MATHS

BOOKS - BEYOND PUBLICATION

SIMILAR TRIANGLES

Example

1. State and prove basic Proportional theorem.

Watch Video Solution

2. Prove that a line joining the mid points of any two sides of a Triangle is parallel to the third side. (Using Converse of Basis Proportionality theorem)

Watch Video Solution

3. In two triangles, if the angles are equal, then the sides opposite to the equal angles are in the same ratio (or proportional) and hence the two triangles are similar.

Watch Video Solution

4. If In two triangles, the sides of one triangle are proportional to the corresponding sides of the other triangle, then their corresponding angles are equal and hence the traingles are similar.

Watch Video Solution

5. IF one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar. This property is.....

Watch Video Solution

6. The ratio of areas of two similar triangles is equal to the ratio of the squares of corresponding.....

Watch Video Solution

7. A perpendicular is drawn from the vertex of a right angle to the hypotenuse then the triangles on each side of the perpendicular are.....

Watch Video Solution

8. Pythagoras theorem (Baudha-yana theorem):

In a right triangle, the square of the hypotenuse is

equal to the sum of the squares of the other two sides.

Watch Video Solution

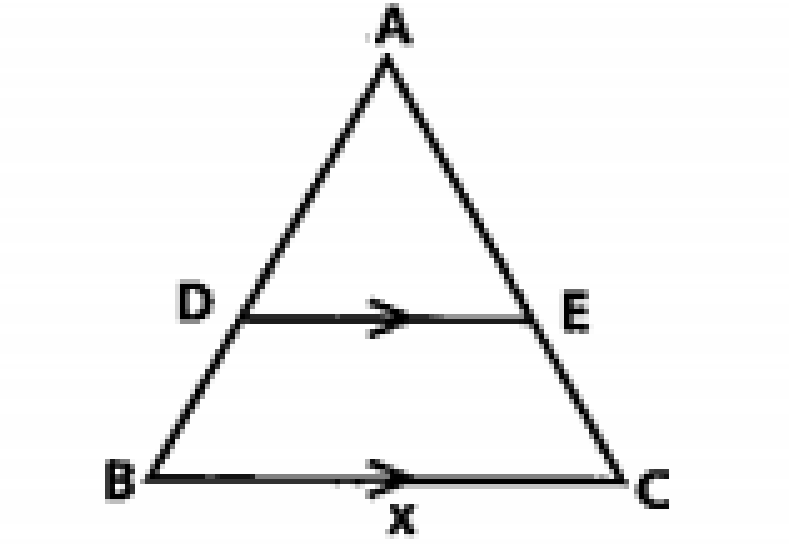
9. Converse of Pythagoras theorem:

In a triangle if the square of one side is equal to the sum of squares of the other two sides, then the angle opposite to the first side is a right angle and the triangle is a right angled triangle.

Watch Video Solution

10. In $\triangle ABC, DE \mid\mid BC$ and $A\frac{D}{D}B = \frac{3}{5}$.

AC=5.6. Find AE.(AS_1)



Watch Video Solution

11. In the given figure$LM \mid\mid AB$.

$AL = x + 3$,AC=2x, $BM = x + 2$and $BC = 2x + 3$

find the value of x.

Watch Video Solution

12. The diagonals of a quadrilateral ABCD intersect each other at point'O' such that $\frac{AO}{BO} = \frac{CO}{DO}$. Prove that ABCD is a trapezium.

Watch Video Solution

13. In trapezium ABCD, $AB \| DC$. E and F are points on non-parallel sides AD and BC respectively such that $EF \| AB$.

Show that $\frac{AE}{ED} = \frac{BF}{FC}$.

Watch Video Solution

14. All squares are.....

Watch Video Solution

15. Fill in the blanks with similar/not similar.

All equilateral triangles are.....

Watch Video Solution

16. Fill in the blanks with similar/not similar.

All isosceles traingles are.....

Watch Video Solution

17. Fill in the blanks with similar/not similar. Two polygons with same numbers of sides are....., if their corresponding angles are equal and corresponding sides are equal.

Watch Video Solution

18. Fill in the blanks with similar/not similar. Reduced and enlarged photographs of an object are.....

Watch Video Solution

19. Fill in the blanks with similar/not similar. Rhombus and squares are..... to each other.

Watch Video Solution

20. Write True/False for the following statements. Any two similar figures are congruent.

Watch Video Solution

21. WriteTrue/Falseforthefollowingstatements.Any two congruent figures are similar.

Watch Video Solution

22. WriteTrue/Falseforthefollowingstatements.Two polygons are similar if their corresponding angles are equal.

Watch Video Solution

23. Give two different examples of pair of i) Similar figures

Watch Video Solution

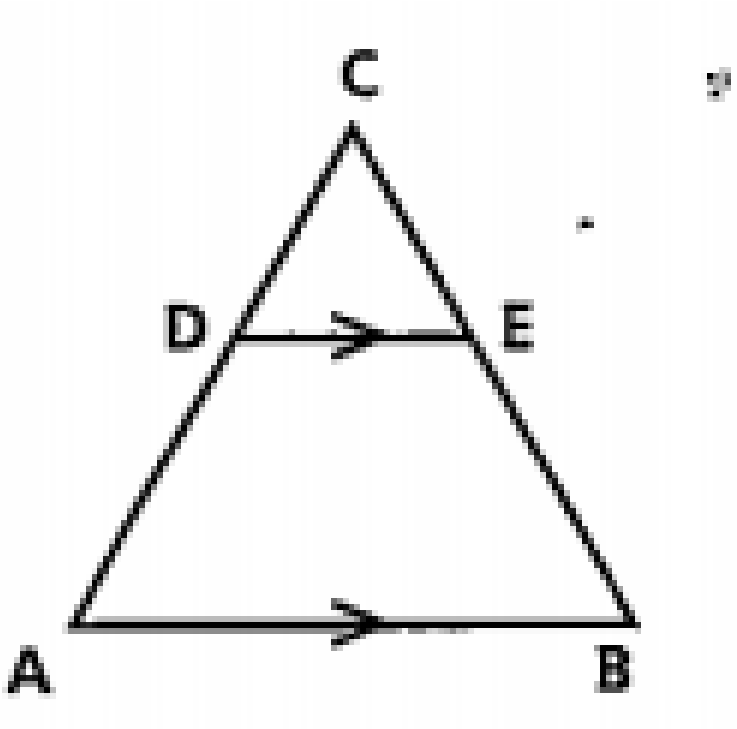
24. Given two diferent examples of pair of (i) similar figures. (ii) Non-similar figures.

Watch Video Solution

25. What value(s) of x will makeDE/AB, in the given figure?

$AD = 8x + 9, CD = X + 3,$

$BE = 3x + 4, CE = x$



Watch Video Solution

26. In $\triangle ABC$, DE//BC. AD=x, $DB = x - 2$, AE=x+2 and $EC = x - 1$.Find the value of x.

Watch Video Solution

27. E and F are points on the sides PQ and PR respectively of ΔPQR. For each of the following state whether $EF \| QR$ or not?

PE=3.9 cm ,EQ=3cm,

PF=3.6 cm and FR=2.4 cm.

Watch Video Solution

28. E and F are points on the sides PQ and PR respectively of ΔPQR. For each of the following state whether $EF \| QR$ or not?

PE=4cm,QE=4.5cm,

PF=8 cm and RF=9cm.

Watch Video Solution

29. E and F are points on the sides PQ and PR respectively of ΔPQR. For each of the following state whether $EF \| QR$ or not?

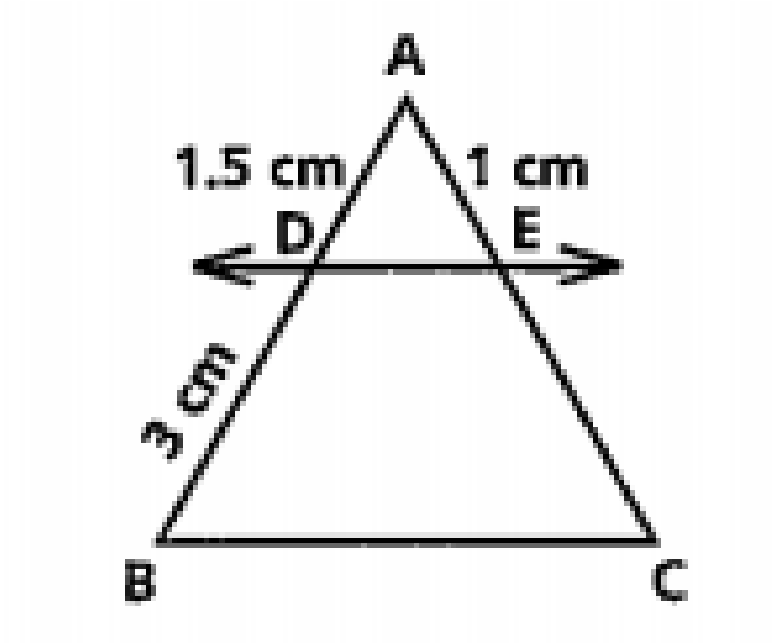
PF=1.28 cm, FR=2.56 cm,

PE=0.18 cm and EQ=0.36 cm.

Watch Video Solution

30. In the following figures DE||BC.

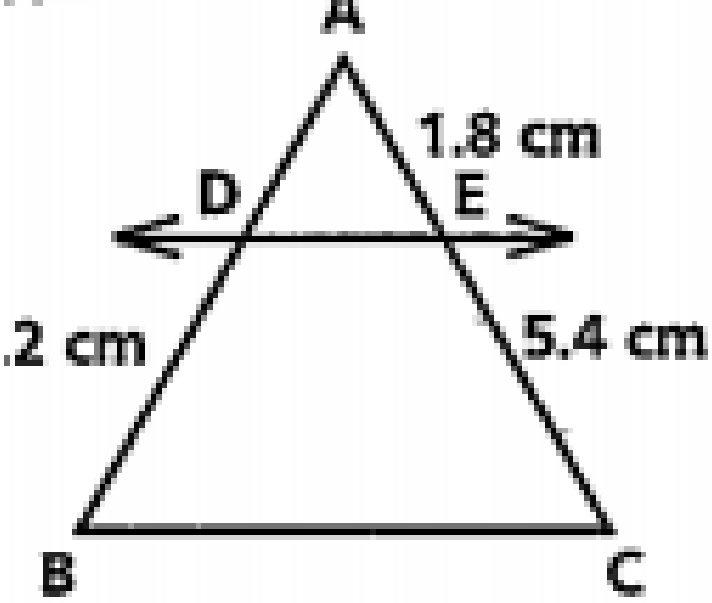
Find EC



Watch Video Solution

31. In the following figures DE||BC.

Find AD



Watch Video Solution

32. Can you give some more examples from your daily life where scale factor is used?

Watch Video Solution

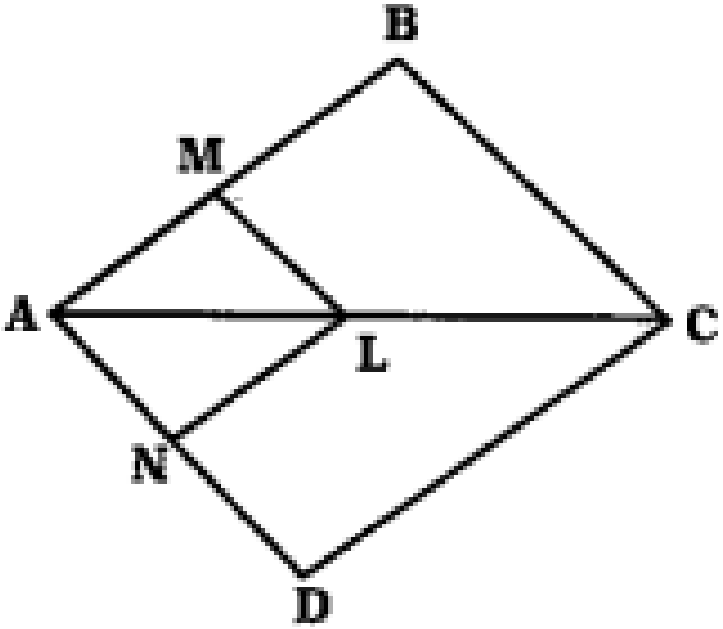
33. Can you say that a square and a rhombus are similar ? Discuss

Watch Video Solution

34. In ΔPQR,ST is a line such that $\frac{PS}{SQ} = \frac{PT}{TR}$ and also $\angle PST = \angle PRQ$. Prove that ΔPQR is an isosceles Triangle.

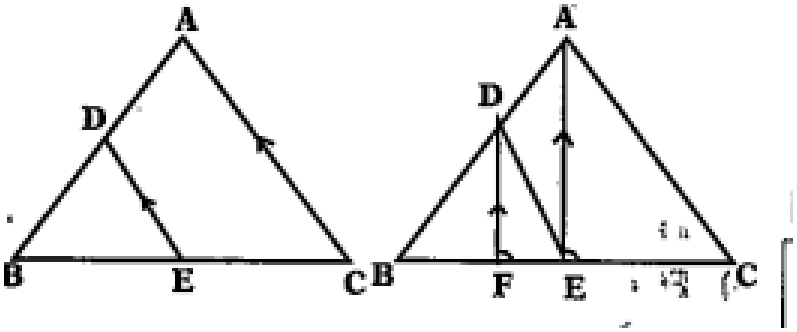
Watch Video Solution

35. In the given figure,$LM \mid\mid CB$ and $LN \mid\mid CD$, prove that $\frac{AM}{AB} = \frac{AN}{AD}$.



Watch Video Solution

36. In the given figure, DE/AC and DF/AE prove that $B\frac{F}{F}E = B\frac{E}{E}C$.



Watch Video Solution

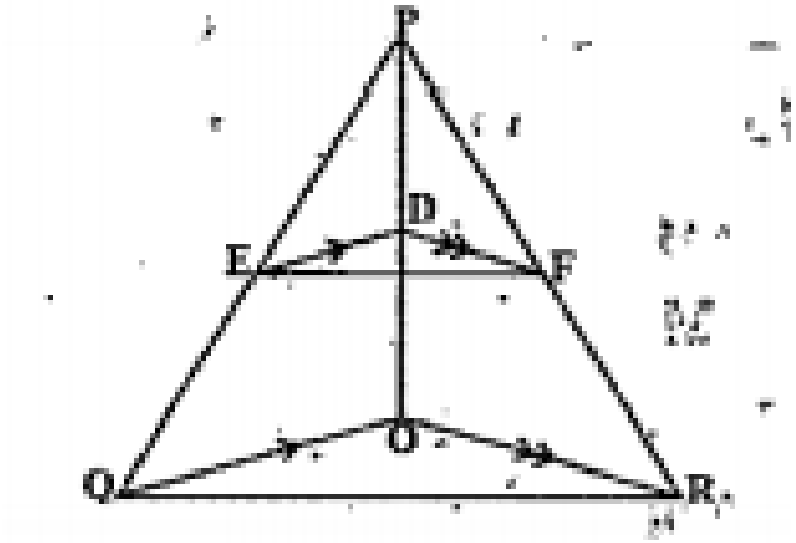
37. Prove that a line drawn through the mid-point of one side of a Triangle parallel to another side bisects the third side (Using Basic proportionality theorem).

Watch Video Solution

38. Prove that a line joining the mid points of any two sides of a Triangle is parallel to the third side. (Using Converse of Basis Proportionality theorem)

Watch Video Solution

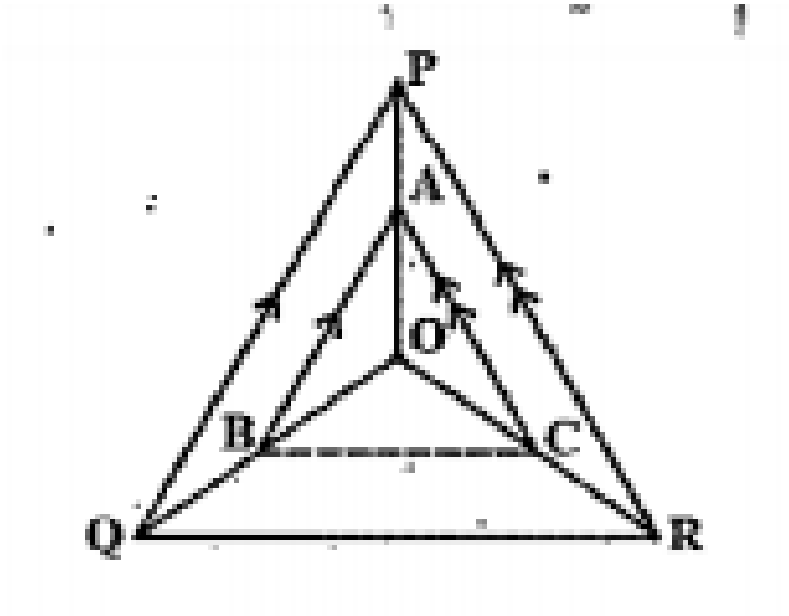
39. In the given figure, $DE \| OQ$ and $DF \| OR$. Show that $EF \| QR$.



Watch Video Solution

40. In the given figure, A, B and C are points on OP,OQ and OR respectively that $AB \| PQ$ and $AC \| PR$

. Show that $BC \| QR$.



Watch Video Solution

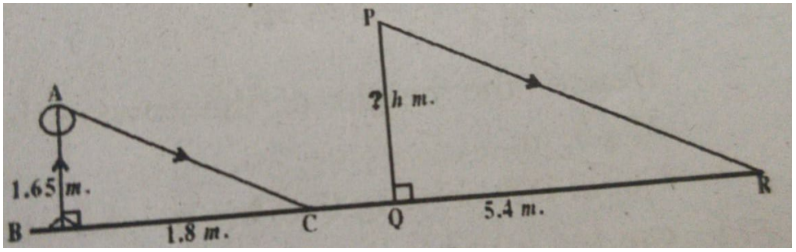
41. ABCD is a trapezium in which $AB \| DC$ and its diagonal intersect each other at point 'O'. Show that $\frac{AO}{BO} = \frac{CO}{DO}$.

Watch Video Solution

42. Draw a line segment of length 7.2 cm and divide it in the ratio 5:3 .Measure the two parts.

Watch Video Solution

43. A Person 1.65 m m tall casts 1.8 m shadow. AT the same instance, a lamp post casts a shadow of 5.4 m. Find the height of the lamp-post.

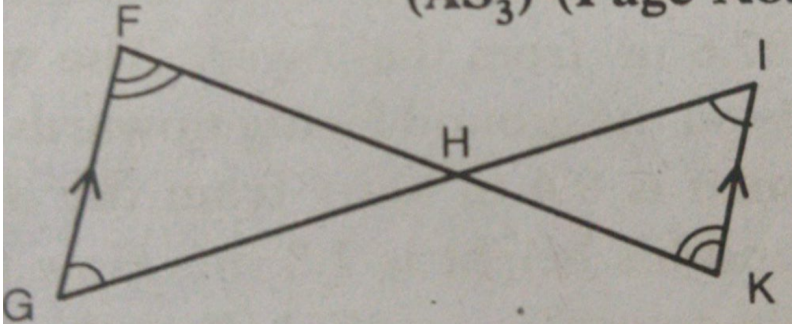


Watch Video Solution

44. A man sees the top of a tower in a mirror which is at a distance of 87.6 m from the tower. The mirror is on the ground facing upwards. The man is 0.4 m away from the mirror and his height is 1.5 m. How tall is the tower?

Watch Video Solution

45. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic form.

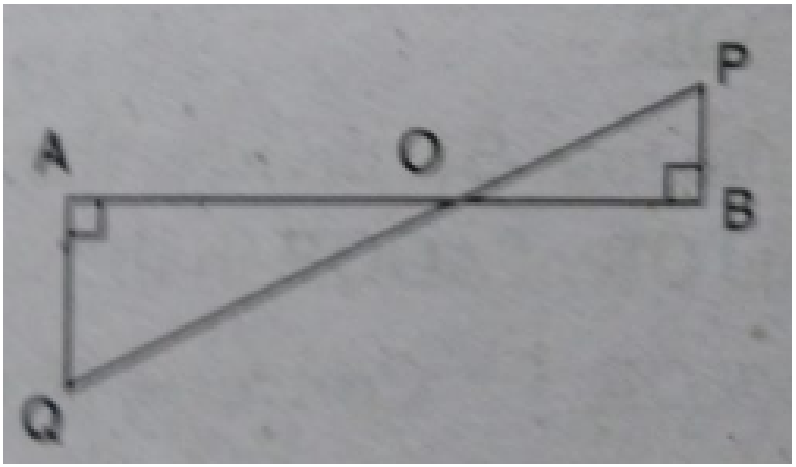


!! $\angle G = \angle I$ alt.int.angles for the $\angle F = \angle K$ parallel lines $GF \,||\, KI$

Watch Video Solution

46. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

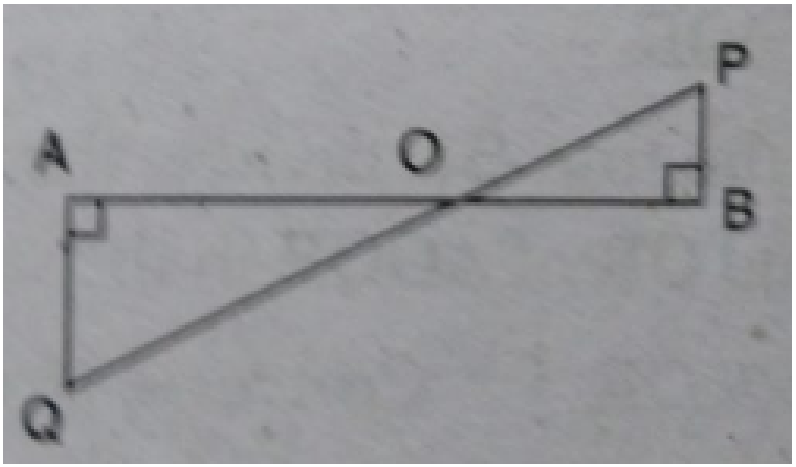
form.



