



# MATHS

## BOOKS - MBD NCERT SOLUTIONS

### TRIANGLES

#### Multiple Choice Questions

1. Sides of two similar triangles are in the ratio 4:9 . Areas of these triangles are in the ratio.

2: 3 (b) 4: 9 (c) 81: 16 (d) 16: 81

A. 16: 81

B. 8: 18

C. 81: 16

D. 12: 27

**Answer: A**



**Watch Video Solution**

2. The areas of two similar

$\triangle ABC$  and  $\triangle PQR$  are 64 sq. cm and 121

sq. cm. respectively. If  $QR = 15.4$  cm, find  $BC$ .

A. 11.2 cm

B. 11.4 cm

C. 12.4 cm

D. None of these

**Answer: A**



**Watch Video Solution**

**3.** Triangles ABC and DEF are similar. If area of

$\Delta ABC = 16cm^2$ , area of  $\Delta DEF = 25cm^2$

and  $BC = 2.3cm$ , then EF is :

A. 2.875 cm

B. 2.758 cm

C. 2.578 cm

D. None of these

**Answer: A**



**Watch Video Solution**

**4.** Triangle ABC and DEF are similar. If  $AC = 19$  cm and  $DF = 8$  cm , the ratio of the area of two triangles are :

A.  $\frac{19}{8}$

B.  $\frac{361}{64}$

C.  $\frac{38}{65}$

D. None of these

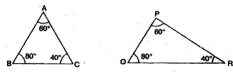
**Answer: B**



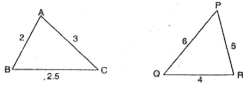
**Watch Video Solution**

5. Which one pair of the triangles is not similar triangles ?

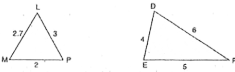
A.



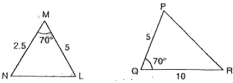
B.



C.



D.



**Answer: C**



**View Text Solution**

**6.** Area of two similar triangles are in the ratio of 5:3 then the ratio of their corresponding sides is :

A.  $5:3$

B.  $25:9$

C.  $9:25$

D.  $\sqrt{5}:\sqrt{3}$

**Answer: B**



**Watch Video Solution**

7. In the given figure

$$\triangle ODC \sim \triangle OAB, \angle BOC = 100^\circ, \angle ODC = 60^\circ$$

then  $\angle OAB =$

A.  $20^\circ$

B.  $80^\circ$

C.  $60^\circ$

D.  $40^\circ$

**Answer: D**



**Watch Video Solution**

**8.** The ratio of corresponding sides of two similar triangles is  $2:3$ , then the ratio of the perimeters of two triangles is  $4:9$  (True/False).



A.  $\sqrt{2} : \sqrt{3}$

B. 2 : 3

C. 4 : 9

D. None of these

**Answer: C**

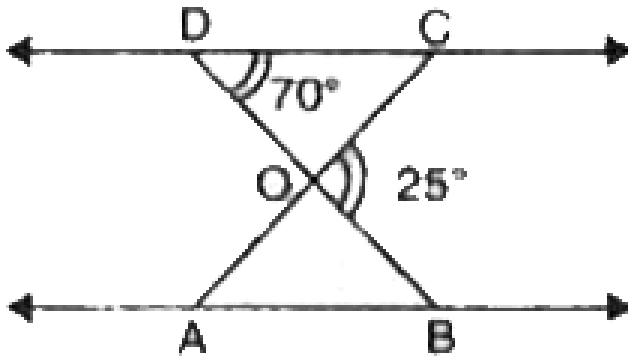


**Watch Video Solution**

9. In the given figure

$$\triangle ODC \sim \triangle OAB, \angle BOC = 125^\circ, \angle ODC = 70^\circ$$

, then  $\angle OAB$  is equal to :



