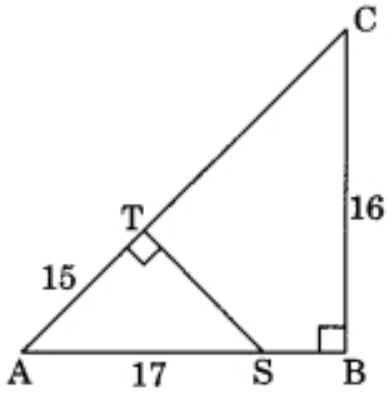
MCQs : TRIANGLES

Question 1.

In the given figure, ∠T and ∠B are right angles. If the length of AT, BC and AS (in centimeters) are 15, 16, and 17 respectively, then the length of TC (in centimeters) is:



(a) 18

(b) 16

(c) 19

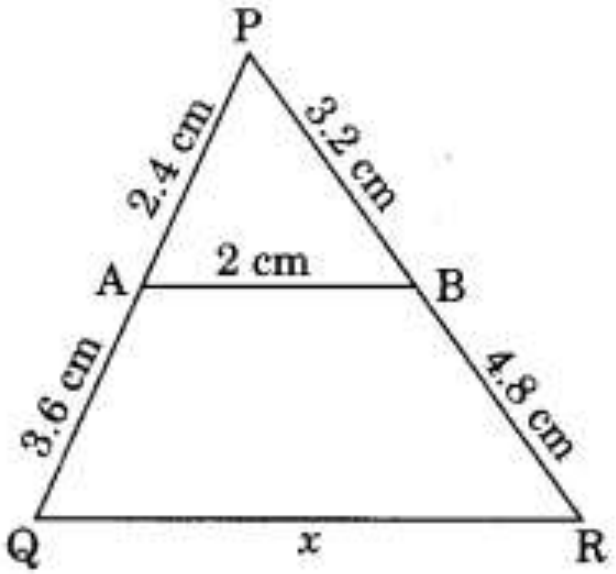
(d) 12

Answer

Answer: (c) 19

Question 2.

In the given figure, value of x(in cm) is



(a) 4

(b) 5

(c) 6

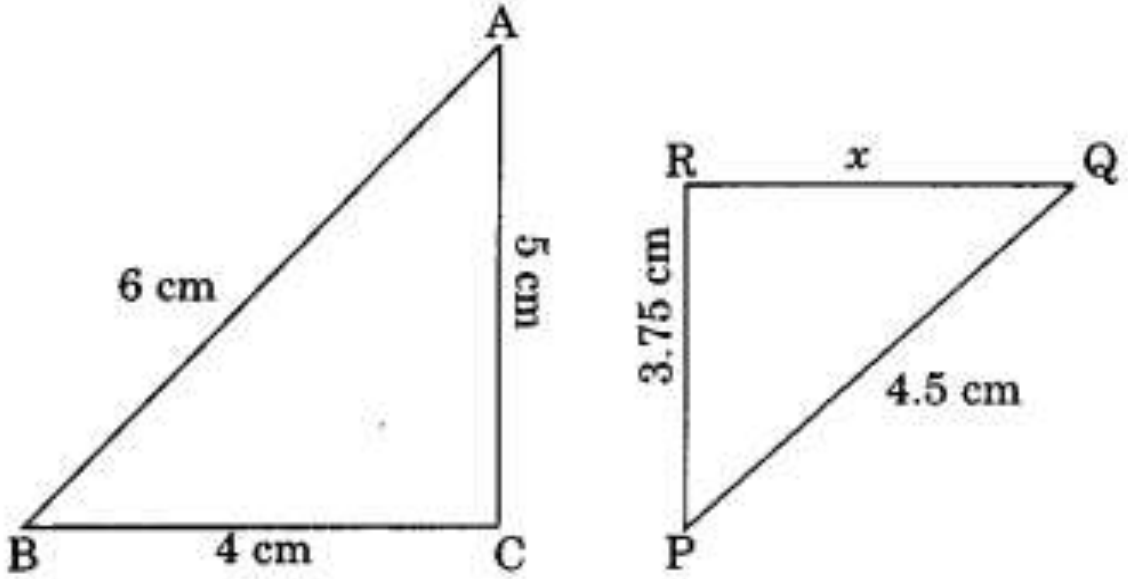
(d) 8

Answer

Answer: (b) 5

Question 3.