Watch Video Solution

47. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

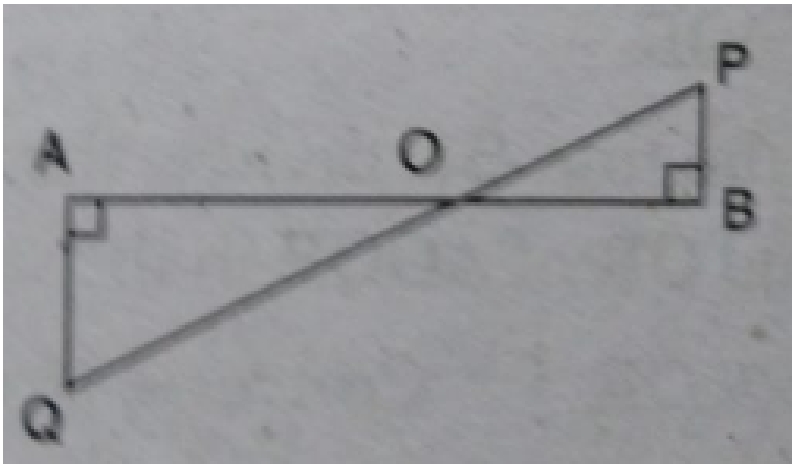
form.



Watch Video Solution

48. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

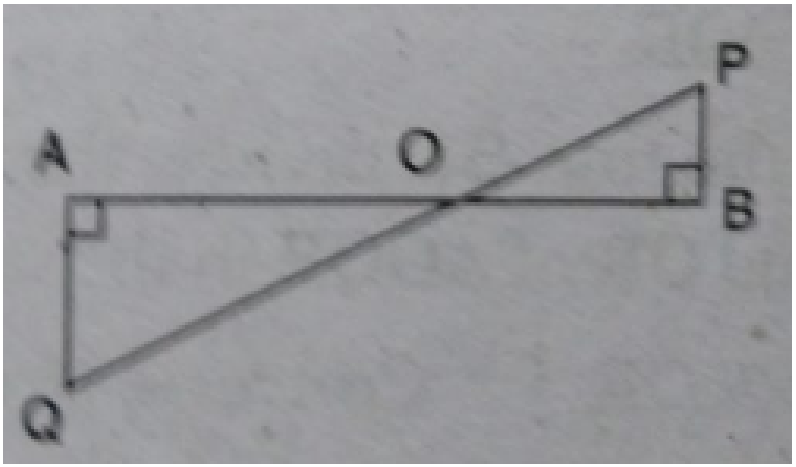
form.



Watch Video Solution

49. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

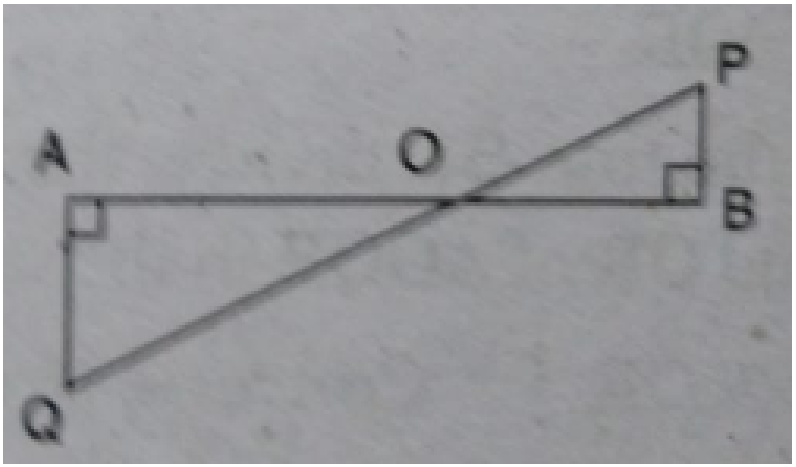
form.



Watch Video Solution

50. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

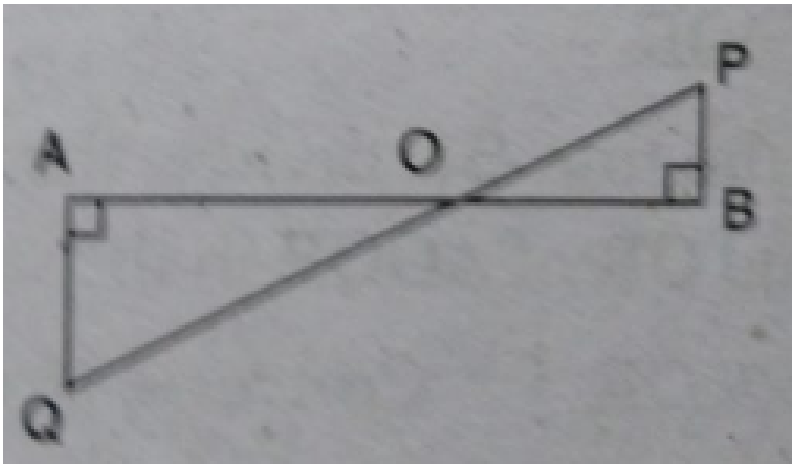
form.



Watch Video Solution

51. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

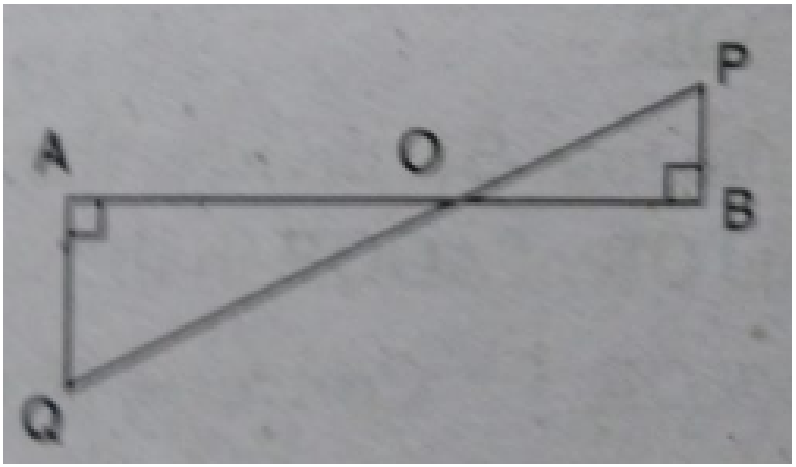
form.



Watch Video Solution

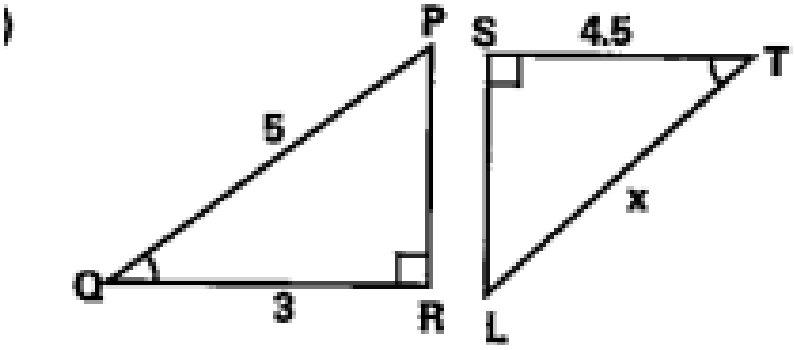
52. Area the triangle similar? IF so, name the criterion of similarity. Write the similarity relation in symbolic

form.



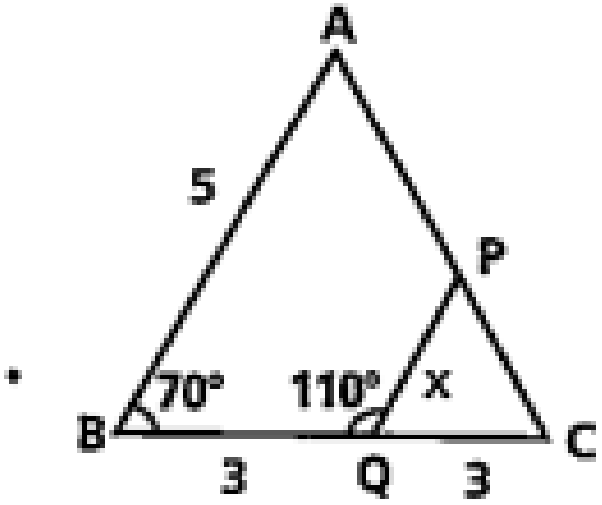
Watch Video Solution

53. If pairs of the traingles are similar and then find the value of x.



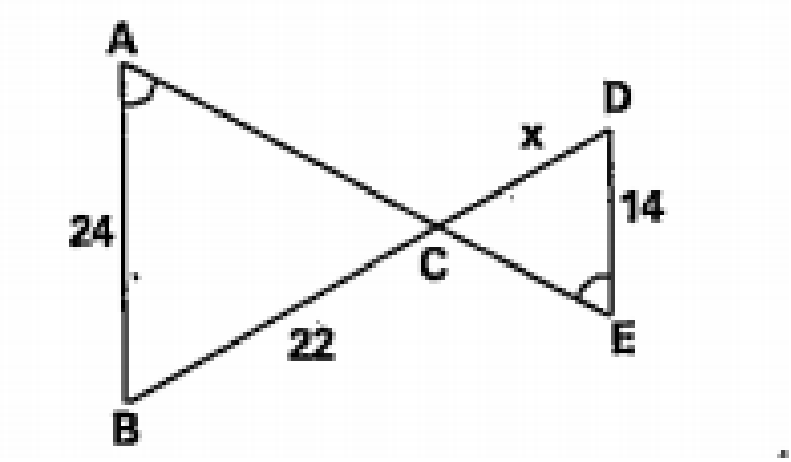
Watch Video Solution

54. If pairs of the traingles are similar and then find the value of x.



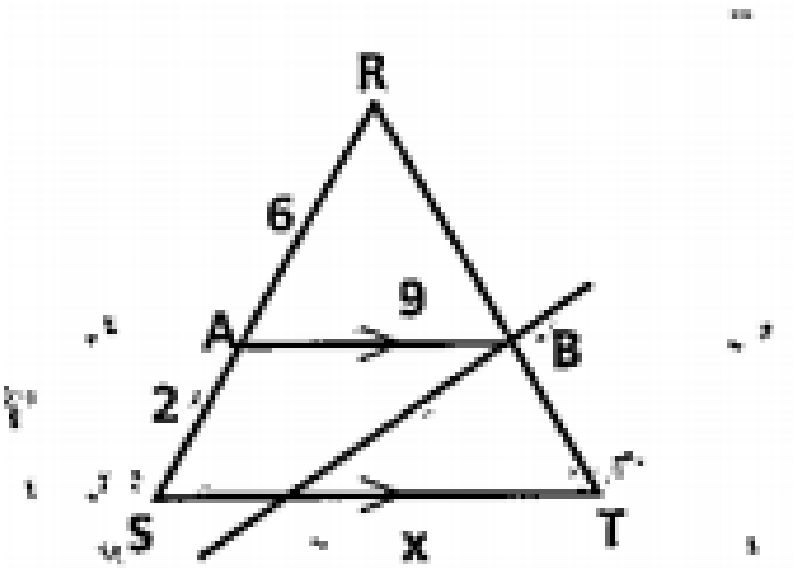
Watch Video Solution

55. If pairs of the traingles are similar and then find the value of x.



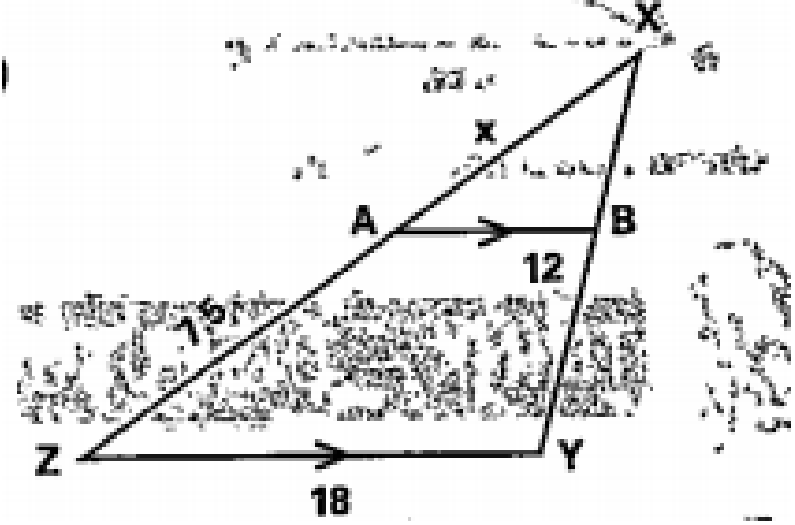
Watch Video Solution

56. If pairs of the traingles are similar and then find the value of x.



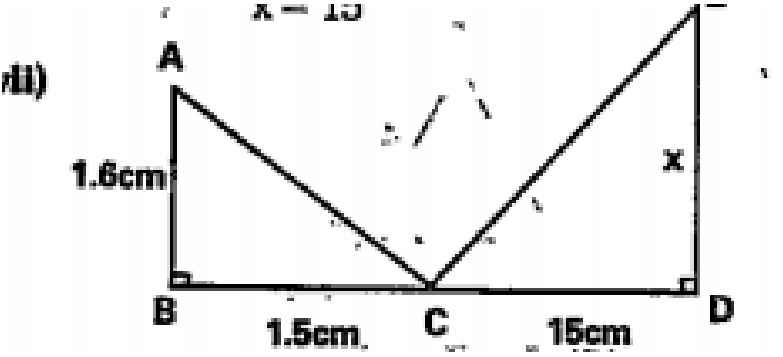
Watch Video Solution

57. If pairs of the traingles are similar and then find the value of x.



Watch Video Solution

58. If pairs of the traingles are similar and then find the value of x.



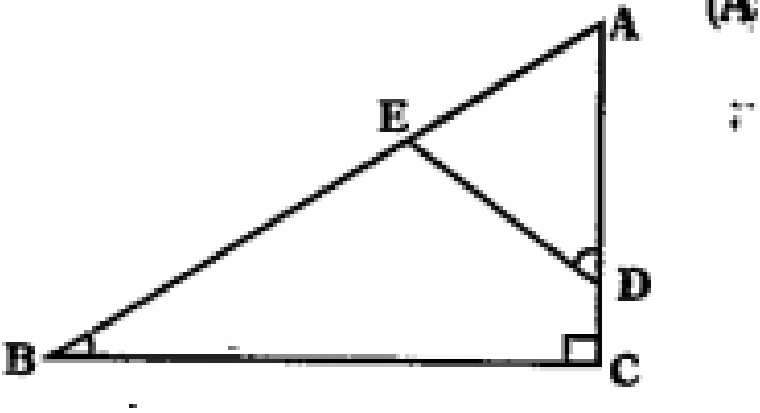
Watch Video Solution

59. Discuss with your friends that in what way similarity of traingles is different from similarity of other polygons?

Watch Video Solution

60. In the given figure, $\angle ADE = \angle B$

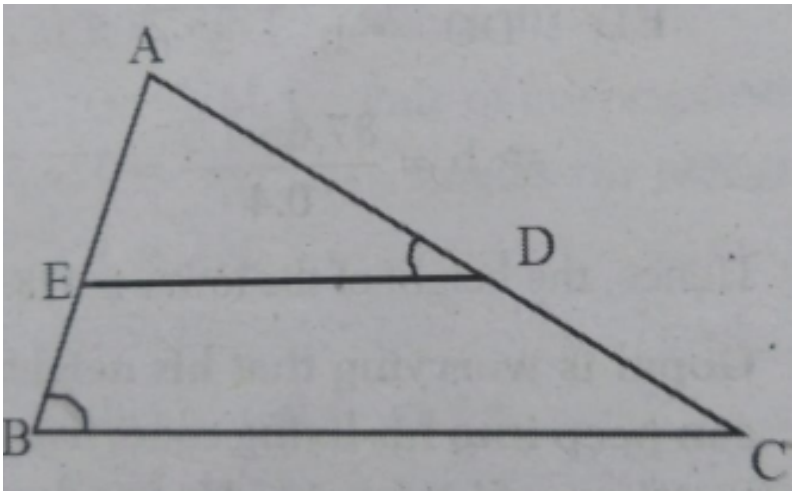
Show that $tra \in g \leq ABC \sim tra \in g \leq ADE$



Watch Video Solution

61. In the given figure $\angle ADE = \angle B$

IF AD=3.8 cm, AE=3.6 cm, BE=2.1 cm, BC=4.2 cm, find DE.



Watch Video Solution

62. The perimeters of two similar triangle are 30 cm and 20 cm respectively. IF one side of the first Triangle is 12 cm. determine the corresponding side of the second Triangle.

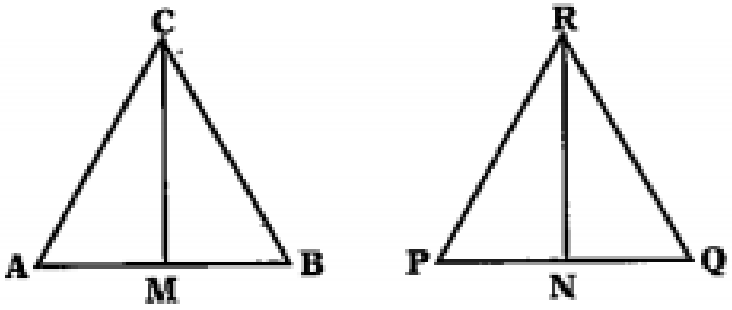
Watch Video Solution

63. A girl of height 90 cm is walking away from the base of a lamp-post at a speed of $1.2m/\sec$. IF the lamp-post is 3.6 m above the ground, find the length of her shadow after 4seconds.

Watch Video Solution

64. Given that $\triangle ABC \sim \triangle PQR$, CM and RN are respectively the medians of similar triangles $\triangle ABC$ and $\triangle PQR$. Prove that

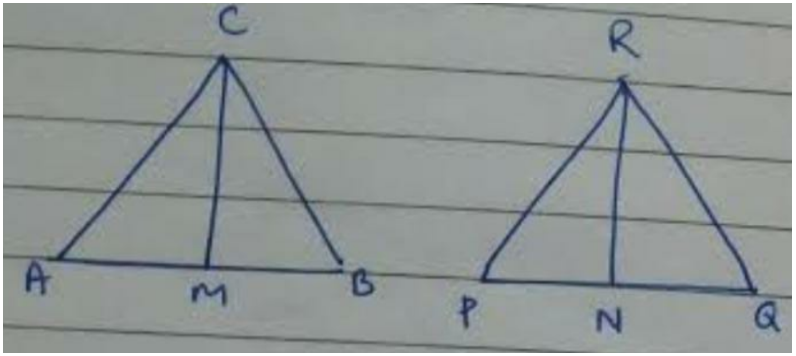
$\triangle AMC \sim \triangle PNR$



Watch Video Solution

65. CM and RN are respectively the medians of similar triangle ΔABC and ΔPQR. Prove that

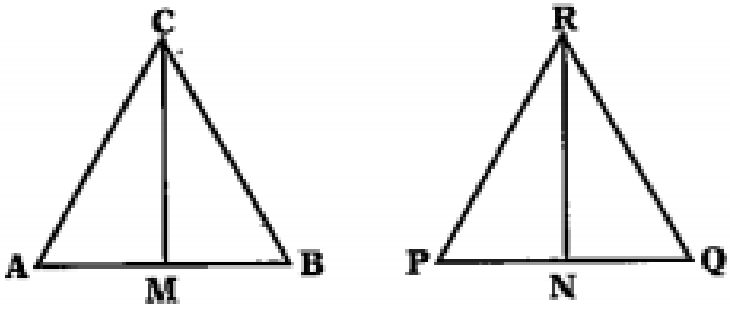
$$\frac{CM}{RN} = \frac{AB}{PQ}$$



Watch Video Solution

66. Given that $\triangle ABC \sim \triangle PQR$, CM and RN are respectively the medians of similar triangles $\triangle ABC$ and $\triangle PQR$. Prove that

$\triangle CMB \sim \triangle RNQ$



Watch Video Solution

67. Diagonals AC and BD of a trapezium ABCD with $AB \| DC$ intersect each other at the point 'O'.Using the criterion of similarity for two tri-angles , show that $\frac{OA}{OC} = \frac{OB}{OD}$.

Watch Video Solution

68. AB,CD,PQ are perpendicular to BD. AB=x. CD=y and PQ=z, prove that $\frac{1}{x}+\frac{1}{y}=\frac{1}{z}$.

Watch Video Solution

69. A flag pole 4 cm tall casts a 6m, shadow. At the same time , a nearby building casts a shadow of 24 m. How tall is the building?

Watch Video Solution

70. CD and GH are respectively the bisectors of $\angle ACB$ and $\angle EGF$ such that D and H lie on sides AB and FE of ΔABC and ΔFEG respectively. IF

$\Delta ABC \sim \Delta FEG$ then show that

$$\frac{CD}{GH} = \frac{AC}{FG}$$

Watch Video Solution

71. CD and GH are respectively the bisectors of $\angle ACB$ and $\angle EGF$ such that D and H lie on sides AB and FE of ΔABC and ΔFEG respectively. IF $\Delta ABC \sim \Delta FEG$ then show that

$$\frac{CD}{GH} = \frac{AC}{FG}$$

Watch Video Solution

72. CD and GH are respectively the bisectors of $\angle ACB$ and $\angle EGF$ such that D and H lie on sides AB and FE of ΔABC and ΔFEG respectively. IF $\Delta ABC \sim \Delta FEG$ then show that $\frac{CD}{GH} = \frac{AC}{FG}$

Watch Video Solution

73. AX and DY are altitudes of two similar triangle ΔABC and ΔDEF. Prove that $AX : DY = AB : DE$

.