A.  $70^\circ$

B.  $35^\circ$

C.  $50^\circ$

D.  $55^\circ$

**Answer: D**



**Watch Video Solution**

10. If the ratio of the sides of two similar triangles is 3 : 5, then the ratio of their areas is :

A.  $\sqrt{3} : \sqrt{5}$

B. 9 : 25

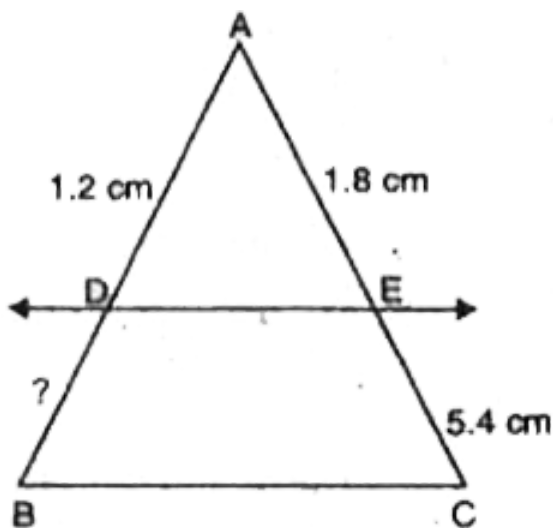
C. 5 : 3

D. None of these

**Answer: B**



11. In the given figure  $DE \parallel BC$ , then the value of DB is :



A.  $2.4 \text{ cm}$

B.  $4.8 \text{ cm}$

C. 1.8 cm

D. 3.6 cm

**Answer: D**



**Watch Video Solution**

**12.** Areas of two similar triangles are in the ratio of 4:5, then the ratio of their corresponding sides is :

A. 4:5

B. 16:25

C. 2:  $\sqrt{5}$

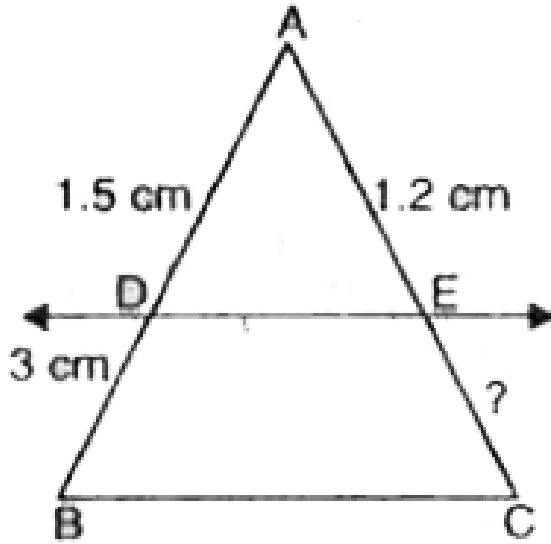
D. 5:4

**Answer: C**



**Watch Video Solution**

**13.** In the given figure  $DE \parallel BC$ , then the value of EC is :



A. 2.7 cm

B. 1.5 cm

C. 2.4 cm

D. 3 cm

**Answer: C**



14. Areas of two similar triangles are in the ratio of 5:3, then the ratio of their corresponding sides is :

A. 5 : 3

B. 3 : 5

C.  $\sqrt{5} : \sqrt{3}$

D.  $\sqrt{3} : \sqrt{5}$

**Answer: C**





Watch Video Solution

15. If the ratio of sides of two similar triangles is 2:5, then the ratio of their areas will be :

A. 25 : 4

B. 4 : 10

C. 4 : 25

D. 2 : 5

**Answer: C**



Watch Video Solution

16. If in a triangle, square of one side is equal to the sum of squares of the other two sides, then the angle opposite the first side is :

A.  $60^\circ$

B.  $90^\circ$

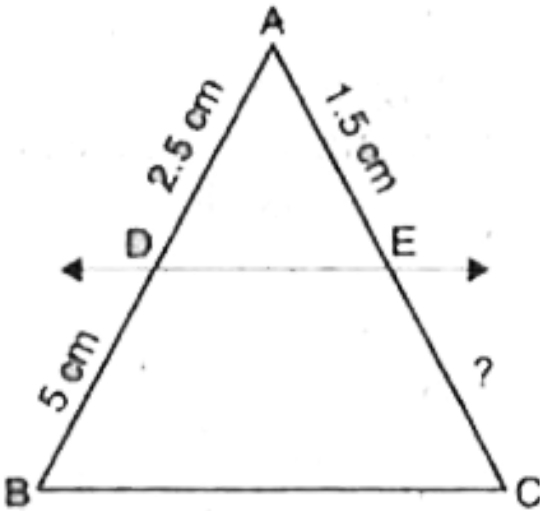
C.  $45^\circ$

D.  $30^\circ$

**Answer: B**



17. In figure,  $DE \parallel BC$ , then EC will be :



A. 3 cm

B. 4 cm

C. 5 cm

D. 7 cm

**Answer: A**



**Watch Video Solution**

**18.** Areas of two similar triangles are in the ratio 64:121, then the sides of these triangles are in the ratio:

A. 8 : 11

B. 11 : 8

C. 64: 121

D. None of these

**Answer: A**



**Watch Video Solution**

**19.** Sides of some triangles are given below:

(i) 5 cm, 12 cm , 15 cm

(ii) 5 cm , 6 cm , 8 cm

(iii) 8 cm, 15 cm , 17 cm .

Among these, right triangles is :

A. (i)

B. (ii)

C. (iii)

D. None of these

**Answer: C**

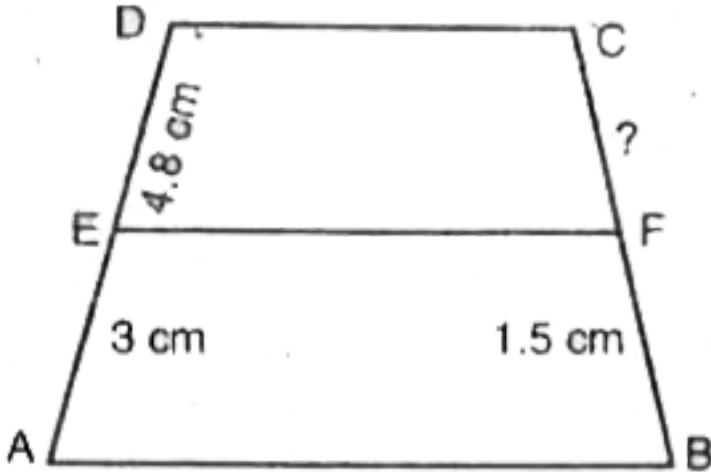


**View Text Solution**

**20.** ABCD is a trapezium with  $AB \parallel DC$ . E and F are points on non-parallel sides AD and BC respectively such that  $EF \parallel AB$ , If  $AE =$