In the given figure ΔABC ~ ΔPQR. The value of x is



(a) 2.5 cm

(b) 3.5 cm

(c) 2.75 cm

(d) 3 cm

Answer

Answer: (d) 3 cm

Question 4.

In ΔABC, if $DE \parallel BC$, $AD = x$, $DB = x - 2$, $AE = x + 2$ and $EC = x - 1$, then value of x is

(a) 3

(b) 4

(c) 5

(d) 3.5

Answer

Answer: (b) 4

Question 5.

The perimeters of two similar triangles ABC and PQR are 60 cm and 36 cm respectively. If PQ = 9 cm, then AB equals

(a) 6 cm

(b) 10 cm

(c) 15 cm

(d) 24 cm

Answer

Answer: (c) 15 cm

Question 6.

If ΔABC is similar to ΔDEF such that 2 AB = DE and BC = 8 cm then EF is equal to.

(a) 12 cm

(b) 4 cm

(c) 16 cm

(d) 8 c

Answer

Answer: (c) 16 cm

Question 7.

In ΔABC, AB = 6 cm and DE || BC such that AE = $\frac{1}{4}$ AC then the length of AD is

(a) 2 cm

(b) 1.2 cm

(c) 1.5 cm

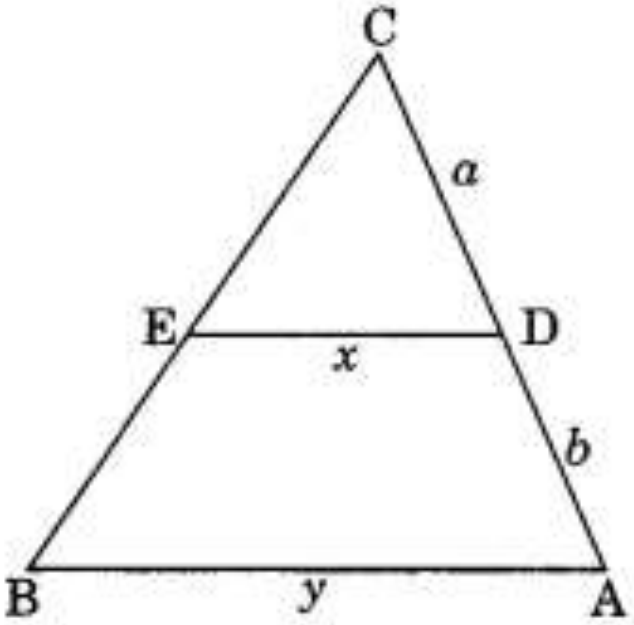
(d) 4 cm

Answer

Answer: (c) 1.5 cm

Question 8.

In the given figure DE || AC which of the following is true?



(a) $x = \frac{a+b}{ay}$

(b) $y = \frac{ax}{a+b}$

(c) $x = \frac{ay}{a+b}$

(d) $\frac{x}{y} = \frac{a}{b}$

Question 9.

$\Delta ABC \sim \Delta DEF$. If AB = 4 cm, BC = 3.5 cm, CA = 2.5 cm and DF = 7.5 cm, then the perimeter of ΔDEF is

(a) 10 cm

(b) 14 cm

(c) 30 cm

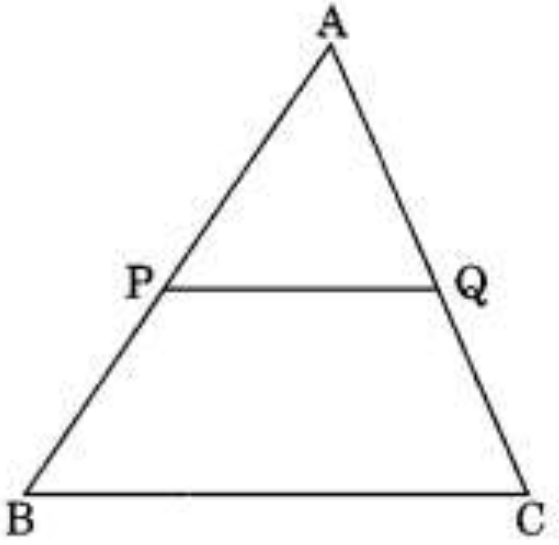
(d) 25 cm

Answer

Answer: (c) 30 cm

Question 10.