Watch Video Solution

74. Construct a Triangle of sides 4 cm, 5 cm and 6cm. Then, construct a Triangle similar to it, whose sides are $2/3$ of the corresponding sides of the first Triangle.

Watch Video Solution

75. Construct a Triangle of sides 4 cm, 5 cm and 6cm. Then, construct a Triangle similar to it, whose sides are $2/3$ of the corresponding sides of the first Triangle.

Watch Video Solution

76. Construct is an isosceles Triangle whise base is 8 cm and altitude is 4 cm, Then, draw another Triangle whose sides are $1^1/2$ times the corresponding sides of the isosceles Triangle.

Watch Video Solution

77. Prove that if the area of two similar triangles are equal, then they are congruent.

Watch Video Solution

78. $\Delta ABC \sim \Delta DEF$ and their areas are respectively 64 cm^2 and 121 cm^2. IF EF=15.4 cm., then find BC.

Watch Video Solution

79. Diagonals of a trapezium ABCD with $AB \| DC$. Intersect each other at the point 'O'. IF AB=2CD, find the ratio of areas of triangles AOB and COD.

Watch Video Solution

80. Equilateral triangle are drawn on the three sides of a right angled Triangle. Show that the area of the

Triangle on the hypotenuse is equal to the sum of the areas of triangle on the other two sides.

Watch Video Solution

81. Prove that the area of the equilateral Triangle described on the side of a square is half the area of the equilateral triangle described on its diagonal.

Watch Video Solution

82. D,E,F are midpoints of sides BC,CA,AB of ΔABC. Find the ratio of areas of ΔDEF and ΔABC.

Watch Video Solution

83. In $\Delta ABC XY \mid\mid AC$ and XY divides the Triangle into two parts of equal area. Find the ratio of $\frac{AX}{XB}$.

Watch Video Solution

84. Prove that the ratio of areas of two similar triangle is equal to the square of the ratio of their corresponding medians.

Watch Video Solution

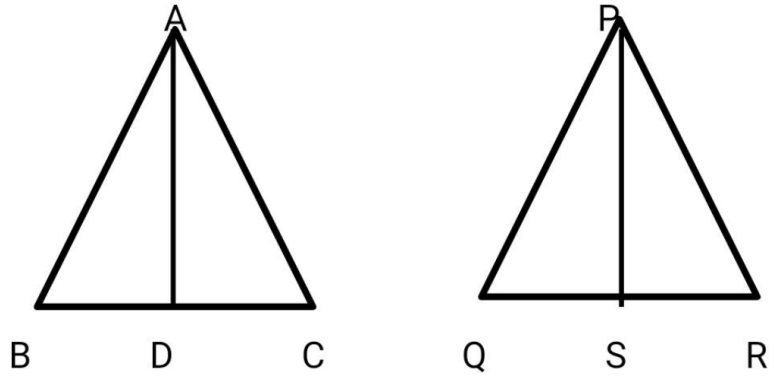
85. $\Delta ABC \sim \Delta DEF$,BC=3cm, EF=4cm and area of ΔABC= 54cm^2. Determine the area of ΔABC.

Watch Video Solution

86. ABC is a Triangle and PQ is a straight line meeting AB in P and AC in Q. IF AP=1 cm and BP= 3cm, AQ=1..5 cm, CQ=4.5 cm. Prove that area of $\Delta APQ = \frac{1}{16}$ (area of ΔABC).

Watch Video Solution

87. The areas of two similar triangle are $81cm^2$ and $49cm^2$ respectively. IF the altitude of the bigger Triangle is 4.5 cm. Find the corresponding altitude of the smaller Triangle.



Watch Video Solution

88. A folder 25 m long reaches a window of building 20 m above the ground. Determine the distance of the

foot of the ladder from the building.

Watch Video Solution

89. BL and CM are medians of a triangle ABC right angled at A. Prove that $4\left(BL^2+CM^2\right)=5BC^2$.

Watch Video Solution

90. O' is any point inside a rectangle ABCD.

Prove that $OB^2+OD^2=OA^2+OC^2$

Watch Video Solution

91. The hypotenuse of a right Triangle is 6 m more than twice of the shortest side. IF the third side is 2 m, less than the hypotenuse, find the sides of the Triangle.

Watch Video Solution

92. ABC is a right Triangle right angled at C. Let BC=a,CA=b,AB=c and let p be the length of the perpendicular fromt C on AB Prove that pc=ab

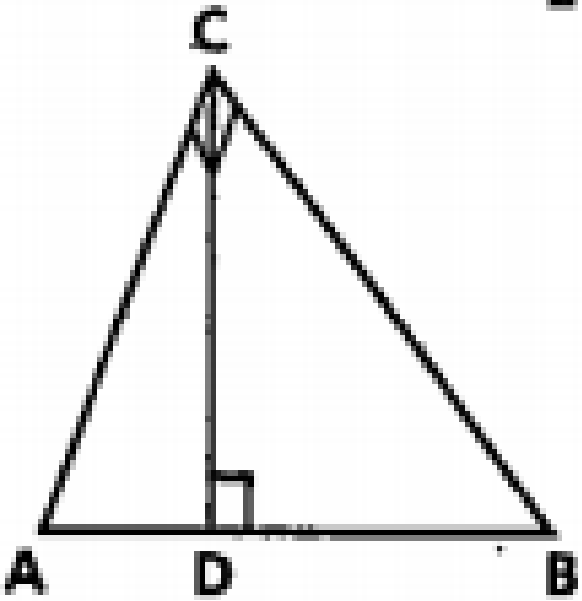
Watch Video Solution

93. ABC is a right Triangle right angled at C. Let BC=a,CA=b,AB=c and let p be the length of the perpendicular fromt C on AB Prove that $\frac{1}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$.

Watch Video Solution

94. In $\triangle ACB, \angle C = 90^\circ$ and $CD \perp AB$.

Prove that $B\frac{C^2}{A}C^2 = B\frac{D}{A}D$.



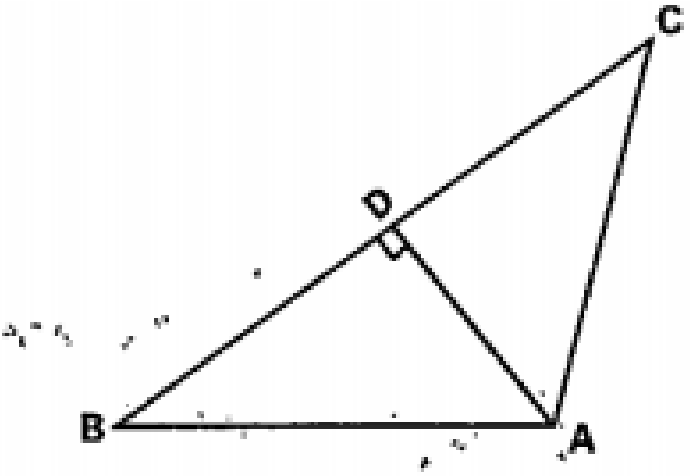
Watch Video Solution

95. A ladder 15 m long reaches a window which is 9 m above the ground on one side of a street. Keeping its foot at the same point, the ladder is turned to other

side of the street to reach a window 12 m high. Find the width of the street.

Watch Video Solution

96. In the given fig. if $AD \perp BC$, prove that $AB^2 + CD^2 = BD^2 + AC^2$.



Watch Video Solution

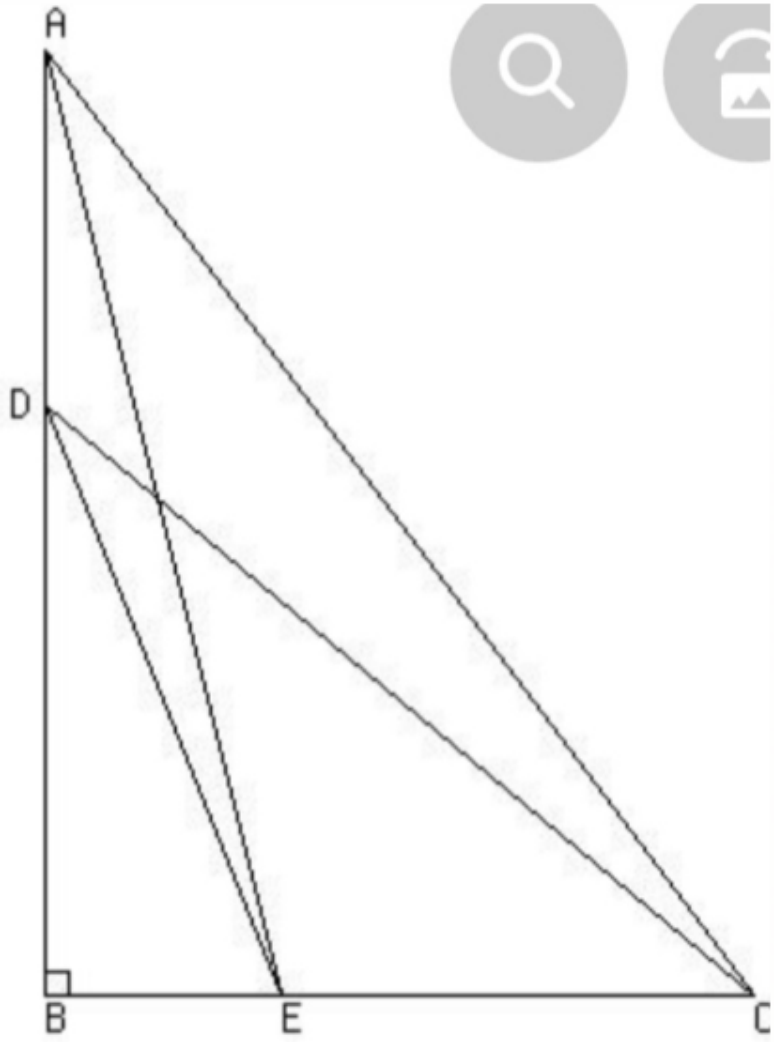
97. For a right angled triangle with integer sides atleast one of its measurements must be an even number. Why?

Watch Video Solution

98. Prove that the sum of the squares of the sides of a rhombus is equal to the sum of the squares of its diagonals.

Watch Video Solution

99. ABC is a right Triangle right angled at B.Let D and E be any points on AB and BC respectively. Prove that $AE^2 + CD^2 = AC^2 + DE^2$.



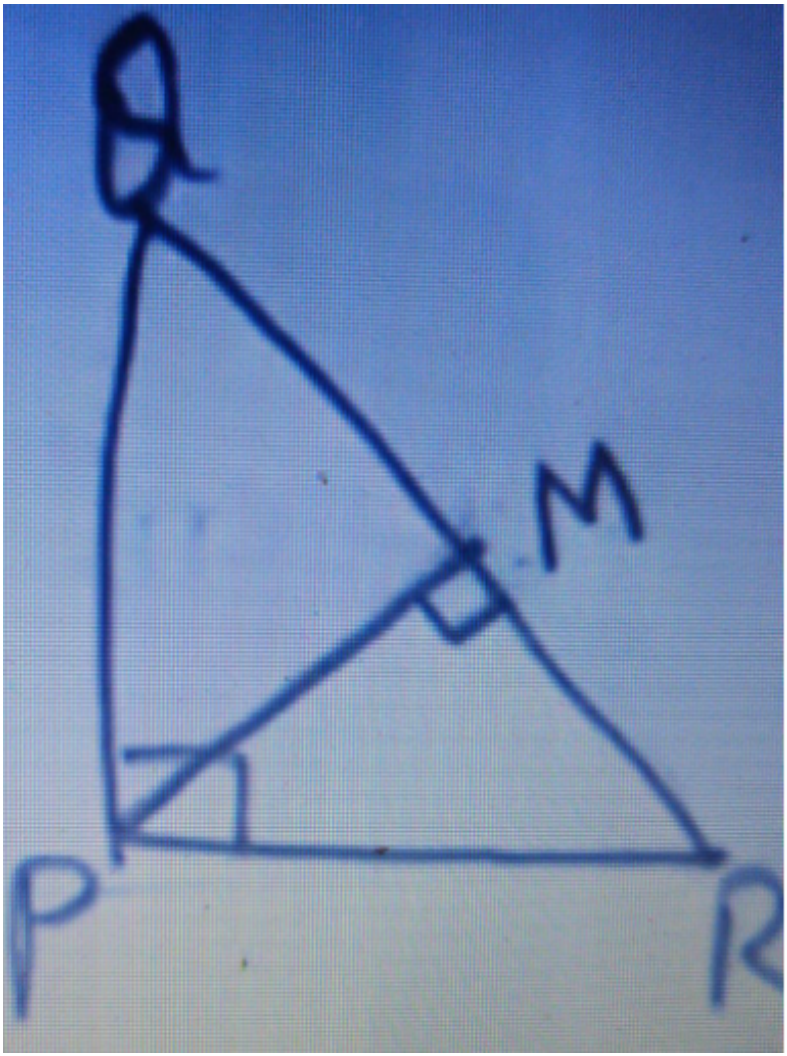
Watch Video Solution

100. Prove that three times the square of any side of an equilateral Triangle is equal to four times the square of the altitude.

Watch Video Solution

101. PQR is a Triangle right angled at P and M is a point on QR such that $PM \perp QR$. Show that PM^2

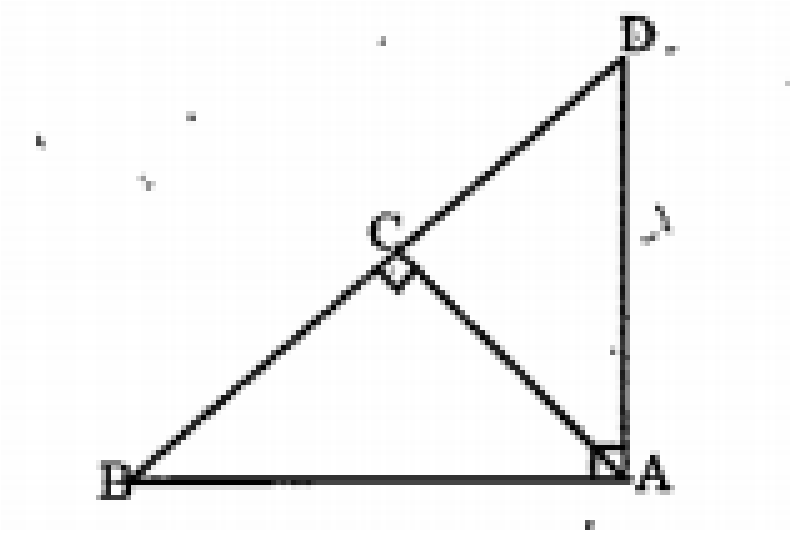
=QM.MR.



Watch Video Solution

102. ABD is a triangle right angled at A and $AC \perp BD$

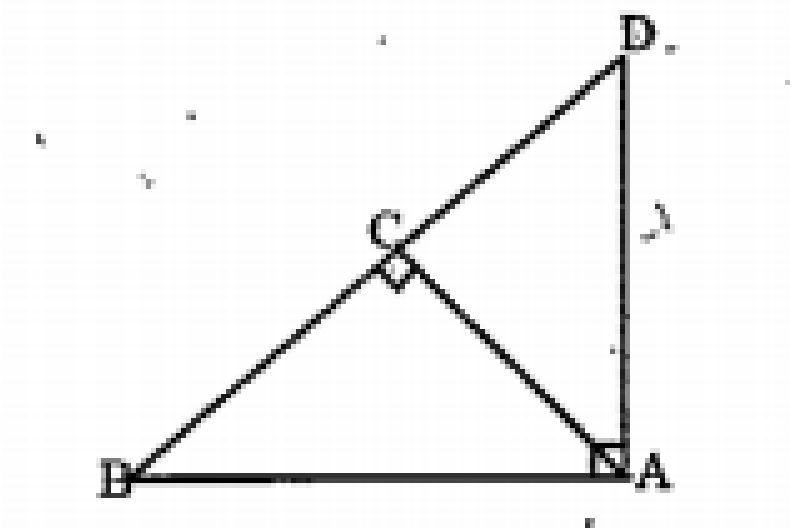
. Show that i) $AB^2 = BC \cdot BD$



Watch Video Solution

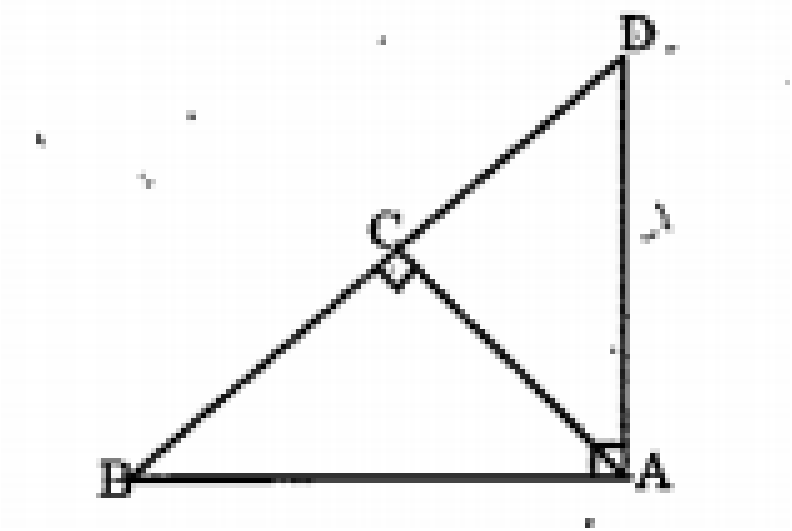
103. ABD is a triangle right angled at A and $AC \perp BD$

. Show that i) $AB^2 = BC \cdot BD$



Watch Video Solution

104. ABD is a triangle right angled at A and $AC \perp BD$. Show that i) $AB^2 = BC \cdot BD$

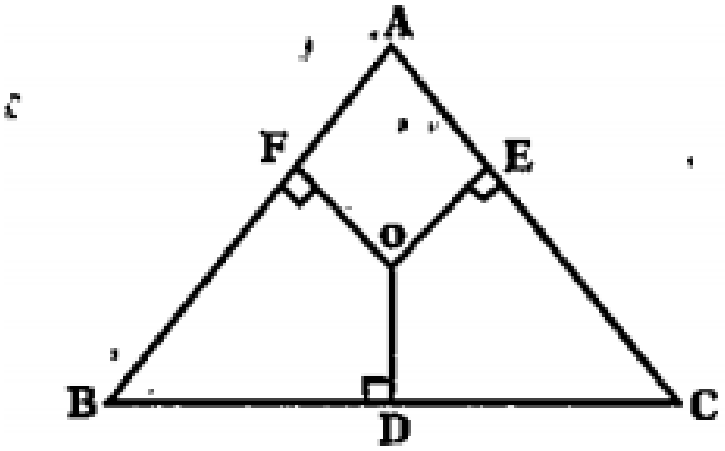


Watch Video Solution

105. ABC is an isosceles Triangle right angled at C. Prove that $AB^2 = 2AC^2$.

Watch Video Solution

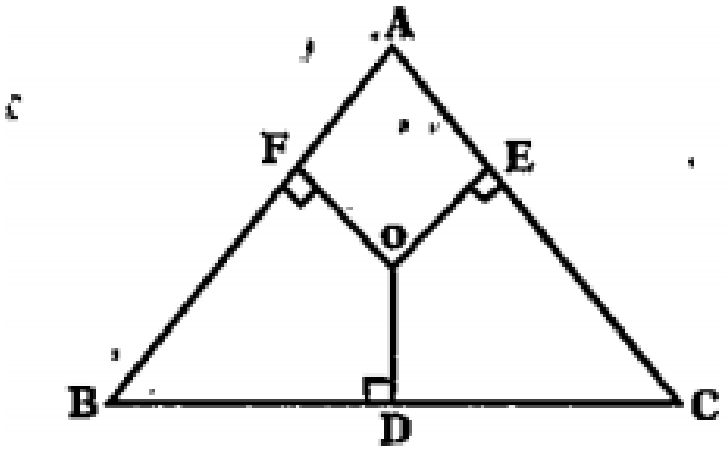
106. O' is any point in the interior of a triangle ABC. $OD \perp BC, OE \perp AC$ and $OF \perp AB$, Show that $OA^2 + OB^2 + OC^2 \tilde{n} OD^2 \tilde{n} OF^2 = AF^2 + BD^2 + CE^2$



Watch Video Solution

107. O' is any point in the interior of a triangle ABC. $OD \perp BC, OE \perp AC$ and $OF \perp AB$, Show that

$AF^2 + BD^2 + CE^2 = AE^2 + CD^2 + BF^2$.



Watch Video Solution

108. A wire attached to vertical pole of height 18m is 24m long and has a stake attached to the other end. How far from the base of the pole should the stake be driven so that the wire will be taut?

Watch Video Solution

109. Two poles of heights 6m and 11 m stand on a plane ground. IF the distance between the feet of the poles is 12m, find the distance between their tops.

