED$  is  $36\text{cm}^2$ .

Find the area of  $\triangle AED$ ,  $\triangle BEC$



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55. Note the specialities of fractional numbers.

It can be written as

$$1 - \frac{1}{2} = \frac{2 - 1}{1 \times 2} = \frac{1}{1 \times 2}$$

$$\frac{1}{2} - \frac{1}{3} = \frac{3 - 2}{2 \times 3} = \frac{1}{2 \times 3}$$

$$\frac{1}{3} - \frac{1}{4} = \frac{4 - 3}{3 \times 4} = \frac{1}{3 \times 4}$$

now answer the following.

$$\frac{1}{4} - \frac{1}{5} = \frac{1}{\text{----}}$$



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**56.** Note the specialities of fractional numbers.

It can be written as

$$1 - \frac{1}{2} = \frac{2 - 1}{1 \times 2} = \frac{1}{1 \times 2}$$

$$\frac{1}{2} - \frac{1}{3} = \frac{3 - 2}{2 \times 3} = \frac{1}{2 \times 3}$$

$$\frac{1}{3} - \frac{1}{4} = \frac{4 - 3}{3 \times 4} = \frac{1}{3 \times 4}$$

now answer the following.

$$\frac{1}{5 \times 6} = \frac{1}{x} - \frac{1}{y} \text{ find X and Y}$$



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**57.** Note the specialities of fractional numbers.

It can be written as

$$1 - \frac{1}{2} = \frac{2 - 1}{1 \times 2} = \frac{1}{1 \times 2}$$
$$\frac{1}{2} - \frac{1}{3} = \frac{3 - 2}{2 \times 3} = \frac{1}{2 \times 3}$$
$$\frac{1}{3} - \frac{1}{4} = \frac{4 - 3}{3 \times 4} = \frac{1}{3 \times 4}$$

now answer the following.

$$\frac{1}{1 \times 2} + \frac{1}{2 \times 3} = \text{----}$$



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**58.** Note the specialities of fractional numbers.

It can be written as

$$1 - \frac{1}{2} = \frac{2 - 1}{1 \times 2} = \frac{1}{1 \times 2}$$

$$\frac{1}{2} - \frac{1}{3} = \frac{3 - 2}{2 \times 3} = \frac{1}{2 \times 3}$$

$$\frac{1}{3} - \frac{1}{4} = \frac{4 - 3}{3 \times 4} = \frac{1}{3 \times 4}$$

now answer the following.

$$\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} = \text{-----}$$



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59. Note the specialities of fractional numbers.

It can be written as

$$1 - \frac{1}{2} = \frac{2-1}{1 \times 2} = \frac{1}{1 \times 2}$$
$$\frac{1}{2} - \frac{1}{3} = \frac{3-2}{2 \times 3} = \frac{1}{2 \times 3}$$
$$\frac{1}{3} - \frac{1}{4} = \frac{4-3}{3 \times 4} = \frac{1}{3 \times 4}$$

now answer the following.

$$\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \dots + \frac{1}{99 \times 100} =$$

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60. Note the specialities of fractional numbers.

It can be written as

$$\begin{aligned}1 - \frac{1}{2} &= \frac{2 - 1}{1 \times 2} = \frac{1}{1 \times 2} \\ \frac{1}{2} - \frac{1}{3} &= \frac{3 - 2}{2 \times 3} = \frac{1}{2 \times 3} \\ \frac{1}{3} - \frac{1}{4} &= \frac{4 - 3}{3 \times 4} = \frac{1}{3 \times 4}\end{aligned}$$

now answer the following.

$$\frac{1}{1 \times 2} + \frac{1}{2 \times 3} + \dots + \frac{1}{n \times (n + 1)} = \text{-----}$$



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