In the figure PQ || BC. If $\frac{PQ}{BC} = \frac{2}{5}$ then $\frac{AP}{PB}$ is



(a) $\frac{2}{5}$

(b) $\frac{2}{3}$

(c) $\frac{3}{2}$

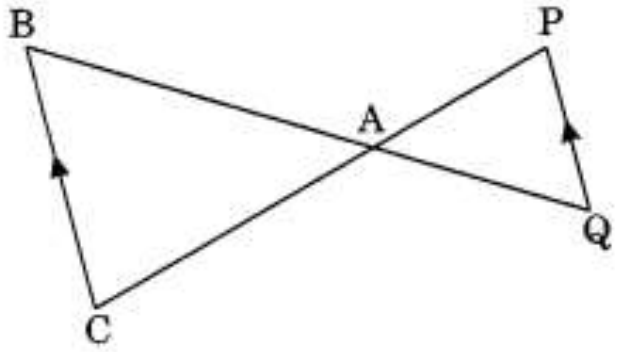
(c) $\frac{3}{5}$

Answer

Answer: (b) $\frac{2}{3}$

Question 11.

In the given figure, $\Delta ACB \sim \Delta APQ$. If AB = 6 cm, BC = 8 cm, and PQ = 4 cm then AQ is equal to



(a) 2 cm

(b) 2.5 cm

(c) 3 cm

(d) 3.5 cm

Answer

Answer: (c) 3 cm

Question 12.

$\Delta DEF \sim \Delta ABC$. If DE : AB = 2 : 3 and ar ΔDEF is equal to 44 square units then ar (ΔABC) (square unit) is

(a) 99

(b) 120

(c) $\frac{176}{9}$

(d) 66

Answer

Answer: (a) 99

Question 13

ΔABC and ΔBDE are two equilateral triangles such that D is the mid point of BC. Ratio of the areas of triangle ΔABC and ΔBDE is.

(a) 2 : 1

(b) 1 : 2

(c) 4 : 1

(d) 1 : 4

Answer

Answer: (c) 4 : 1

Question 14.

If $\Delta ABC \sim \Delta PQR$, $\frac{ar\Delta ABC}{ar\Delta PQR} = \frac{9}{4}$ and AB = 18 cm, then the length of PQ is

(a) 14 cm

(b) 8 cm

(c) 10 cm

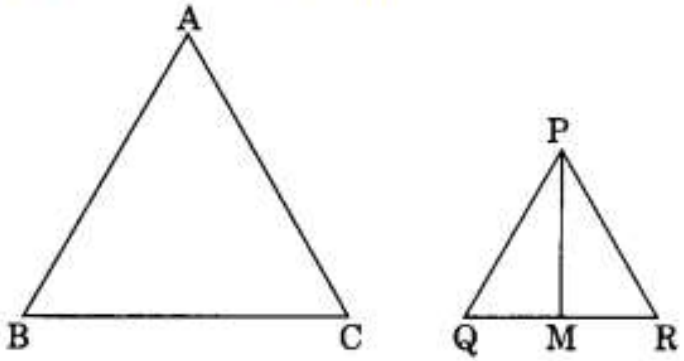
(d) 12 cm

Answer

Answer: (d) 12 cm

Question 15.

In the given figure $\Delta ABC \sim \Delta PQR$, PM is median of ΔPQR. If ar $\Delta ABC = 289\ cm^2$, BC = 17 cm, MR = 6.5 cm then the area of ΔPQM is



(a) $169\ cm^2$

(b) $13\ cm^2$

(c) $84.5\ cm^2$

(d) $144.5\ cm^2$

Answer

Answer: (c) $84.5\ cm^2$

Question 16.