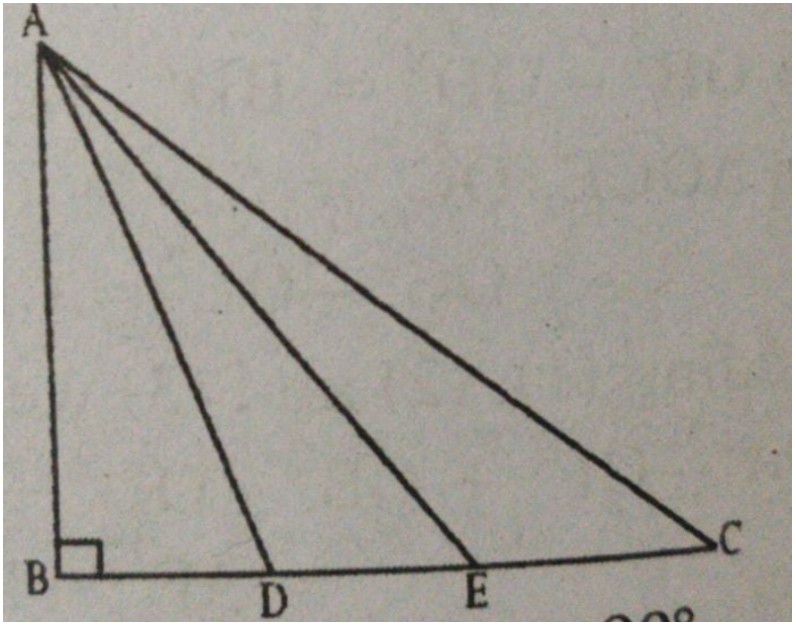
Watch Video Solution

110. In an equilateral Triangle ABC,D is a point on side BC such that $BD = \frac{1}{3}BC$. Prove that $9AD^2 = 7AB^2$

.

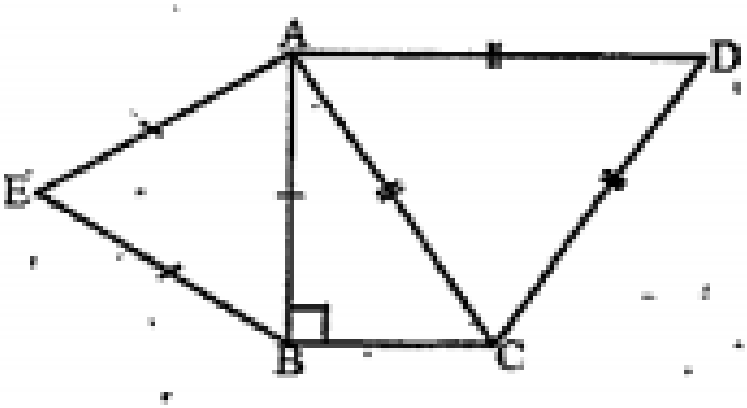
Watch Video Solution

111. In the given figure, ABC is a Triangle right angled at B.D and E are points on BC trisect it. Prove that $8AE^2 = 3AC^2 + 5AD^2$.



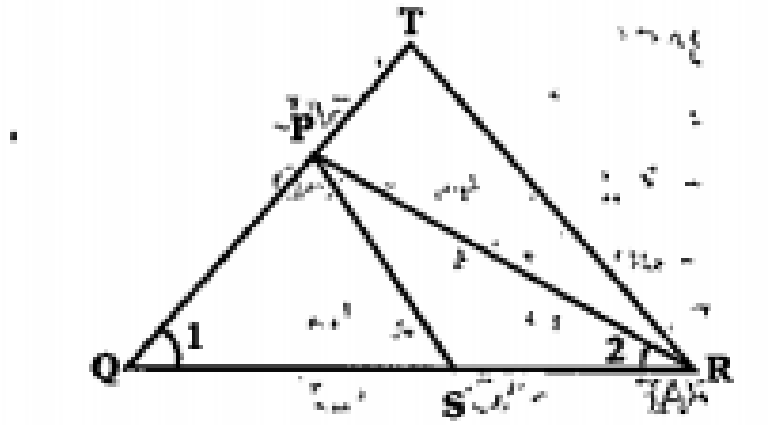
Watch Video Solution

112. ABC is an isosceles triangle right angled at B. Similar triangles ACD and ABE are constructed on sides AC and AB. Find the ratio between the areas of $\triangle ABE$ and $\triangle ACD$.



Watch Video Solution

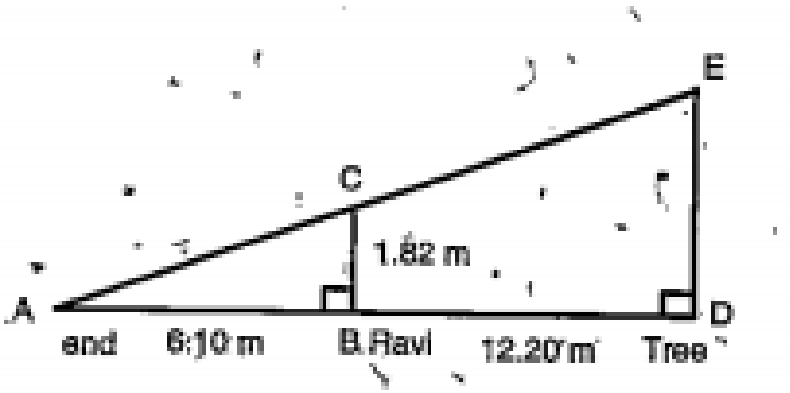
113. In the given figure, $\frac{QT}{P}R = \frac{QR}{QS}$ and $\angle 1 = \angle 2$. Prove that $\triangle PQS \sim \triangle TQR$.



Watch Video Solution

114. Ravi is 1.82 m tall. He wants to find the height of a tree in his backyard, From the tree's base he walked 12.20 m along the tree's shadow to a position where the end of his shadow exactly overlaps the end of the tree's shadow. He is now 6.10 m from the end of the

shadow. How tall is the tree?



Watch Video Solution

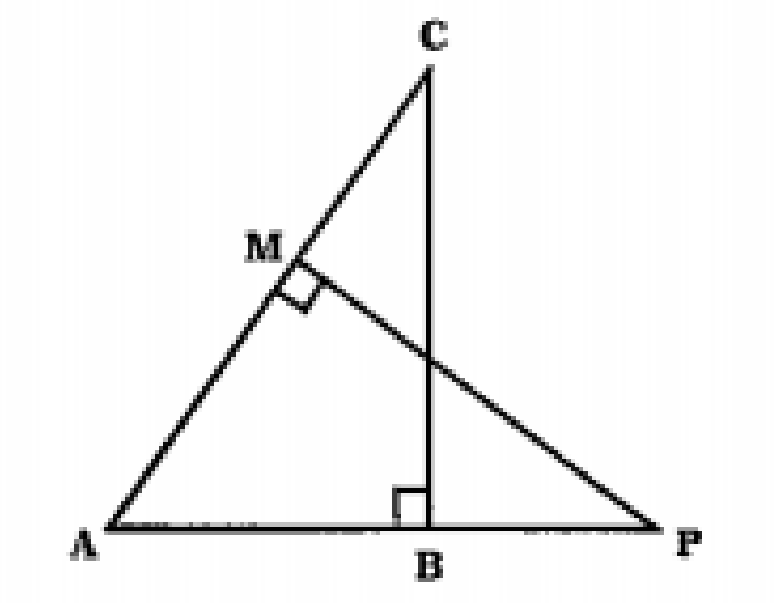
115. The diagonal AC of a parallelogram ABCD intersects DP at the point Q, where 'P' is any point on side AB. Prove that $CQ \times PQ = QA \times QD$.

Watch Video Solution

116. $\triangle ABC$~$tra \in g \leq AMP$are two right triangles right angled at B and M respectively.

Prove that

$\triangle ABC$~ $\triangle AMP$



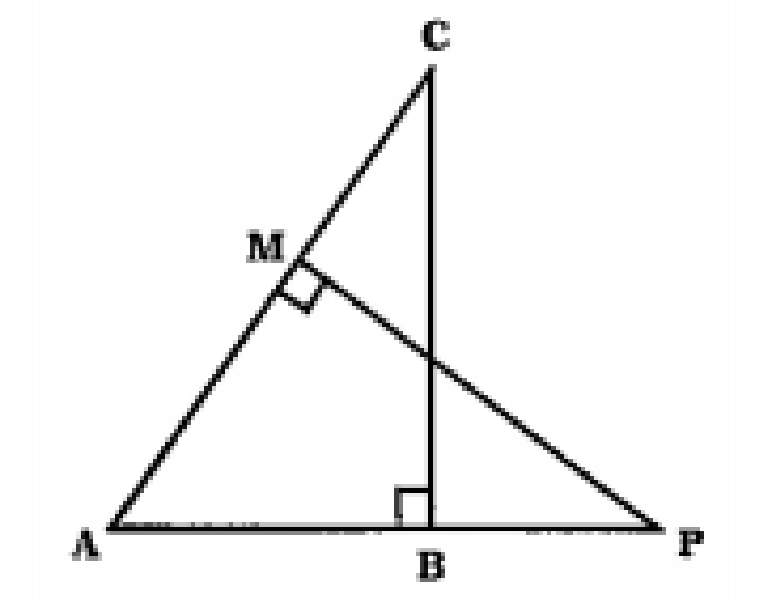
Watch Video Solution

117. $\triangle ABC$~$tra \in g \leq AMP$are two right triangles

right angled at B and M respectively.

Prove that

$$C\frac{A}{P}A = B\frac{C}{M}P$$



Watch Video Solution

118. An aeroplane leaves an airport and flies due north at a speed of 1000 kmph. At the same time another aeroplane leaves the same airport and flies due west at a speed of 1200 kmph. How far apart will the two planes be after $1\frac{1}{2}$ hour?

Watch Video Solution

119. In a right Triangle ABC right angled at C.P and Q are points on sides AC and CB respectively which divide these sides in the ratio of 2:1. Prove that

$9AQ^2 = 9AC^2 + 4BC^2$

Watch Video Solution

120. In a right Triangle ABC right angled at C.P and Q are points on sides AC and CB respectively which divide these sides in the ratio of 2:1. Prove that

$9BP^2 = 9BC^2 + 4AC^2$

Watch Video Solution

121. In a right Triangle ABC right angled at C.P and Q are points on sides AC and CB respectively which divide these sides in the ratio of 2:1. Prove that

$9\left(AQ^2 + BP^2\right) = 13AB^2$

Watch Video Solution

122. In a $\triangle ABC$, $DE \mid\mid BC$ and $AD = \frac{1}{3}BD$. If BC = 5.6cm, find DE.

A. `

B.

C.

D.

Answer:

Watch Video Solution

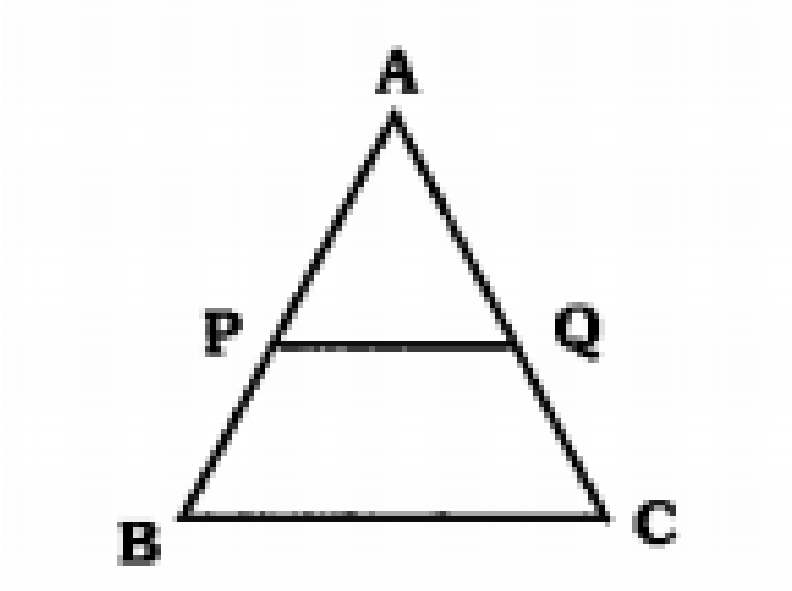
123. In the adjacent figures $\triangle ABC \sim \triangle AHK$. If AK = 8cm, BC = 4.5cm and HK = 9cm

find AC.

Watch Video Solution

124. In the below given figure P and Q are points on the sides AB and AC respectively of $\triangle ABC$ such that AQ = 3cm, QC= 5cm and $PQ \| BC$. Find the

ratio of areas $tra \in g \leq APQ$ and $\triangle ABC$.

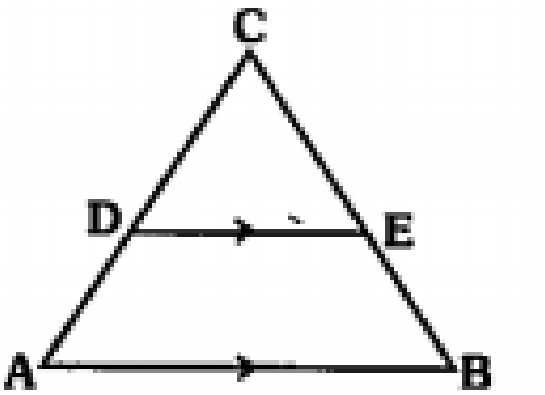


Watch Video Solution

125. What value of (5) of x will make $DE \mid\mid AB$, in the given figure?

$AD = 5x + 5, CD = x + 2$

$BE = 3x + 3, CE = x$



Watch Video Solution

126. $\triangle ABC \sim \triangle PQR$ and their areas are respectively $81cm^2$ and $144cm^2$.

If QR = 16 cm then find BC.

Watch Video Solution

127. $\triangle ABC \sim \triangle DEF$, BC = 5 cm, EF = 6cm and area of $\triangle DEF = 72cm^2$. Determine the area of $\triangle ABC$

Watch Video Solution

128. A ladder 13cm long reaches a windown of building 12cm above the ground. Determine the distance of the foot of the ladder from the building.

Watch Video Solution

129. The hypotenuse of a right angled triangle is 3 m more than twice of the shortest side. If the third side is 1 m less than the hypotenuse find the sides of the triangle.

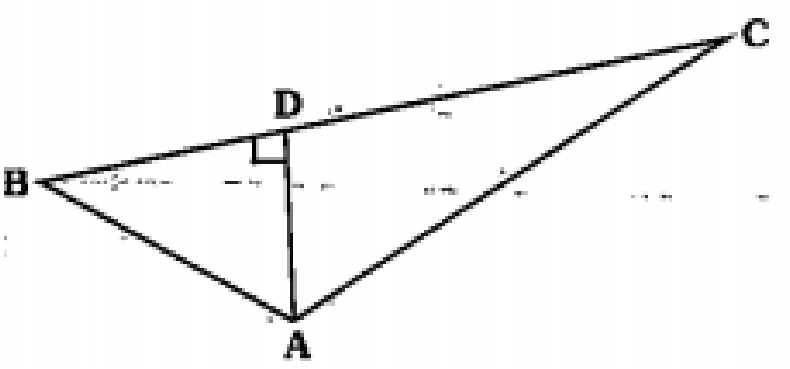
Watch Video Solution

130. A ladder 25 m long reaches a window which is 15 m above the ground an one side of the road. Keeping its foot at the same point, the ladder is turned to other side of the road to reach a window 20 m high. Find the width of the road.

Watch Video Solution

131. In the given figure below, If $AD \perp BC$,

prove that $AB^2 + CD^2 = AC^2 + BD^2$.



Watch Video Solution

132. In an equilateral triangle ABC, if AD is the altitude

prove that $3AB^2 = 4AD^2$.

Watch Video Solution

133. A wire attached to a vertical pole of height 15 m is 25 m long and has a stake attached to the other end. How far from the base of the pole should the stake be driven so that the wire will be taut?

Watch Video Solution

134. The larger of two complimentary angles is double the smaller. Find the angles.

Watch Video Solution

135. In $\triangle ABC, DE \| BC$ and $\frac{AD}{DB} = \frac{3}{5}$. If AE = 2.1cm, then find AC.

Watch Video Solution

136. What can you say about the ratio of areas of two similar triangles?

Watch Video Solution

137. Construct is an isosceles Triangle whise base is 8 cm and altitude is 4 cm, Then, draw another Triangle

whose sides are $1^1/2$ times the corresponding sides of the isosceles Triangle.

Watch Video Solution

138. Give two different examples of pair of i) Similar figures

Watch Video Solution

139. $\Delta ABC \sim \Delta DEF$ and their areas are respectively 64 cm^2 and 121 cm^2. IF EF=15.4 cm., then find BC.

Watch Video Solution

140. In ΔABC, $DE \| BC$ and $\frac{AD}{DB} = \frac{3}{5}$, AC=5.6. Find AE.

Watch Video Solution

141. State and prove basic Proportional theorem.

Watch Video Solution

142. Construct a Triangle of sides 4 cm, 5 cm and 6cm. Then, construct a Triangle similar to it, whose sides are $2/3$ of the corresponding sides of the first Triangle.

Watch Video Solution

143. Construct a Triangle of sides 4.2cm, 5.1 cm and 6 cm. Then construct a Triangle similar to it, whose sides are $2/3$ of corresponding sides of the first triangle.

Watch Video Solution

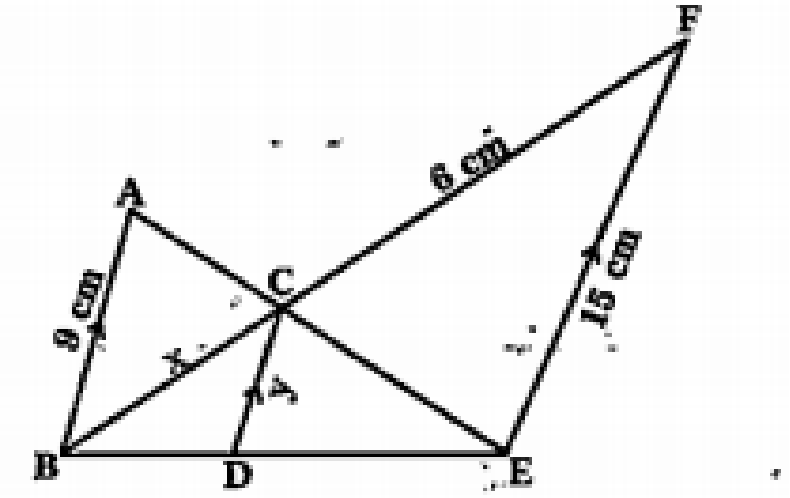
144. Is a square similar to a rectangle? Justify your answer.

Watch Video Solution

145. In a ΔDEF, A, B and C are mid points of EF,FD and DE respectively. IF the area of ΔDEF is 14.4 cm^2 then find the area of ΔABC.

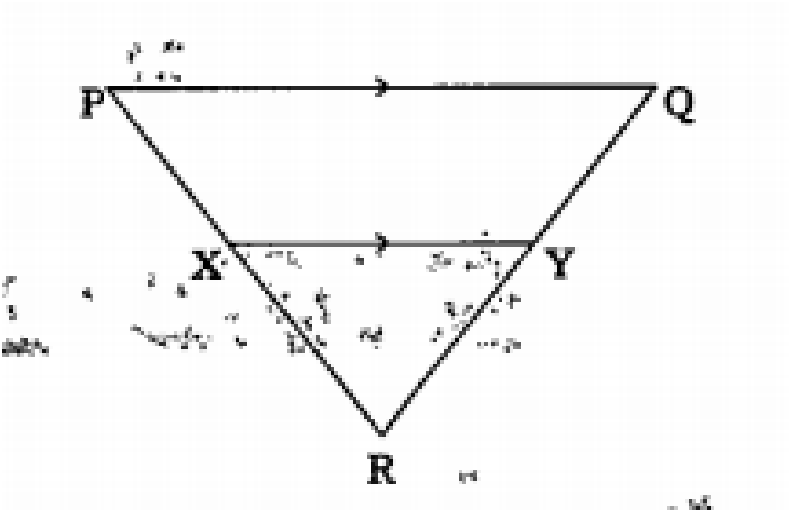
Watch Video Solution

146. Observe the below diagram and find the values of x and y.



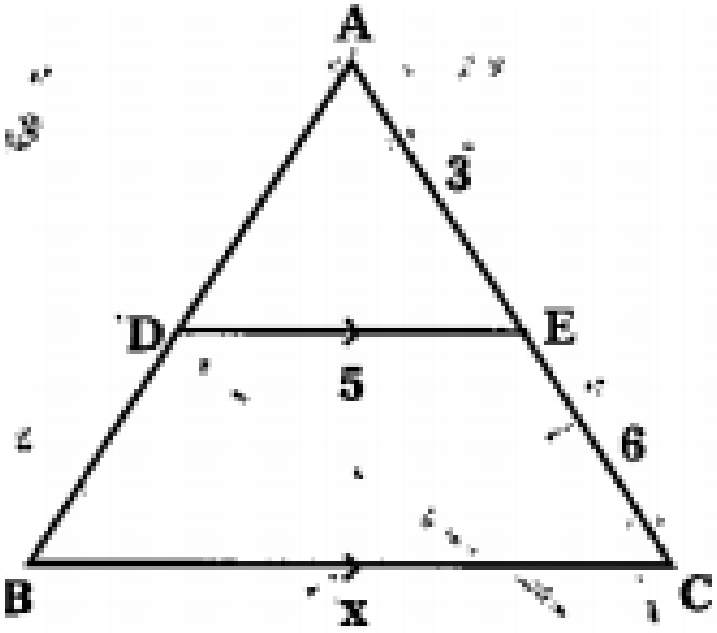
Watch Video Solution

147. Observe the figure given below in $\triangle PQR$ if XY/PQ, $\frac{PX}{XR} = \frac{5}{3}$ and QR = 7.2. Then find the length of RY.