3cm,  $ED = 4.8$  cm,  $BF = 1.5$  cm, then the value of

CF is :



A.  $4.5$  cm

B.  $2.4$  cm

C.  $6.0$  cm

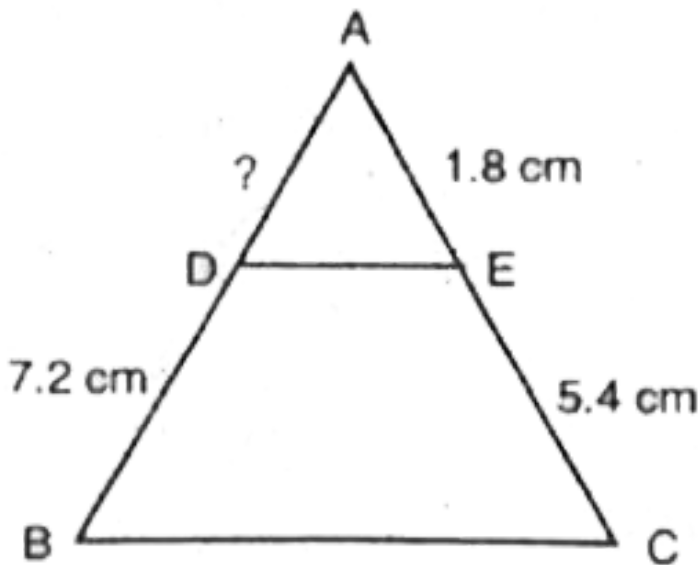
D. None of these

**Answer: B**



**Watch Video Solution**

21. In figure,  $DE \parallel BC$  and  $BD = 7.2$  cm,  $CE = 5.4$  cm and  $AE = 1.8$  cm. Then  $AD$  is equal to :





A. 4.2 cm

B. 3.5 cm

C. 2.4 cm

D. None of these

**Answer: C**



**Watch Video Solution**

**22.** ABC and BDE are two equilateral triangles, such that D is the mid-point of BC. Ratio of the area of triangles ABC and BDE is :

A. 1 : 4

B. 1 : 2

C. 2 : 1

D. 4 : 1

**Answer: D**



**View Text Solution**

**23.** Sides of triangles are given in options, which of them is a right triangle ?

A. 3 cm, 8 cm, 6 cm

B. 13 cm, 12 cm, 6 cm

C. 25 cm, 80 cm, 100 cm

D. 50 cm, 80 cm, 100 cm

**Answer: C**



**View Text Solution**

**24.** The sides of two similar triangles are in the ratio 3:7. The ratio of areas of these triangles will be :

A. 1.5 : 3.5

B. 9 : 49

C. 6 : 14

D. 49 : 4

**Answer: B**



**Watch Video Solution**

**Fill In The Blanks**

1. All circles are ..... . (congruent, similar)



[Watch Video Solution](#)

2. All squares are ..... . (congruent, similar)



[View Text Solution](#)

3. All ..... Triangles are similar. (isoceses, equilateral)



[Watch Video Solution](#)

4. Two polygons of the same number of sides are similar, if their corresponding angles are ..... . (equal, proportional)



[Watch Video Solution](#)

## Short Answer Types Questions

1. A girl of height 90 cm is walking away from the base of a lamp post at a speed of 1.2 m/s. If

the lamp is 3.6 m above the ground find the length of her shadow after 4 seconds.



[View Text Solution](#)

2. A vertical pole of length 6 m casts a shadow 4 m long on the ground and the same time a tower casts a shadow 28 m long. Find the height of the tower.



[View Text Solution](#)

3. Two poles of heights 7 m and 12m stand on a plane ground. If the distance between the feet of the poles be 12 m, then find the distance between their tops.



[Watch Video Solution](#)

4. Two poles of heights 6 m and 12 m stands on plane ground. If the distance between the feet of the poles be 8m, then find the distance between their tops.







[Watch Video Solution](#)

5. A ladder is placed against a wall such that its foot is 2.5 m distance from the wall, and its top reaches a window 6m above the ground. Find the length of the ladder.



[View Text Solution](#)

6. A ladder 10m long reaches a window 8m above the ground. Find the distance of foot of the ladder from base of the wall.



[View Text Solution](#)

7. If the areas of two similar triangles are equal, prove that they are congruent.



[View Text Solution](#)

8. ABC is an isosceles triangle with  $AC = BC$ . If  $AB^2 - 2AC^2 = 0$ , prove that ABC is right triangle.



[Watch Video Solution](#)

9. Two poles of heights 8m and 13 m stands on a plane ground. If the distance between the feet of the poles is  $12m$ , find the distance between their tops.



[Watch Video Solution](#)