If the ratio of the perimeters of two similar triangles is 4 : 25, then the ratio of the areas of the similar triangles is

(a) 16 : 625

(b) 2 : 5

(c) 5 : 2

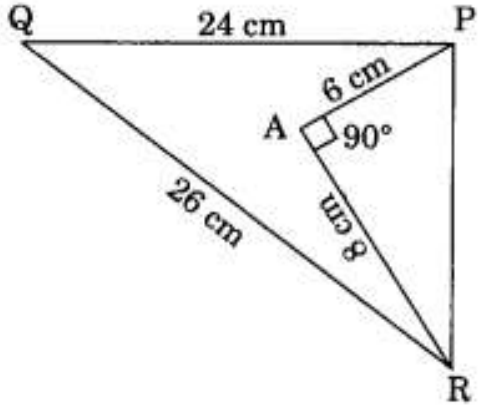
(d) 625 : 16

Answer

Answer: (a) 16 : 625

Question 17.

In the given figure, PQ = 24 cm, QR = 26 cm ∠PAR = 90°, PA = 6 cm, and AR = 8 cm, the degree measure of ∠QPR is



(a) 90°

(b) 100°

(c) 50°

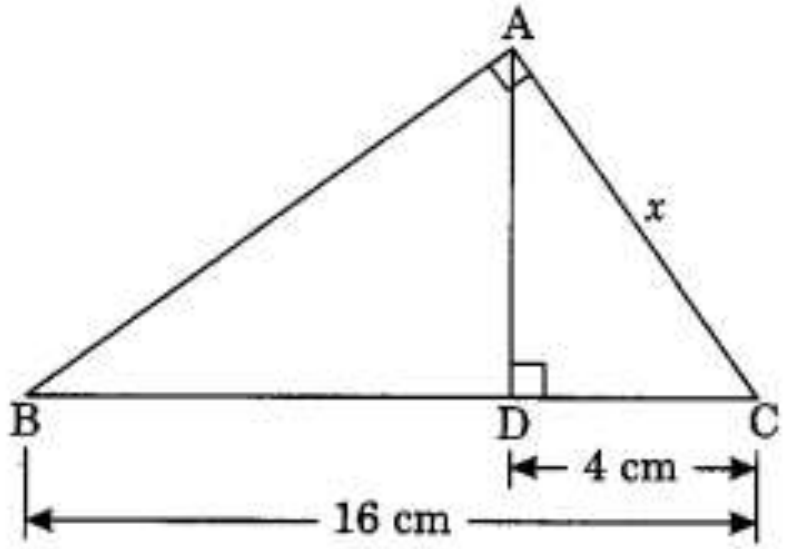
(d) 45°

Answer

Answer: (a) 90°

Question 18.

In the given figure the value of x is



(a) 4 cm

(b) 5 cm

(c) 8 cm

(d) 3 cm

Answer

Answer: (c) 8 cm

Question 19.

ΔPQR is an equilateral triangle with each side of length 2p. If PS ⊥ QR, then PS is equal to

(a) $\frac{\sqrt{3}}{2}$ p

(b) 2p

(c) √3p

(d) p

Answer

Answer: (c) √3p

Question 20.

In ΔLMN, $\angle L = 50°$ and $\angle N = 60°$, If $\Delta LMN \sim \Delta PQR$, then find $\angle Q$

(a) 50°

(b) 70°

(c) 60°

(d) 40°

Answer

Answer: (b) 70°

21

Q.4. If ∆ ABC ~ ∆ DEF such that AB = 12 cm and DE = 14 cm. Find the ratio of areas of ∆ ABC and ∆ DEF.

(A) 49/9

(B) 36/49

(C) 49/16

(D) 25/49

Answer

Answer: (B) 36/49

22

Q.5. In ∆ABC, AB = 3 and, AC = 4 cm and AD is the bisector of ∠A. Then, BD : DC is —

(A) 9: 16

(B) 4:3

(C) 3:4

(D) 16:9

Answer

Answer: (C) 3:4

THANK YOU