Watch Video Solution

148. Find the value of 'x' in the given figure where $\triangle ABC \sim \triangle ADE$.



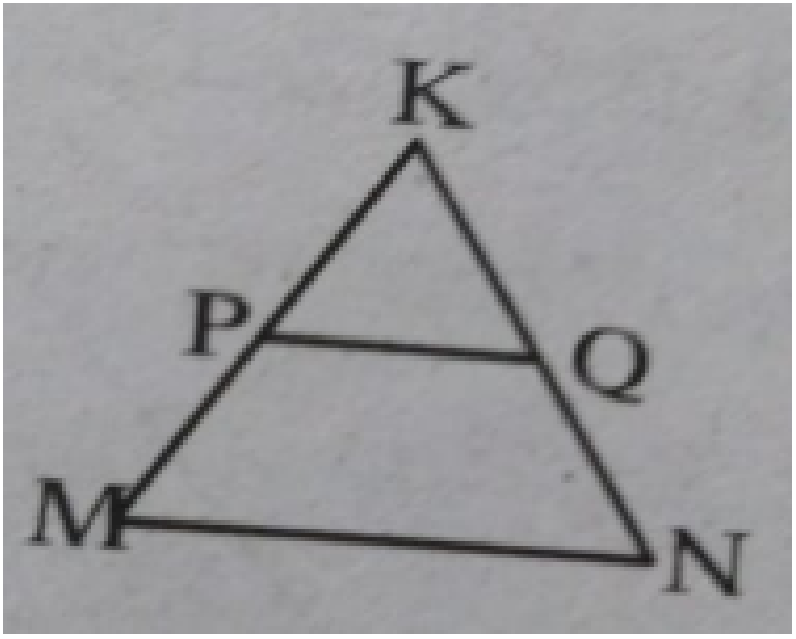
Watch Video Solution

149. Construct a triangle of sides 5 cm, 6 cm and 7cm then construct a triangle similar to it, whose sides are

$2/3$ of a corresponding sides of the triangle.

Watch Video Solution

150. In the figure ,PQ/MN, $\frac{KP}{PM} = \frac{4}{13}$ and KN=20.4 cm then KQ= .....cm.



Watch Video Solution

151. If $\triangle ABC \sim \triangle DEF$ if $DE: AB = 2:3$ and area of triangle DEF = 44 sq.unitsthen find the area of $\triangle ABC$.

Watch Video Solution

152. Side of a rhombus is 4 cm then its perimeter is.....cm.

Watch Video Solution

153. IF $8^2 + 15^2 = k^2$ then k=.....

Watch Video Solution

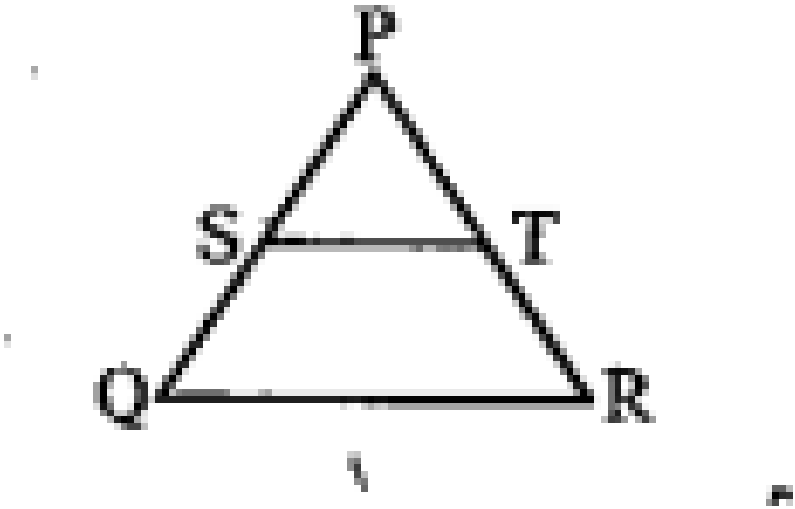
154. $\Delta ABC \sim \Delta DEF$ and 2AB=DE and BC=8cm then EF=.....cm.

Watch Video Solution

155. $\Delta ABC \sim \Delta DEF$, BC=4cm, EF=5cm and area of $\Delta ABC = 80cm^2$ then area of ΔDEF=.....cm^2

Watch Video Solution

156. In the figure, in $\triangle PQR, QR//ST, \frac{PS}{SQ} = \frac{3}{5}$ and $PR = 28$ cm then $PT =$ ..... cm.



Watch Video Solution

157. If $2^{x+1} = 3^{1-x}$ then find the value of x.

Watch Video Solution

158. The angles of a triangle arc in the ratio 1:2:3 then the largest angle is.....

Watch Video Solution

159. In the Right angle triangle $\triangle ABC$, AB = 20, AC = 25 then find the value of BC.

Watch Video Solution

160. In the $\triangle ABC \sim \triangle DEF$ $\angle C = 90\infty$, $B = 75\infty$

then find the value of $\angle F$.

Watch Video Solution

161. $\triangle ABC \sim \triangle PQR$ if AB = 6, BC = 4, AC = 8 and PR = 6 then find the PQ + QR.

Watch Video Solution

162. In the rhombus ABCD, AB = 6 cm, then find $AC^2 + BD^2$.

Watch Video Solution

163. If $\triangle ABC \sim \triangle DEF, \angle = 50^\circ$ then find $\angle E + \angle F$

Watch Video Solution

164. $\triangle ABC \sim \triangle PQR$ if AB = 3.6, PQ = 2.4 and PR = 5.4 then find the AC.

Watch Video Solution

165. If $\triangle ABC \sim \triangle PQR$ if $\angle A = 50$ and $\angle B = 60$ then find the angle of $\angle R$.

Watch Video Solution

166. A man goes 40m due East and then 96m due North. Find the distance from the starting point.

Watch Video Solution

167. In $\triangle ABC$, $\angle C = 90$, AC = 6 cm, BC = 8 cm. then find the length of the median through C.

Watch Video Solution

168. If $\triangle ABC$, AC = 13 cm. then find the length of the median BD.

Watch Video Solution

169. The length of the diagonal of a square is $5\sqrt{2}cm$.

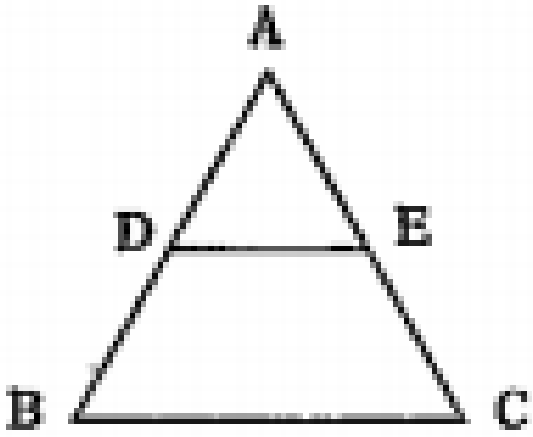
Then find the area of the square.

Watch Video Solution

Exercise

1. In $\triangle ABC, DE \| BC$ and $AD = \frac{1}{3}BD$.

If BC = 4.5cm, Find DE.

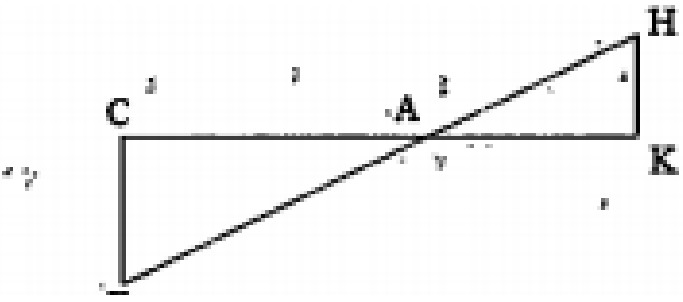


Watch Video Solution

2. In the adjacent figure $\triangle AHK \sim \triangle ABC$.

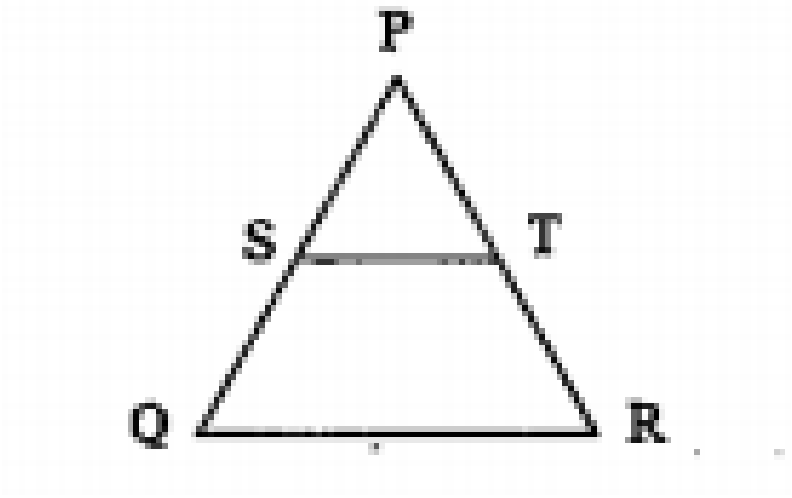
If AK = 10cm, BC = 3.5cm and HK = 7cm,

find AC.



Watch Video Solution

3. In the adjacent figures, S and T are points on the sides PQ and PR respectively of $\triangle PQR$ such that PT = 2cm, TR = 4cm and $ST \parallel QR$. Find the ratio of the areas of $\triangle PST$ and $\triangle PQR$.

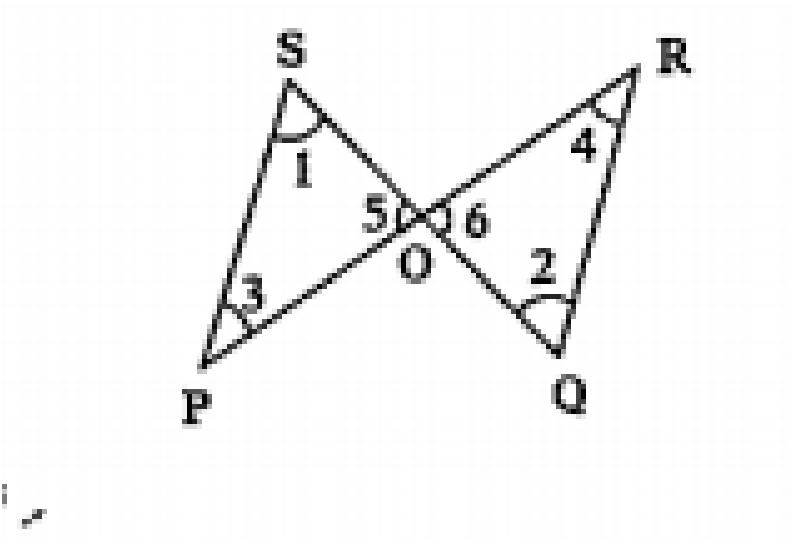


Watch Video Solution

4. In the adjacent figure, $\frac{OA}{OC} = \frac{OD}{BC}$. Prove that $\angle A =$ $an \geq lC$ and $\angle B = \angle D$.

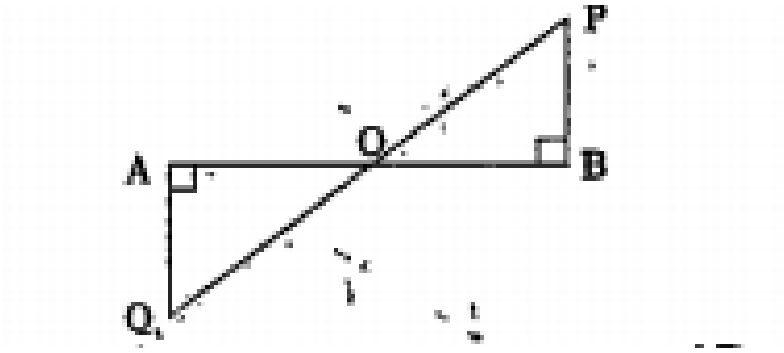
Watch Video Solution

5. In the adjacent figure, if $\triangle PQS \sim \triangle ROQ$, prove that $PS \mid\mid QR$.



Watch Video Solution

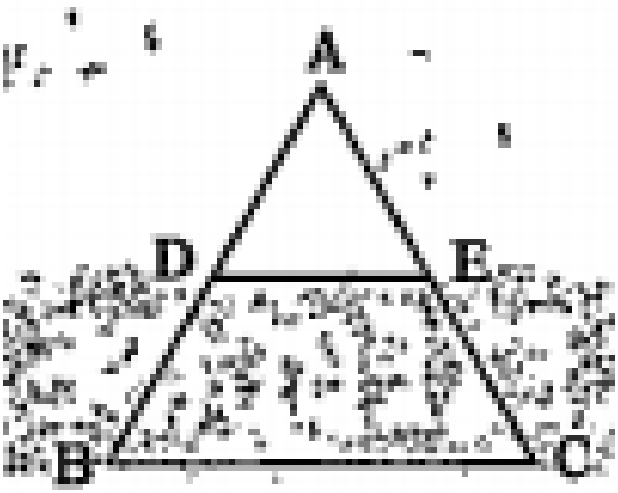
6. In the adjacent figure, QA and PB are perpendiculars to AB. IF AO= 10cm, BO = 6cm and PB= 9cm. Find AQ



Watch Video Solution

7. In the adjacent figure $DE \mid\mid BC$ and $\frac{AD}{DB} = \frac{3}{5}$. If AC = 4.8cm,

find AE.

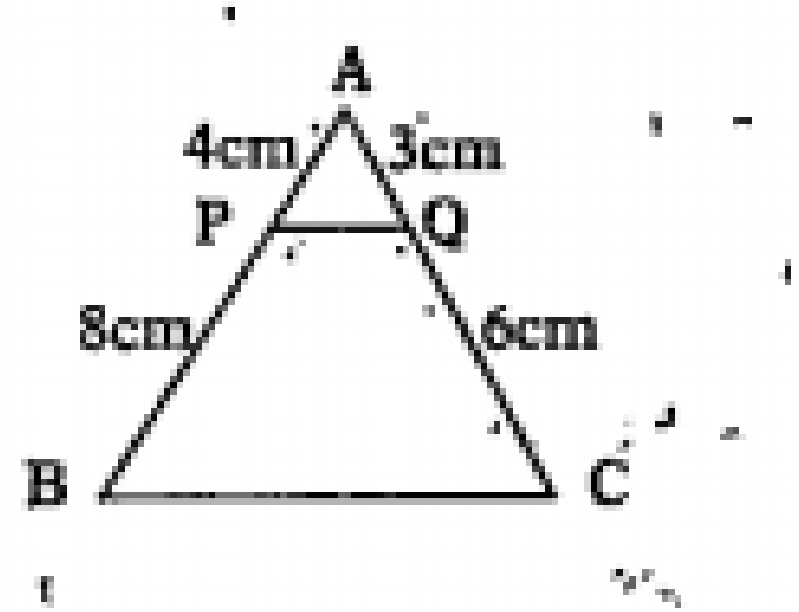


Watch Video Solution

8. P and Q are points on sides AB and AC respectively of $\triangle ABC$.

If AP = 4cm, PB= 8cm, AQ = 3cm and QC =6cm,

show that BC = 3PQ.



Watch Video Solution

9. Prove that if the area of two similar triangles are equal, then they are congruent.

Watch Video Solution

10. In the trapezium ABCD, $AB \parallel CD$ and AB = 2CD. If the area of $\triangle AOB = 84cm^2$, find the area of $\triangle COD$.

Watch Video Solution

11. D,E,F are the mid points of the sides BC, CA and AB respectively of a $\triangle ABC$. Determine the ratio of the areas of $\triangle DEF$ and $\triangle ABC$.

Watch Video Solution

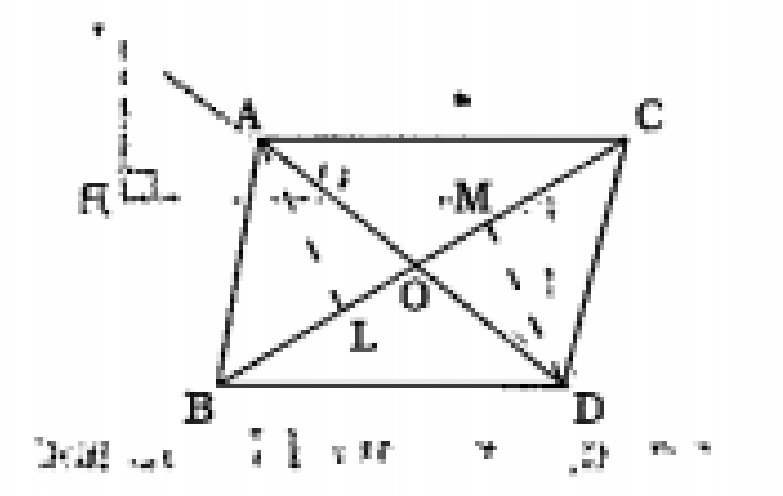
12. If two triangles are equiangular, prove that the ratio of the corresponding sides is same as the ratio of the corresponding medians.

Watch Video Solution

13. If two traingles are equilatangular prove that the ratio of the corresponding sides is same as the ratio of the corresponding altitudes.

Watch Video Solution

14. In the adjacent figure, $\triangle ABC$ and $\triangle DBC$ are on the same base BC. If AD and BC intersect at O, Prove that $\frac{areaof\ \triangle ABC}{areaof\ \triangle DBC} = \frac{AO}{DO}$



Watch Video Solution

15. The areas of two similar triangles ABC and PQR are in the ratio 9 : 16. If BC = 4.5cm. Find the length of QR.

Watch Video Solution

16. In the following a, b and c denote the lenghts of the sides of a triangle. Determine whether the triangle is a right triangle or not in each case.

a = 3cm, b= 4cm, c = 6cm.

Watch Video Solution

17. In the following a, b and c denote the lenghts of the sides of a triangle. Determine whether the triangle is a right triangle or not in each case.

a = 7cm, b= 12, c = 5cm

Watch Video Solution

18. In the following a, b and c denote the lenghts of the sides of a triangle. Determine whether the triangle is a right triangle or not in each case.

a = 8cm, b = 17 cm, c = 15cm

Watch Video Solution

19. In the following a, b and c denote the lenghts of the sides of a triangle. Determine whether the triangle is a right triangle or not in each case.

a = 9cm, b = 41cm, c = 40cm

Watch Video Solution

Watch Video Solution

20. Two poles of heights 23m and 30m stand on the plane ground. If the distance between their feet is 24m, find the distance between their tops.

Watch Video Solution

21. Prove that three times the square of any side of an equilateral Triangle is equal to four times the square of the altitude.

Watch Video Solution

22. A man goes 40m due East and then 96m due North. Find the distance from the starting point.

Watch Video Solution

23. A ladder 26m, long reaches a window of a house 24m above the ground. Determine the distance of the foot of the ladder from the house.

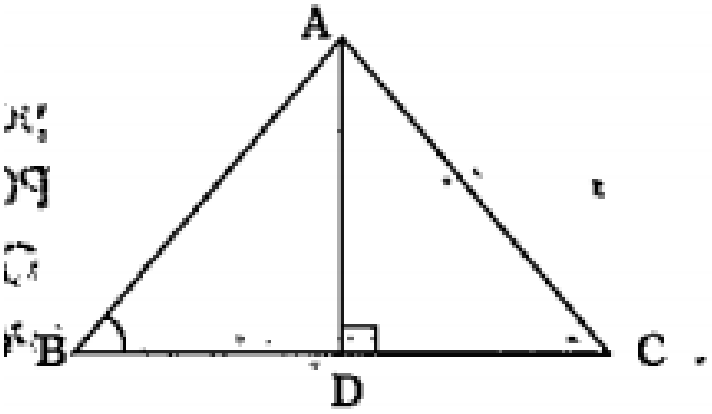
Watch Video Solution

24. In a quadrilateral ABCD, $\angle B = 90^0$, $AD^2 = AB^2 + BC^2 + CD^2$. Prove that $\angle ACD = 90^0$.

Watch Video Solution

25. In the adjacent figure, ABC is a triangle in which $\angle ABC < \angle 90$ and $AD \perp BC$. Prove that

$AC^2 = AB^2 + BC^2 - 2BC.BD.$



Watch Video Solution

26. In $\triangle ABC, \angle C = \angle 90$, D is the mid point of BC, Prove that $AB^2 = 4AD^2 - 3AC^2$.

Watch Video Solution

27. Determine whether the triangle having sides $(a-1)cm$, $2\sqrt{a}cm$and $(a+1)cm$. Is a right angled triangle.

Watch Video Solution

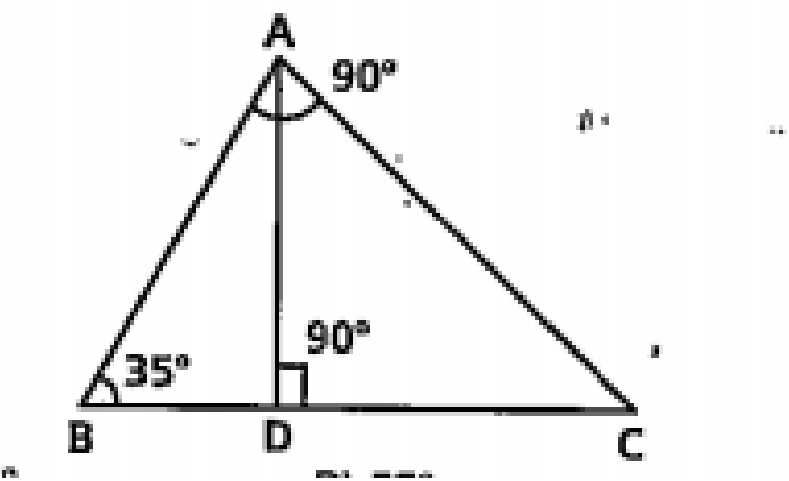
28. In an equilateral triangle ABC, AD $\perp$ BC meeting BC in D then AD^2=.....

Watch Video Solution

29. In a paralledogram, the sum of the square of the lengths of the diagonals is equal to sum of the squares of the lengths of its sides.

Watch Video Solution

30. From the figure $\angle DAC$



A. 35°

B. 55°

C. 45°

D. 60°

Answer:

Watch Video Solution

Watch Video Solution

31. The ratio of the corresponding sides of two similar triangles is 5:3. Then the ratio of their areas.....

A. $5:3$

B. $3:5$

C. $6:10$

D. $25:9$

Answer:

Watch Video Solution

32. If $\triangle ABC \sim \triangle DEF, BC = 4cm, EF = 5cm$ and area triangle ABC = 80 cm^2 then $area \triangle DEF$=

A. $100cm^2$

B. $150cm^2$

C. $125cm^2$

D. $225cm^2$

Answer:

Watch Video Solution

33. In the figure, DE/BC and AD:DB=1:2 then area $\Delta ADE : \Delta ABC$=

A. $1:4$

B. $4:1$

C. $1:9$

D. $2:9$

Answer:

Watch Video Solution

34. $\Delta ABC \sim \Delta PQR$, M is the midpoint of BC and N is the midpoint of QR. IF $\Delta ABC = 100cm^2$ and $\Delta PQR = 144cm^2$ and AM=4 cm, then PN=

A. 5 cm

B. 4.8 cm

C. 4 cm

D. 3.8 cm

Answer:

Watch Video Solution

35. In ΔPQR, $PQ = 6\sqrt{3}$cm, PR=12cm and QR=6cm , then $\angle Q$=

A. 30°

B. 45°

C. 90°

D. 60°

Answer:

Watch Video Solution

36. The lengths of diagonals of a rhombus are 24 cm and 32 cm, then the perimeter of the rhombus is.....cm.

A. 180°

B. 120°

C. 220°

D. 112°

Answer:

Watch Video Solution

37. Which of the following does not belongs to side of the right triangle?

A. 9 cm, 15 cm, 12cm

B. 9 cm, 5 cm, 7cm

C. 400 mm, 300 mm, 500 mm

D. 2 cm, $\sqrt{5}cm$, 1 cm

Answer:

Watch Video Solution

38. In an isosceles ΔPQR,PR=QR and $PQ^2 = 2PR^2$, then $\angle R$=

A. 60°

B. 30°

C. 90°

D. 45°

Answer:

Watch Video Solution

39. In ΔABC the midpoints are D,E and F of the sides AB,BC and CA, then $\Delta DEF : \Delta ABC$ is

A. $1:1$

B. $1:3$

C. $1:2$

D. $1:4$

Answer:

Watch Video Solution

40. If the diagonal of a square is $7\sqrt{2}$ cm, then its area is

A. $28cm^2$

B. $14\sqrt{2}cm^2$

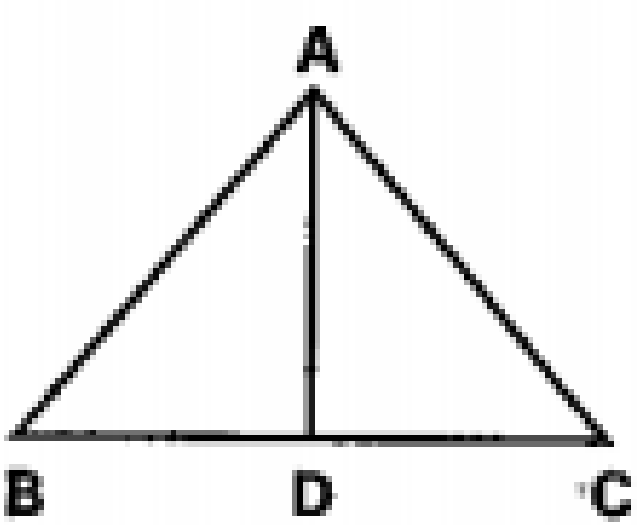
C. $21cm^2$

D. $49cm^2$

Answer:

Watch Video Solution

41. In the figure AB = 2.5 cm, AC = 3.5 cm. If AD is the bisector of $\angle BAC$ then BD : DC



A. $5:3$

B. $3:5$

C. $5:7$

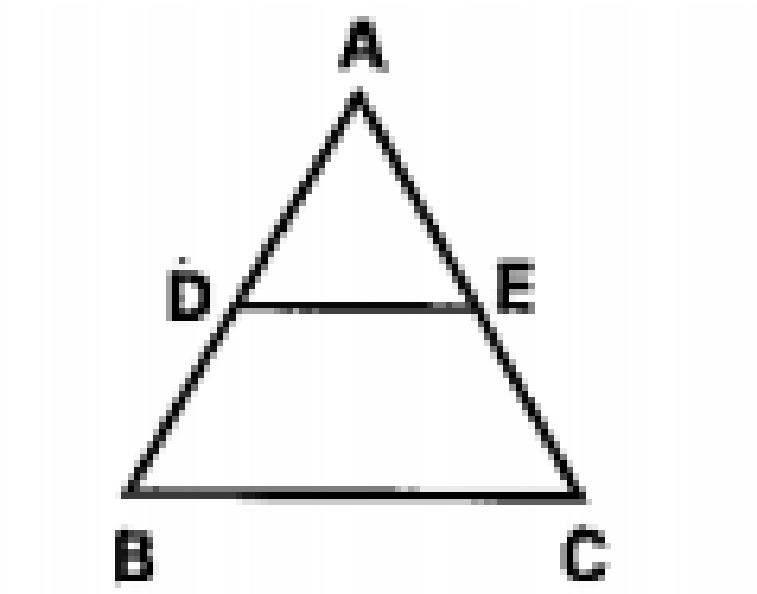
D. $2:7$

Answer:

Watch Video Solution

42. In the figure DE divides AB and AC in the ratio $1:3$

If DE = 2.4 cm then BC



A. 4.8 cm

B. 7.2 cm

C. 9.6 cm

D. 12 cm

Answer:

Watch Video Solution

43. The height of an equilateral triangle whose side is a units is

A. a / 2

B. $\frac{\sqrt{3}}{2}a$

C. $\sqrt{3}a$

D. $\frac{\sqrt{3}}{4}a$

Answer:

Watch Video Solution

44. If $\triangle ABC \sim \triangle XYZ$, $\angle C = 60^\circ$ $\angle B = 75^\circ$ then $\angle Z$ =

A. 90°

B. 75°

C. 45°

D. 60°

Answer:

Watch Video Solution

45. The maximum nuber of possible tangents that can be draw to a circle is .....

A. Infinity

B. 4

C. 100

D. 2

Answer:

Watch Video Solution

Watch Video Solution

46. $\triangle ABC \sim \triangle DEF$ and areas of $\triangle ABC$, $\triangle DEF$ are $64cm^2$ and $121cm^2$ then the ratio of corresponding sides.

A. $11:8$

B. $8:11$

C. $3:11$

D. $19:8$

Answer:

Watch Video Solution

47. Area of a regular hexagon whose side is 'a' cm is.....

A. $6\left(\frac{\sqrt{3}}{4}a^2\right)$

B. $\left(6\frac{\sqrt{3}}{4}a^2\right)$

C. $\sqrt{6}\left(\frac{3}{4}a^2\right)$

D. $6\left(\frac{\sqrt{3}}{4}a^2\right)$

Answer:

Watch Video Solution

48. IF a man walks 6m to East and 8m to North. Now he is at a distance of .....from origin point.

A. 10 cm

B. 48 cm

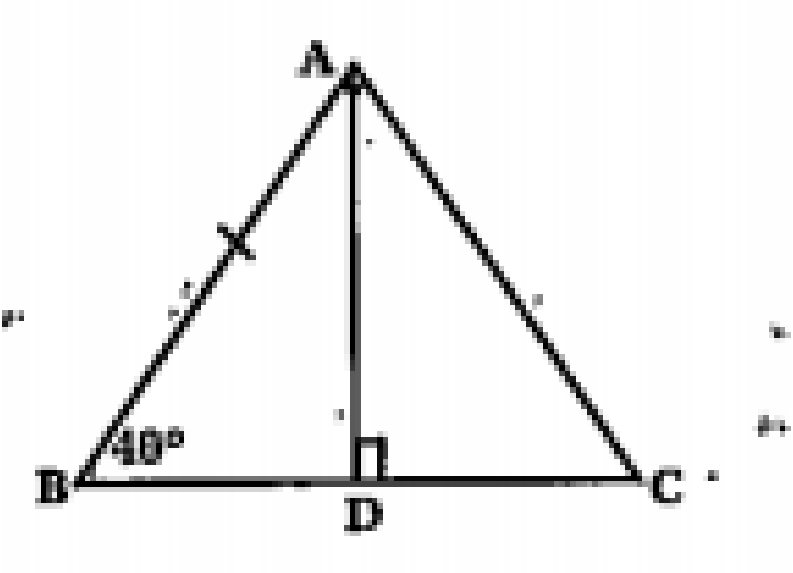
C. 14 cm

D. 2 m

Answer:

Watch Video Solution

49. $\angle CAD$ in the given figure is.....



A. 50°

B. 60°

C. 40°

D. 90°

Answer:

Watch Video Solution

50. Example for the sides of a Right angled triangle is.....

A. 5, 6, 9

B. 5, 12, 13

C. 5, 11, 12

D. 7, 8, 9

Answer:

Watch Video Solution

51. Height of an equilateral triangle whose sides is 'a' cm is .....

A. $\frac{\sqrt{3}}{2}a$

B. $\frac{2}{\sqrt{3}}a^2$

C. $\sqrt{\frac{3}{2}}a$

D. $\frac{\sqrt{3}}{2}a^2$

Answer:

Watch Video Solution

52. In $\triangle ABC \sim \triangle XYZ, \angle C = 60^\circ \quad \angle B = 70^\circ$ then `angle X = ...

A. $\angle X = 70^\circ$

B. $\angle X = 50^\circ$

C. $\angle X = 60^\circ$

D. $\angle X = 10^\circ$

Answer:

Watch Video Solution

53. When we construct a triangle similar to a given triangle as per given scale factor, we construct on the basis of .....

A. SSS similarity

B. AAA similarity

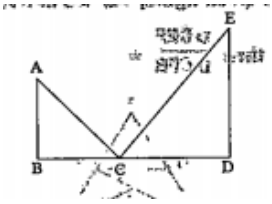
C. Basic proportionality theorem

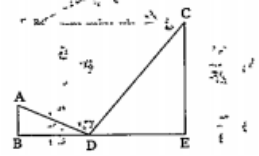
D. A and C are correct

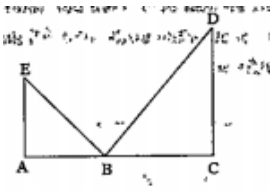
Answer:

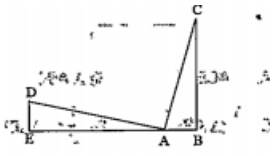
Watch Video Solution

54. $\triangle ABC \sim \triangle DEF$ is given then which of the following is correct.

A. 

B. 

C. 

D. 

Answer:

Watch Video Solution

55. In $\Delta ABC \angle C = 90^\circ$, BC=a, AB=c, AC=b and 'p' is length of height drawn from 'C' to AB then .....is correct.

A. $\frac{1}{p^2} = \frac{1}{a^2} - \frac{1}{b^2}$

B. $\frac{1}{p^2} = \frac{1}{b^2} - \frac{1}{a^2}$

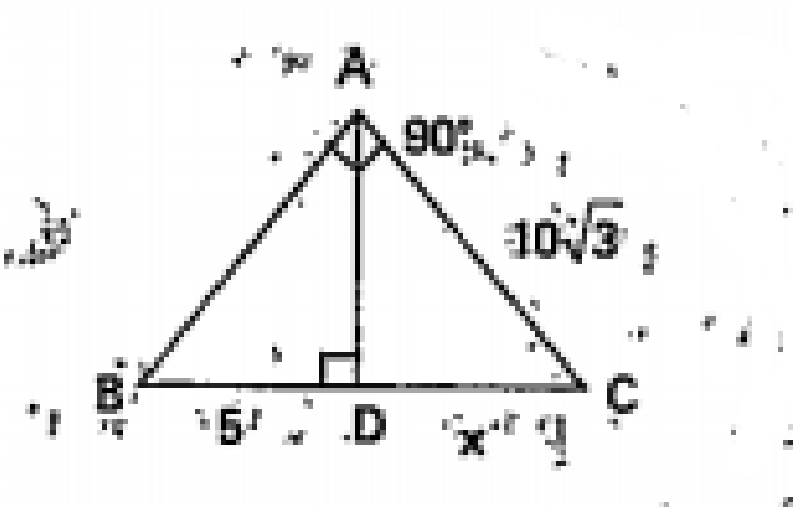
C. $\frac{1}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$

D. $\frac{2}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$

Answer:

Watch Video Solution

56. From the figure, x =.....



A. 10

B. 15

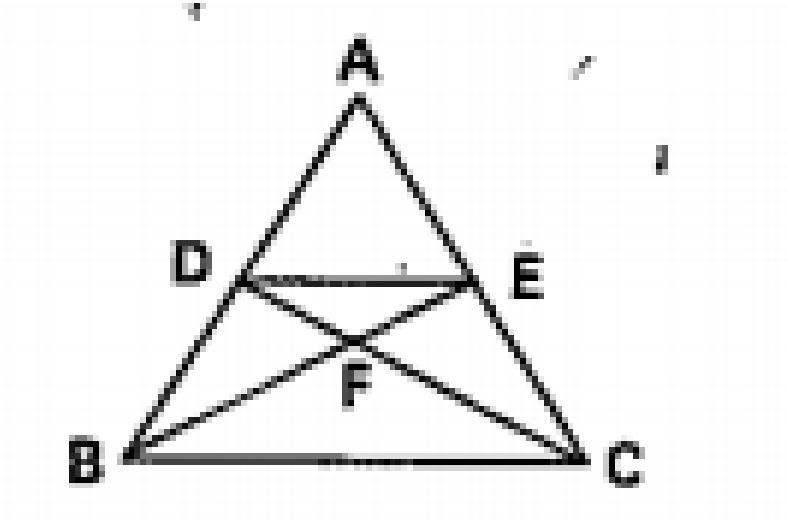
C. 12

D. 25

Answer:

Watch Video Solution

57. In the given figure, DE//BC and AD : DB = 5 : 4, then $\frac{\triangle DEF}{\triangle CFB}=$



A. 81/25

B. 44325

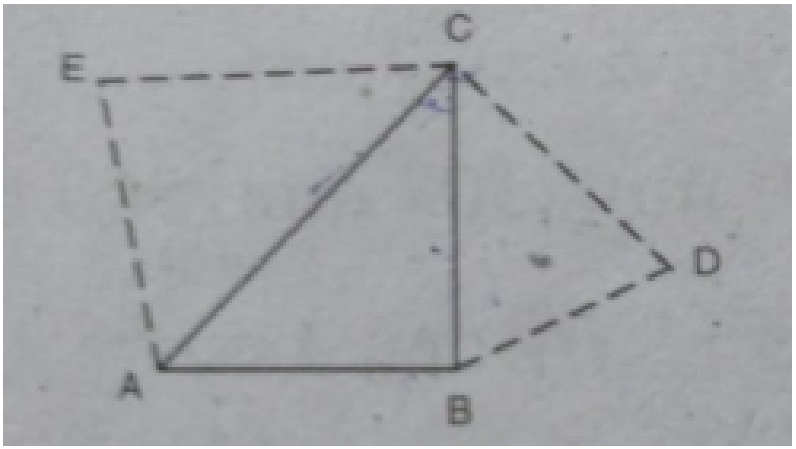
C. 44320

D. 25/81

Answer:

Watch Video Solution

58. In the figure, ΔABC is an isosceles triangle right angled at B. Two equilateral triangles are constructed with sides AC and BC. Then ΔBCD=



A. $\triangle ACE$

B. $\triangle ABC$

C. $\frac{1}{2}(\triangle ABC)$

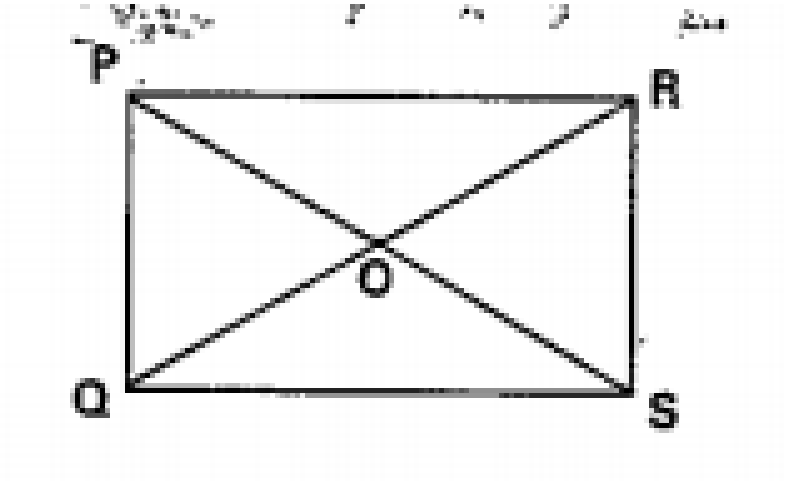
D. $\frac{1}{2}(\triangle ACE)$

Answer:

Watch Video Solution

59. In te figure $\triangle PQR$ and $\triangle SQR$ are two triangles on the same base QR. If PS intersects QR at

'O' then $\triangle PQR : \triangle SQR$=



A. PO : SO

B. PQ : QS

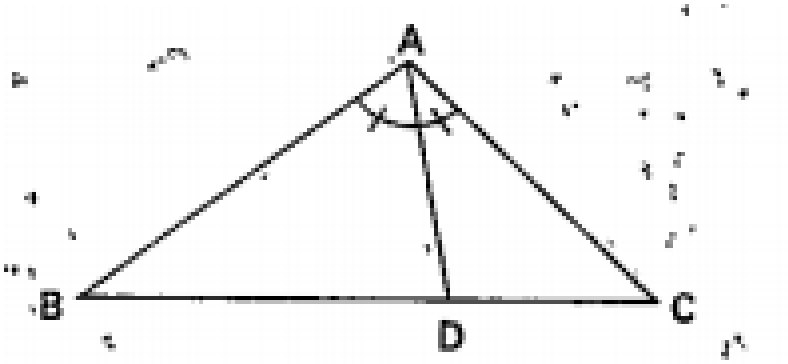
C. PR : SR

D. PQ : SR

Answer:

Watch Video Solution

60. In the figure, $\angle BAD = \angle CAD$, AB = 3.4 cm, BD = 4 cm, BC = 10 cm, then AC =



A. 5.1 cm

B. 3.4 cm

C. 6 cm

D. 5.3 cm

Answer:

Watch Video Solution

61. All.....triangles similar.

A. equilateral

B. scalene

C. isosceles

D. none

Answer:

Watch Video Solution

62. Two polygons are similar if.....

A. corresponding angles are equal

B. corresponding sides are equal

C. both A & B

D. none

Answer:

Watch Video Solution

63. The ratio of areas of two similar triangles is equal to the ratio of the squares of corresponding.....

A. sides

B. areas

C. angles

D. none

Answer:

Watch Video Solution

64. A perpendicular is drawn from the vertex of a right angle to the hypotenuse then the triangles on each side of the perpendicular are.....

A. similar

B. not similar

C. square

D. none

Answer:

Watch Video Solution

65. IF one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar. This property is.....

A. SSS

B. ASA

C. AAA

D. SAS

Answer:

Watch Video Solution

66. IF the sides of two similar triangles are in the ratio $7:2$ then the ratio of their areas is.....

A. $9:2$

B. $8:9$

C. $4:49$

D. $49:4$

Answer:

Watch Video Solution

67. $\triangle ABC \sim \triangle PQR, \angle A = 32^\circ, \angle R = 65^\circ$ then

`angle B = ...

A. 64°

B. 73°

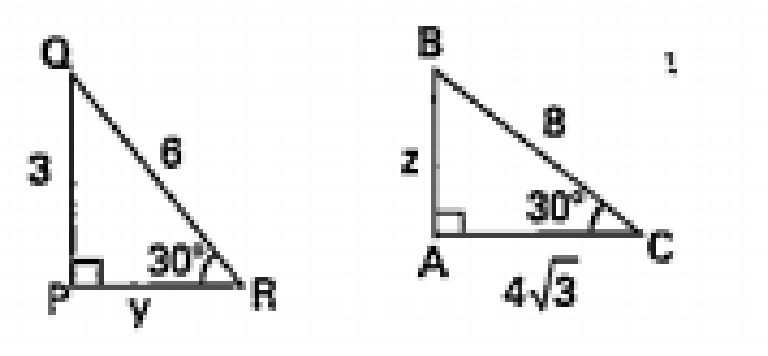
C. 83°

D. none

Answer:

Watch Video Solution

68.



If $\triangle ABC \sim \triangle PQR$ then y + z =.....

A. $1 + 3\sqrt{3}$

B. $4 + 3\sqrt{3}$

C. $3\sqrt{3} + 7$

D. $9 + \sqrt{3}$

Answer:

Watch Video Solution

69. In $\triangle LMN$, $\angle L = 60^\circ$, $\angle M = 50^\circ$ and $\triangle LMN \sim \triangle PQR$ then $\angle R$ = ...

A. 70°

B. 80°

C. 90°

D. none

Answer:

Watch Video Solution

Watch Video Solution

70. The perimeter of $\Delta ABC \sim \Delta LMN$ are 60 cm and 48 cm of LM=8cm then AB=.....cm.

A. 19

B. 11

C. 7

D. 10

Answer:

Watch Video Solution

71. IN $\Delta ABC, BC^2 + AB^2 = AC^2$ then.....is the right angle.

A. $\angle B$

B. $\angle A$

C. $\angle C$

D. none

Answer:

Watch Video Solution

72. The bisector of $\angle A$ of ΔABC intersects BC at D. IF BD:DC=4:7 and AC=3.5. Then AB=.....

A. 2

B. 8

C. 10

D. 11

Answer:

Watch Video Solution

73. $\triangle ABC \sim \triangle PQR, \angle A = 50^\circ$ then $\angle Q + \angle R$ =.....

A. 120°

B. 110°

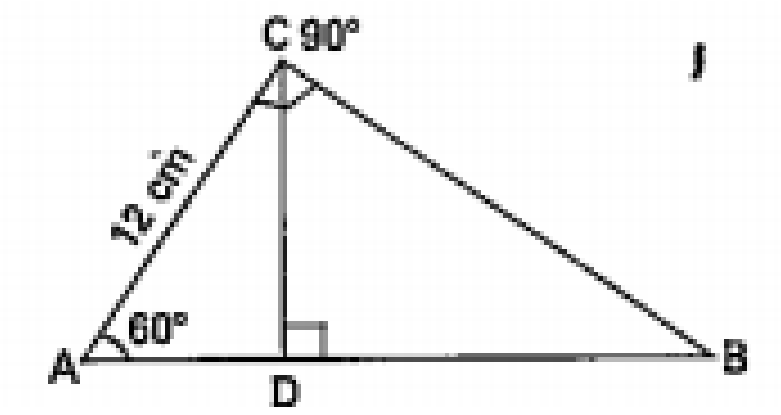
C. 130°

D. 180°

Answer:

Watch Video Solution

74. In the figure, CD = ...cm.



A. $\sqrt{3}$

B. $2\sqrt{3}$

C. $3\sqrt{3}$

D. $6\sqrt{3}$

Answer:

Watch Video Solution

75. The ratio of corresponding sides of two similar triangles is 3:2 then the ratio of their corresponding heights is.....

A. $3:2$

B. $2:3$

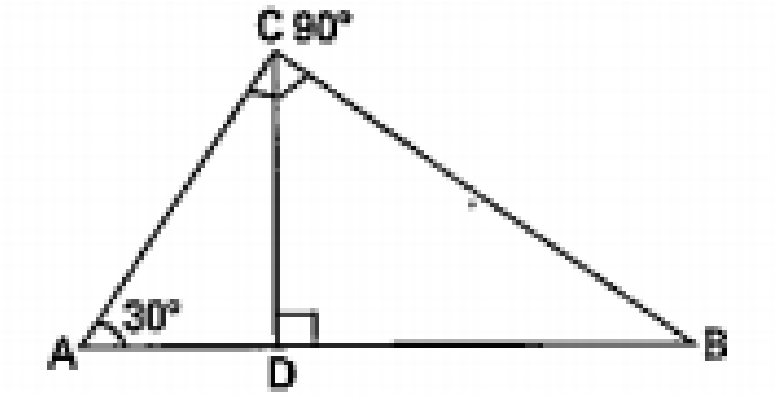
C. $1:4$

D. $1:7$

Answer:

Watch Video Solution

76. In the figure, $\angle ABC$ = ...



A. 30°

B. 70°

C. 50°

D. 60°

Answer:

Watch Video Solution

77. In $\triangle ABC$, XY || BC, AX : XB = 2 : 1 then $trianl \geq AXY$: triangle ABC`= .....

A. $9:4$

B. $4:9$

C. $1:9$

D. $2:3$

Answer:

Watch Video Solution

78. In a square, the diagonal is.....times of its side.

A. $\sqrt{7}$

B. $\sqrt{3}$

C. $\sqrt{2}$

D. 2

Answer:

Watch Video Solution

79. The side of an equilateral triangle is 'a' units . Its height is.....units.

A. $\frac{\sqrt{3}a}{2}$

B. $\frac{\sqrt{3}}{4}a$

C. $\frac{3}{a}\sqrt{2}$

D. 44257

Answer:

Watch Video Solution

80. The ratio of the areas of two similar triangles is 1:4 then the ratio of their corresponding sides.....

A. $9:1$

B. $1:1$

C. $2:1$

D. $1:2$

Answer:

Watch Video Solution

81. $\triangle ABC \sim \triangle PQR$ then AB : PQ = ...

A. AC : PR

B. AC : PQ

C. AB : PR

D. none

Answer:

Watch Video Solution

82. ΔABC is an isosceles triangle $\angle C = 90^\circ$ then AB^2=.....

A. $AB^2 + BC^2$

B. $AC^2 + BC^2$

C. $AC^2 + 2$

D. none

Answer:

Watch Video Solution

83. Each angle of an equilateral triangle is.....

A. 60°

B. 80°

C. 100°

D. 70°

Answer:

Watch Video Solution

84. Each exterior angle of an equilateral triangle is.....

A. 180°

B. 130°

C. 110°

D. 120°

Answer:

Watch Video Solution

85. The longest side in a right triangle is.....

A. smaller

B. hypotenuse

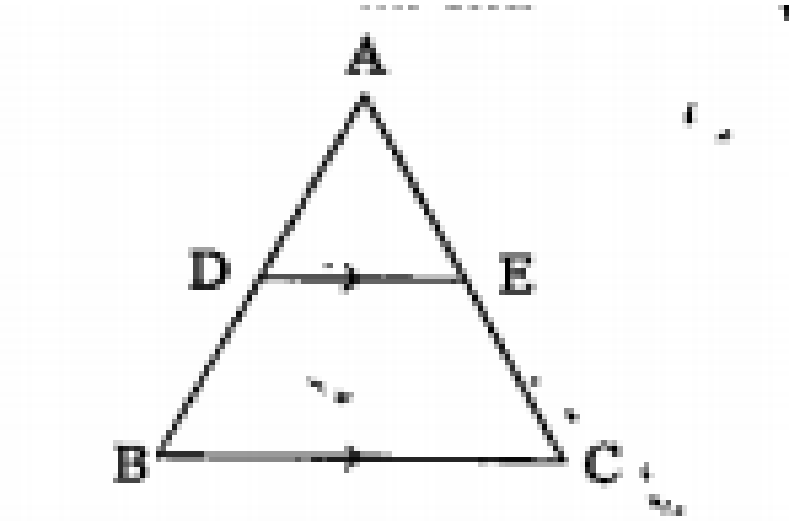
C. adjacent

D. none

Answer:

Watch Video Solution

86. In the figure, $\triangle ABC$, DE// BC and $\frac{AD}{DB} = \frac{3}{5}$, AC = 5.6 then AE = ...cm.



A. 1.8

B. 3.5

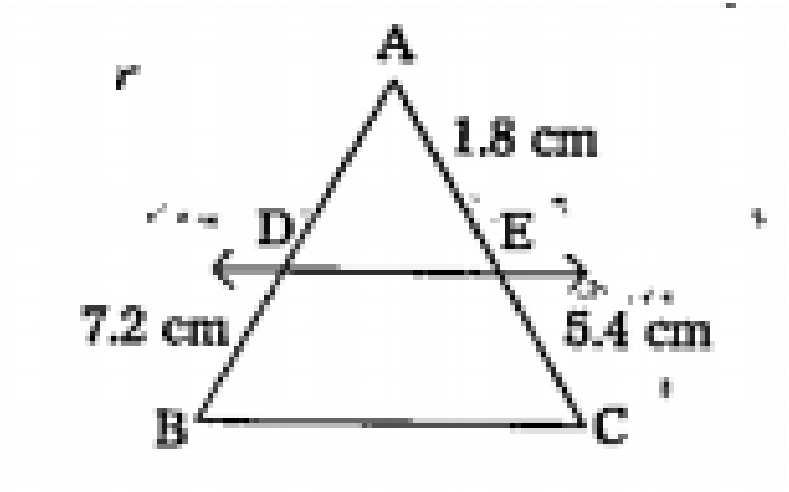
C. 1.2

D. 2.1

Answer:

Watch Video Solution

87. From the figure, AD= .....cm.



A. 2.4

B. 4.2

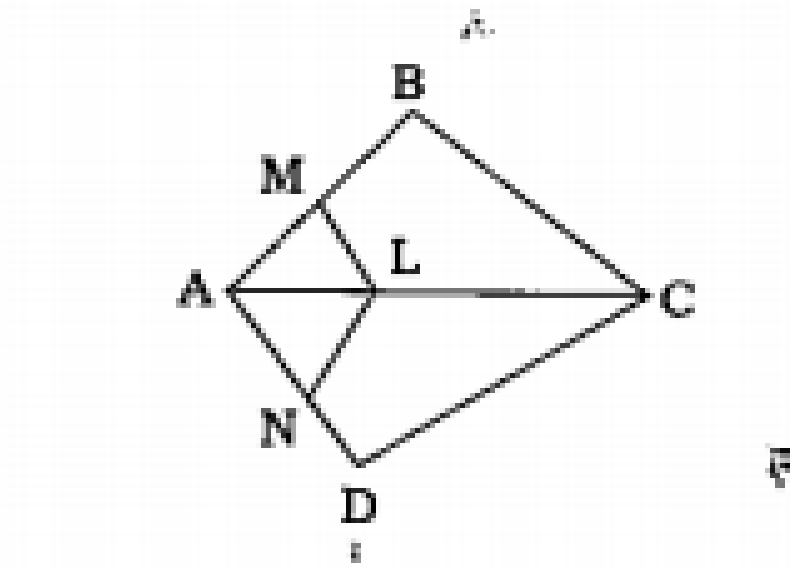
C. 8.2

D. 9.2

Answer:

Watch Video Solution

88. In the figure, LM//CB and LN//CD then $\frac{AM}{AB}$ = ...



A. $\frac{AN}{AD}$

B. $\frac{AN}{ND}$

C. $\frac{LC}{ND}$

D. none

Answer:

Watch Video Solution

89. In a trapezium, diagonals divide each other.....

A. proportionality

B. not proportional

C. congruent

D. none

Answer:

Watch Video Solution

90. The converse of "if in a triangle ABC, AB = AC then $\angle B = \angle C$" is

A. 70°

B. 60°

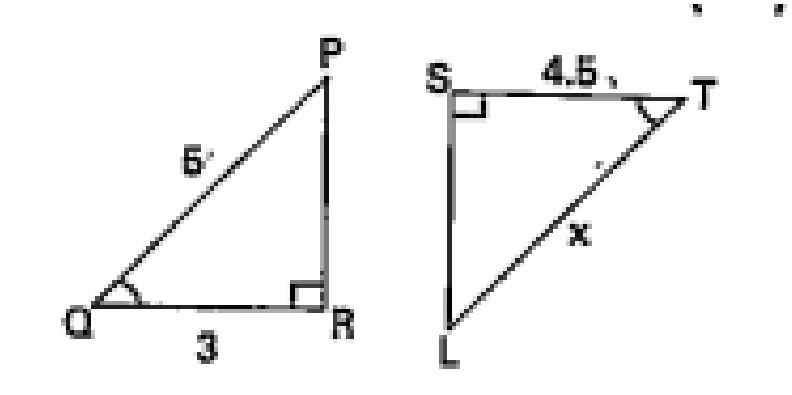
C. 80°

D. 90°

Answer:

Watch Video Solution

91. In the figure, two triangles are similar then x = ...cm.



A. 9.3

B. 1.5

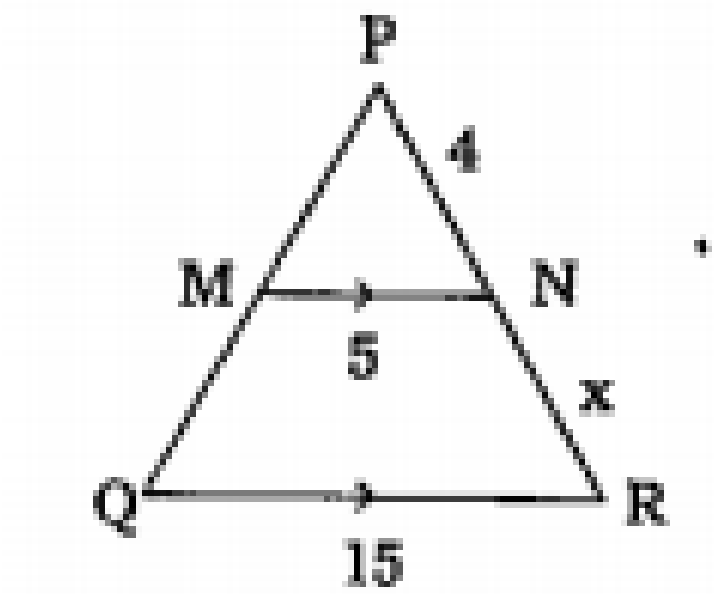
C. 7.5

D. 8.5

Answer:

Watch Video Solution

92. In the figure, x = ...cm.



A. 10

B. 12

C. 9

D. 8

Answer:

Watch Video Solution

93. $\triangle ABC \sim \triangle PQR, \angle A + \angle B = 100^\circ, \angle R$=.....

A. 60°

B. 80°

C. 90°

D. 100°

Answer:

Watch Video Solution

94. $\Delta ABC \sim \Delta DEF$ and their areas are respectively $64cm^2$ and $121cm^2$ IF EF=15.4 cm then BC=.....cm.

A. 10.2

B. 8.7

C. 11.2

D. 10.3

Answer:

Watch Video Solution

95. Which of the following are the sides of a right triangle?

A. 10 cm, 8 cm, 6 cm

B. 12 cm, 1 cm, 9 cm

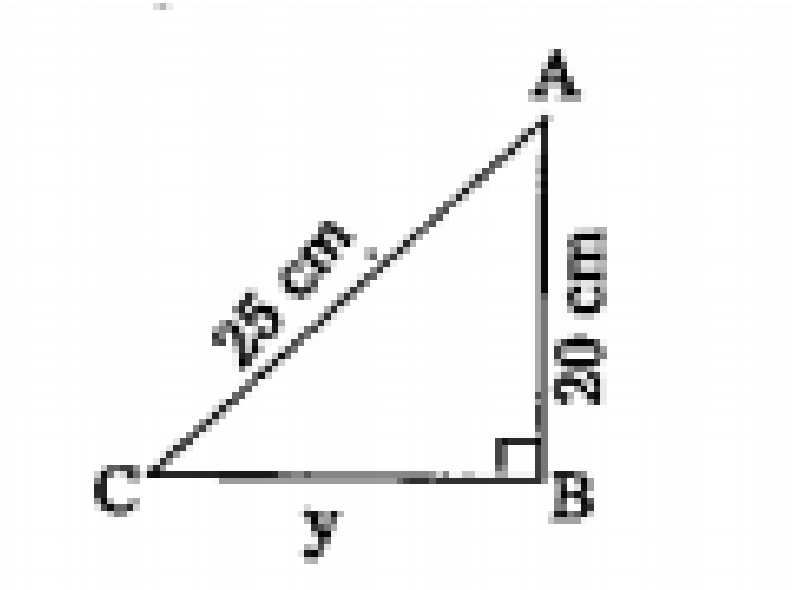
C. 3 cm, 5 cm, 12 cm

D. all

Answer:

Watch Video Solution

96. From the figure y = ...cm.



Watch Video Solution

97. The diagonal of a trapezium ABCD in which $AB||CD$ intersect at'O' . IF AB=2CD then the ratio of areas of triangles AOB and COD is.....

A. $14:1$

B. $1:2$

C. $1:9$

D. none

Answer:

Watch Video Solution

98. $\Delta ABC \sim \Delta DEF$ and 2AB=DE and BC=8cm then EF=.....cm.

A. 16

B. 19

C. 12

D. none

Answer:

Watch Video Solution

99. $\Delta ABC \sim \Delta DEF$, BC=4cm, EF=5cm and area of $\Delta ABC = 80cm^2$ then area of ΔDEF=.....cm^2

A. 105

B. 165

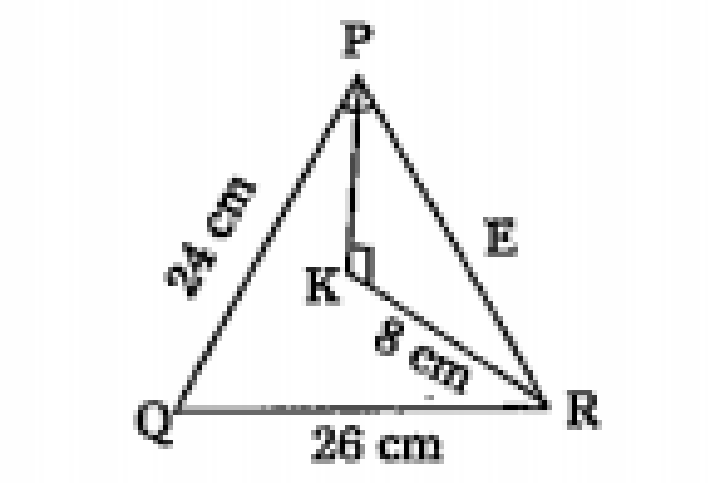
C. 125

D. none

Answer:

Watch Video Solution

100. In the figure PQR, $\angle QPR = 90^\circ$, PQ =24 cm and QR = 26 cm and in $trianl \geq PKR$, $\angle PKR = 90^\circ$ and KR = 8 cm then PK = ...cm.



A. 10

B. 6

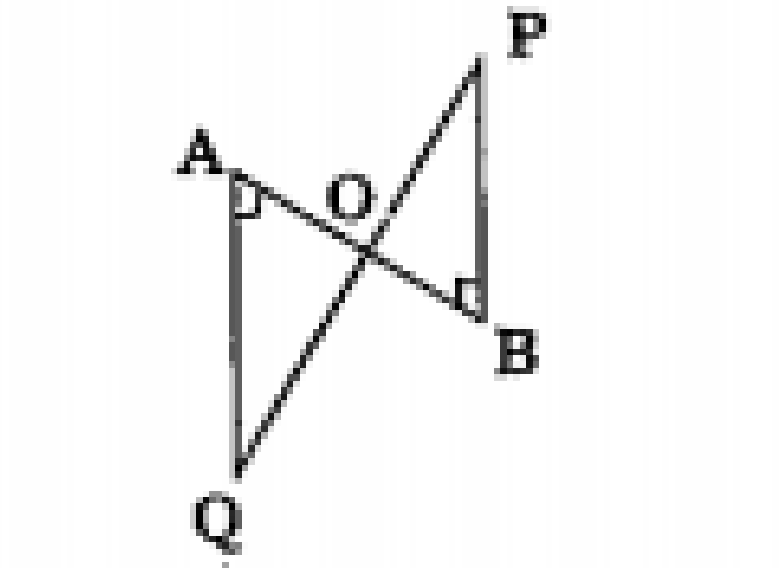
C. 19

D. 8

Answer:

Watch Video Solution

101. In the fiugre, $QA \perp AB$ and $PB \perp AB$ if AO = 20 cm, BO = 12 cm, PB = 18 cm then AQ = ...cm.



A. 70

B. 60

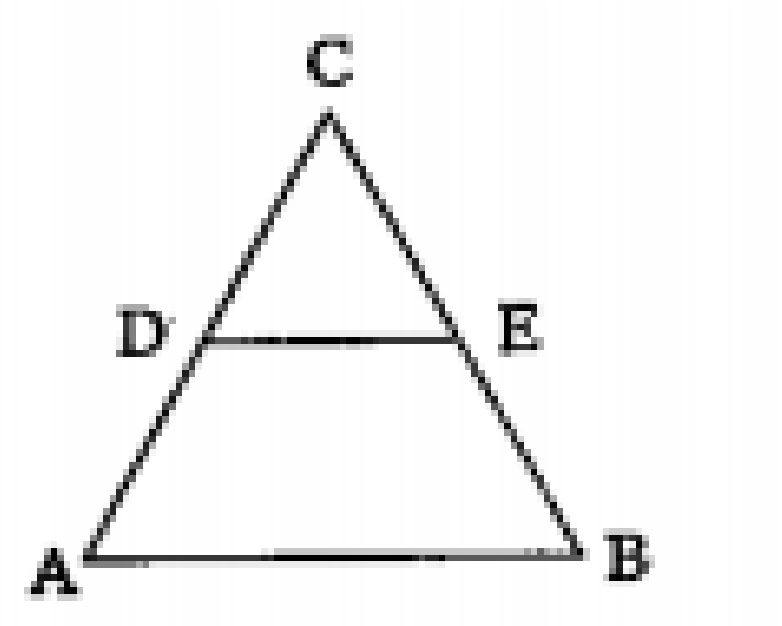
C. 40

D. 30

Answer:

Watch Video Solution

102. In the figure, $\angle A = \angle B$ and AD = BE then .....



A. DE//AB

B. DE = AB

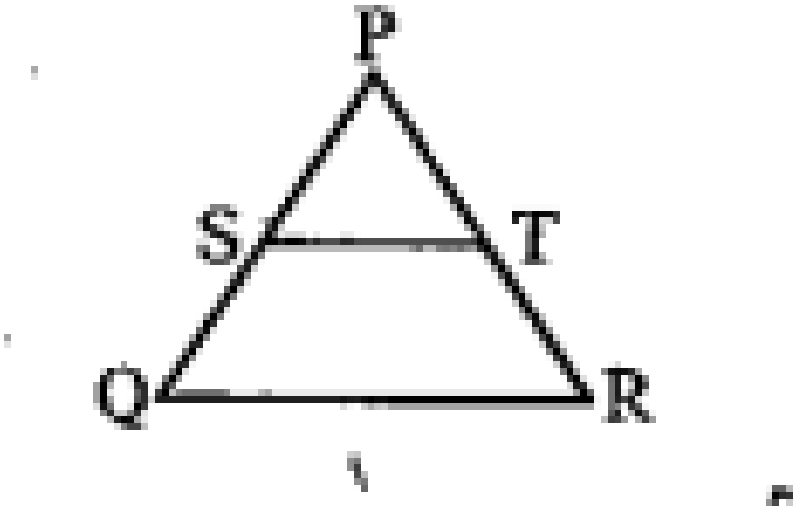
C. CD = EB

D. none

Answer:

Watch Video Solution

103. In the figure, in $\triangle PQR, QR//ST, \frac{PS}{SQ} = \frac{3}{5}$ and $PR = 28$ cm then $PT =$ ..... cm.



A. 6.5

B. 10.5

C. 8.1

D. 3.3

Answer:

Watch Video Solution

104. In an equilateral triangle ABC, AD $\perp$ BC meeting BC in D then AD^2=.....

A. $3BD^2$

B. BD^2

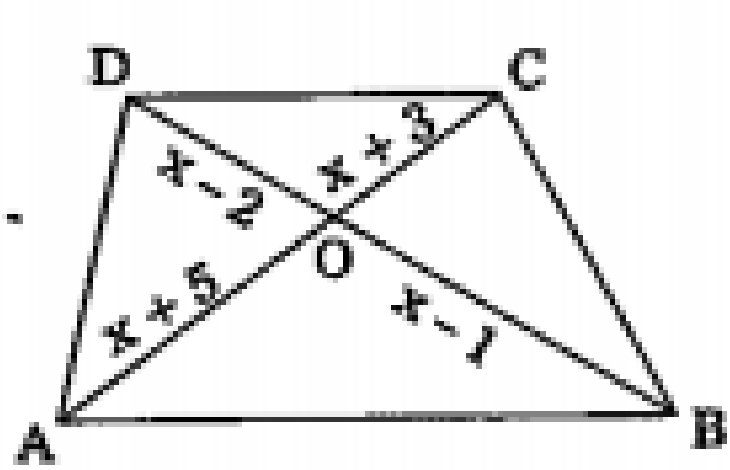
C. AB^2

D. none

Answer:

Watch Video Solution

105. In the figures, if AB//CD then x = ...cm.



A. 10

B. 12

C. 7

D. 9

Answer:

Watch Video Solution

106. IF the diagonals in a quadrilateral divide each other proportionally then it is.....

A. square

B. trapezium

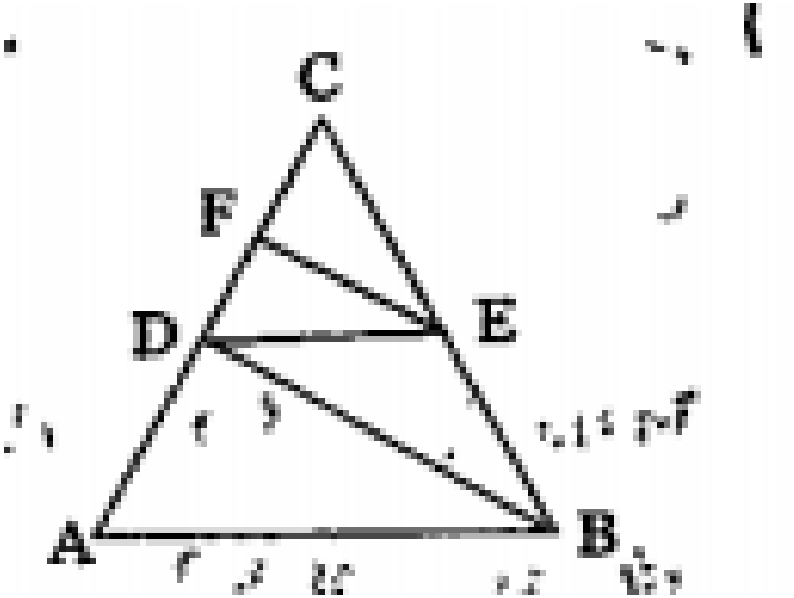
C. trianlge

D. none

Answer:

Watch Video Solution

107. In the figure, DE//AB and FE//DB then DC^2= .....



A. $CF \times AC$

B. $FE \times AB$

C. $CF \times FD$

D. none

Answer:

Watch Video Solution

108. D,E and F are the mid points of the sides BC, CA and AB respectivley of f $\triangle ABC$ then the ratio of the areas of $\triangle DEF$ and ABC =.....

A. $1:9$

B. $2:1$

C. $1:2$

D. $1:4$

Answer:

Watch Video Solution

109. In the figure $\frac{PS}{SQ} = \frac{PT}{TR}$ and $\angle PST = \angle PRQ$ then ΔPQR is.....triangle.

A. isosceles

B. equilatera.

C. scalene

D. none

Answer:

Watch Video Solution

110. Side of a rhombus is 4 cm then its perimeter is.....cm.

A. 22

B. 21

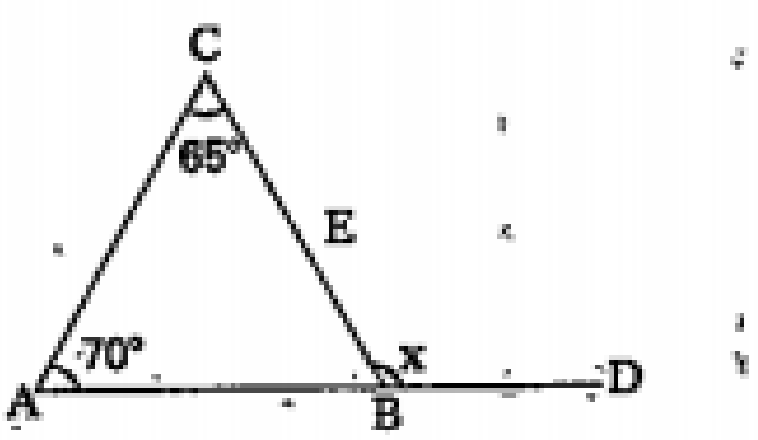
C. 16

D. 20

Answer:

Watch Video Solution

111. In the figure, x=.....



A. 130°

B. 135°

C. 45°

D. 15°

Answer:

Watch Video Solution

112. Two sides of a right triangle are 3cm and 4cm then the third side is .....cm.

A. 9

B. 6

C. 6.1

D. 5

Answer:

Watch Video Solution

113. $\triangle ABC \sim \triangle PQR$, AB : PQ = 3 : 4 then area $\triangle ABC$: area $\triangle PQR$

A. $9:16$

B. $9:1$

C. $16:9$

D. none

Answer:

Watch Video Solution

Watch Video Solution

114. IF $8^2 + 15^2 = k^2$ then k=.....

A. 16

B. 17

C. 19

D. 20

Answer:

Watch Video Solution

115. The angles of a triangle arc in the ratio 1:2:3 then the largest angle is.....

A. 70°

B. 60°

C. 90°

D. 20°

Answer:

Watch Video Solution

116. Straight angle means.....

A. 180°

B. 190°

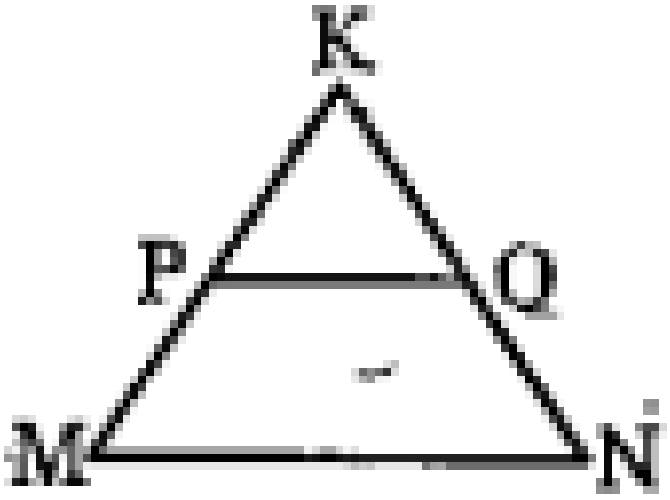
C. 200°

D. 100°

Answer:

Watch Video Solution

117. In the figure, $PQ/MN, K\frac{P}{P}M = \frac{4}{13}$ and $KN = 20.4cm$ then $KQ = \ldots\ldots\ldots\ldots\ldots\ldots\ldots cm$



A. 6.3

B. 4.8

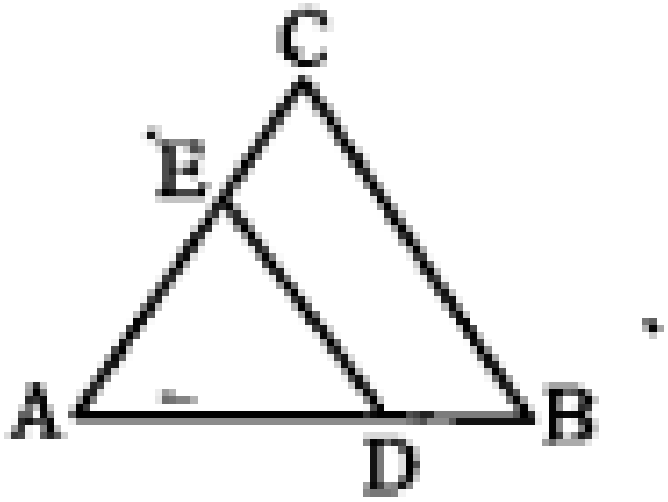
C. 1.8

D. 2.8

Answer:

Watch Video Solution

118. In the figure DE/BC if $AD = x$, $AE = x + 2, DB = x - 2$ and $CE = x - 1$ then $x = \ldots\ldots\ldots\ldots\ldots\ldots$



A. 4

B. 5

C. 6

D. 7

Answer:

Watch Video Solution

119. If $\triangle ABC \sim \triangle DEF$ if $DE: AB = 2:3$ and area of triangle DEF = 44 sq.unitsthen find the area of $\triangle ABC$.

A. 90

B. 101

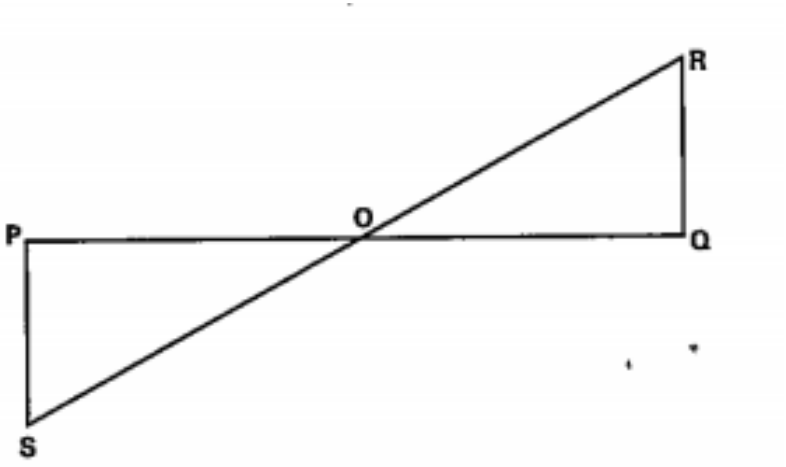
C. 99

D. 110

Answer:

Watch Video Solution

120. In the adjacent figure, PS and RQ are perpendicular to PQ. If PO = 15 cm, QO = 10 cm and RQ = 8 cm. Find PS,



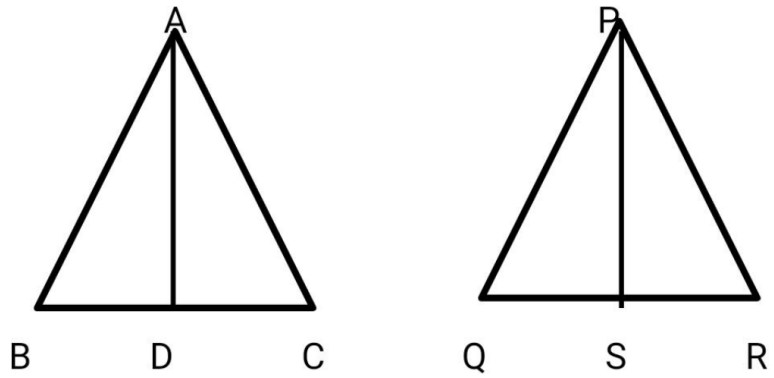
Watch Video Solution

121. The perimeters of two similar triangle are 30 cm and 20 cm respectively. IF one side of the first Triangle is 12 cm. determine the corresponding side of the second Triangle.

Watch Video Solution

122. The areas of two similar triangle are $81cm^2$ and $49cm^2$ respectively. IF the altitude of the bigger Triangle is 4.5 cm. Find the corresponding altitude of

the smaller Triangle.



Watch Video Solution

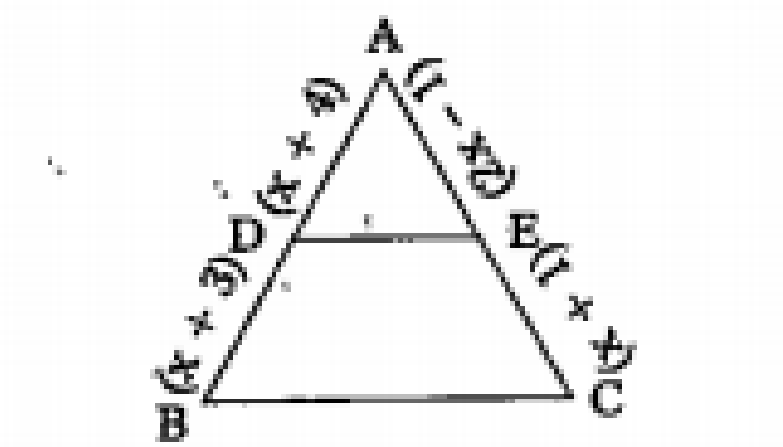
123. ABC is an isosceles triangle right angled at C. Prove that $AB^2 = 2AC^2$.

Watch Video Solution

124. The diagonal AC of a parallelogram ABCD intersects DP at the point Q, where 'P' is any point on side AB. Prove that $CQ \times PQ = QA \times QD$.

Watch Video Solution

125. In the following figure, DE//BC then x =



A. $\sqrt{3}$

B. $\sqrt{7}$

C. $\sqrt{6}$

D. $\sqrt{5}$

Answer:

Watch Video Solution

126. The areas of two similar triangle are $25cm^2$ and $36cm^2$. IF the median of smaller triangle is 10 m, then the median of the larger triangle is

A. 15 m

B. 18 m

C. 16 m

D. 12 m

Answer:

Watch Video Solution

127. In $tra \in g \leq ABC$, AD bisects $\angle A$, AB = 5 cm, BD = 8 cm and DC = 6 cm then AC = ...cm.

A. 4.5 cm

B. 4 cm

C. 4.8 cm

D. 5.6 cm

Answer:

Watch Video Solution

128. ΔABC and ΔBDE are two equilateral triangles such that D is the midpoint of BC. Ratio of the areas of triangles ΔABC and ΔBDE is

A. $2:1$

B. $1:2$

C. $4:1$

D. $2:3$

Answer:

Watch Video Solution

129. In a right triangle

A. hypotenuse = side + side

B. hypotenuse = $side^2 + side^2$

C. $hypotevse^2$ = side + side

D. hypotenuse = $side^2 + side^2$

Answer:

Watch Video Solution

130. IF in two triangles , corresponding sides are in the same ratio then the two triangles are similar, this is called .....criterion.

A. SAS

B. ASA

C. SSS

D. None

Answer:

Watch Video Solution

131. The areas of two similar triangles are $36cm^2$ and $64cm^2$. IF one side of the first triangle is 6 cm then the corresponding side of the latter triangle is .....cm.

A. 12

B. 10

C. 8

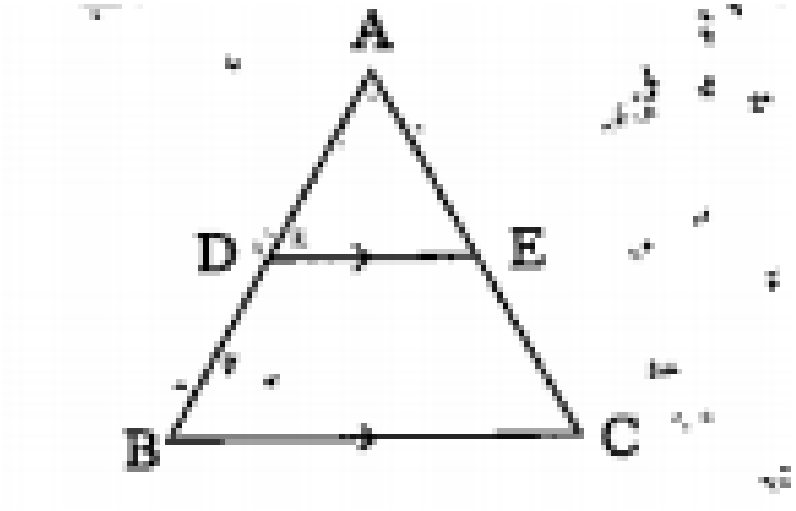
D. 6

Answer:

Watch Video Solution

132. In the figure, D,E are mid-points of AB and AC then

$\triangle ADE$: $\square BCED$=



A. $1:4$

B. $1:3$

C. $2:1$

D. $3:2$

Answer:

Watch Video Solution

133. The sides PQ and PR of right triangle PQR are such that PQ=5cm, PR=13cm . IF $\angle Q = 90^\circ$ then QR=

A. 8 cm

B. 12 cm,

C. 18 cm

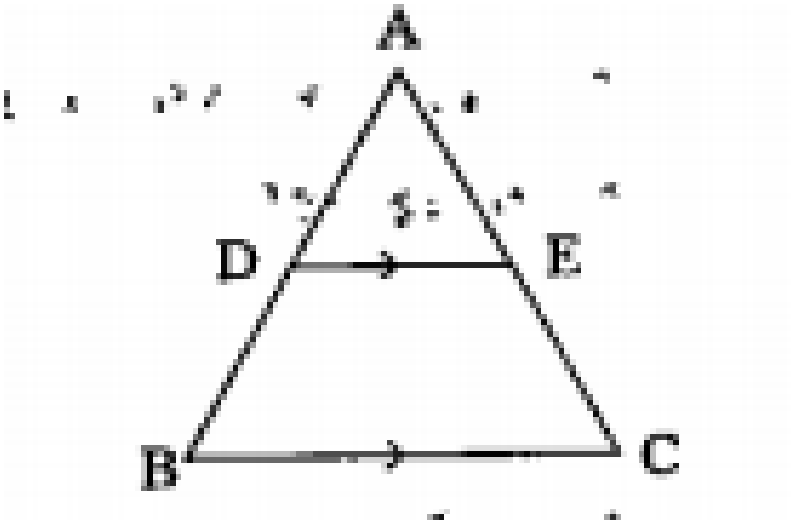
D. 10 cm

Answer:

Watch Video Solution

Watch Video Solution

134. In the figure, D,E are the midpoints of the sides AB and AC. If DE = 4 cm, then BC =



A. 4 cm

B. 6 cm

C. 8 cm

D. 12 cm

Answer:

Watch Video Solution

135. The diagonals of a rhombus are 24 cm and 32cm, then its perimeter is

A. 80 cm

B. 45 cm

C. 38.4 cm

D. 56 cm

Answer:

Watch Video Solution

Watch Video Solution

136. $\Delta ABC \sim \Delta PQR$, M is the midpoint of BC and N is the midpoint of QR. IF $\Delta ABC = 100cm^2$ and $\Delta PQR = 144cm^2$ and AM=4 cm, then PN=

A. 12 cm

B. 4 cm

C. 4.8 cm

D. 5.6 cm

Answer:

Watch Video Solution

137. All circles are.....

A. not similar

B. similar

C. congruent

D. none

Answer:

Watch Video Solution

138. All squares are.....

A. congruent

B. not similar

C. similar

D. none

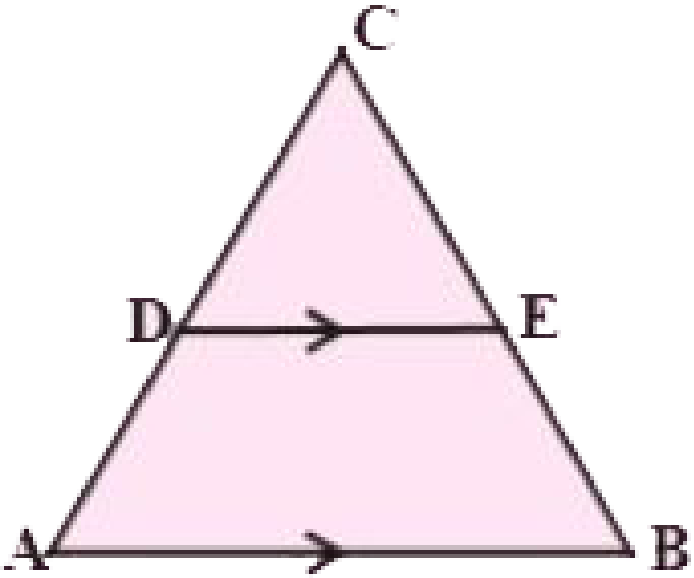
Answer:

Watch Video Solution

139. What value(s) of x will make DE || AB, in the given figure ?

AD = 8x + 9 , CD= x + 3 ,

BE = 3x + 4 , CE = x.



Watch Video Solution

140. In $\triangle ABC$,DE | | AB and

AD= 9 + 8x, DC = 3 + x, CB = 4 + 3x, EC = x. Then find the

value of x.

Watch Video Solution

141. Find the height of an equilateral triangle of side x + 2.

Watch Video Solution

142. In $\triangle ABC$, $\angle C = \angle 90$ D is the mid point of BC, prove that $AB^2 = 4AD^2 - 3AC^2$.

Watch Video Solution

143. A man goes 40 m due East and then 80 m due North. Find his distance form the starting point.

Watch Video Solution