Q1-

ΔABC and ΔPQR are similar triangles such that $\angle A=32°$ and $\angle R=65°$ then $\angle B$ is

(A) 83° (B) 32° (C) 65° (D) 97°

Q2--

The lengths of the diagonals of a rhombus are 24 cm and 32 cm. The perimeter of the rhombus is :

(A) 9 cm (B) 128 cm (C) 80 cm (D) 56 cm

Q3--

If $\Delta ABC \cong \Delta DEF$, $\angle A=47°$, $\angle E=83°$, the value of $\angle C$ is :

(A) 47° (B) 30° (C) 40° (D) 50°

Q4--

If $\Delta ABC \cong \Delta RQP$, $\angle A = 80°$, $\angle B=60°$, the value of $\angle P$ is

(A) 60° (B) 50° (C) 40° (D) 30°

Q5--

If $\Delta ABC \sim \Delta DEF$, BC = 4 cm, EF = 5 cm and *ar* $(\Delta ABC)=80$ cm^2, the *ar* (ΔDEF) is :

(A) 100 cm^2 (B) 125 cm^2 (C) 150 cm^2 (D) 200 cm^2

Q6--

If the ratio of the corresponding sides of two similar triangles is 2 : 3, then the ratio of their corresponding altitude is :

(A) 3 : 2 (B) 16 : 81 (C) 4 : 9 (D) 2 : 3

Q7--

$\Delta ABC \sim \Delta PQR$. M is the mid point of BC and N is the mid point of QR. If the area of $\Delta ABC = 100$ sq. cm and the area of $\Delta PQR = 144$ sq. cm. If AM = 4 cm then PN is :

(a) 4.8 cm (b) 12 cm (c) 4 cm (d) 5.6 cm

Q8--

$\Delta ABC \sim \Delta PQR$. If ar (ABC) = 2.25 m^2 ar (PQR) = 6.25 m^2, PQ = 0.5 m, then length of AB is :

(A) 30 cm (B) 0.5 m (C) 50 cm (D) 3 m

Q9—

Which of the following are not the sides of a right triangle

(A) 9 cm, 15 cm, 12 cm (B) 2 cm, 1cm, $\sqrt{5}$ cm

(C) 400 mm, 300 mm, 500 mm (D) 9 cm, 5 cm, 7 cm

Q10--

In figure 2, $\Delta ABC \sim \Delta PQR$, then $y+z$ is

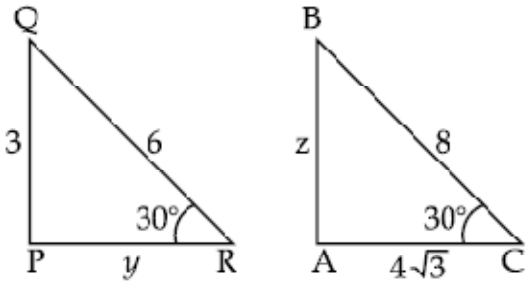


Figure 2

(A) $2+\sqrt{3}$ (B) $4+3\sqrt{3}$ (C) $4+\sqrt{3}$ (D) $3+4\sqrt{3}$

Q11---

The area of two similar triangles ABC and PQR are $25cm^2$ $49cm^2$. If QR = 9.8 cm, then BC is :

(A) 9.8 cm (B) 7 cm (C) 49 cm (D) 25 cm

Q12---

The perimeters of two similar triangles ABC and LMN are 60 cm and 48 cm respectively. If LM = 8cm, length of AB is

(A) 10 cm (B) 8 cm (C) 5 cm (D) 6 cm

Q13---

If in ΔABC and ΔDEF $\frac{AB}{DE} = \frac{BC}{FD}$, then they will be similar if :

(A) $\angle B = \angle E$ (B) $\angle A = \angle D$ (C) $\angle B = \angle D$ (D) $\angle A = \angle F$

Q14--

In an isosceles ΔABC, if $AC = BC$ and $AB^2 = 2AC^2$, then $\angle C$ is equal to :

(A) 45° (B) 60° (C) 30° (D) 90°

Q15--

In the figure - 1, PQ ∥ BC and AP : PB = 1 : 2.

Find $\frac{\text{ar}(\Delta APQ)}{\text{ar}(\Delta ABC)}$

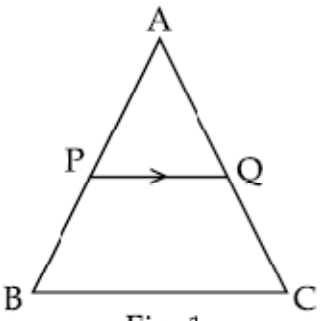


Fig. 1

(A) 1 : 4 (B) 4 : 1 (C) 1 : 9 (D) 2 : 9

Q16---

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

(A) 2 : 3 (B) 4 : 9 (C) 81 : 16 (D) 16 : 81

Q17---

In ΔLMN, $\angle L = 60°$, $\angle M = 50°$. If $\Delta LMN \sim \Delta PQR$, then the value of $\angle R$ is

(A) 40° (B) 30° (C) 70° (D) 110°

Q18--

If $\Delta PQR \sim \Delta XYZ$, $\angle Q = 50°$ and $\angle R = 70°$, then $\angle X$ is equal to :

(A) 70° (B) 50° (C) 120° (D) 60°

Q19--

ΔABC is such that $AB = 3$ cm, $BC = 2$ cm and $CA = 2.5$ cm. If $\Delta DEF \sim \Delta ABC$ and $EF = 4$ cm, then perimeter of ΔDEF is :

(A) 15 cm (B) 22.5 cm (C) 7.5 cm (D) 30 cm

Q20--

In figure 2, if DE||BC then x equals to :

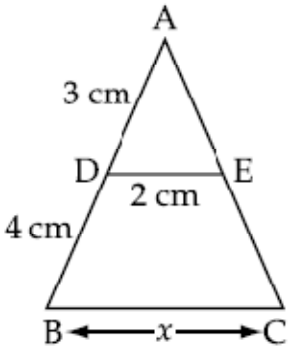


Figure 2

(A) 3 cm (B) 4 cm (C) 7 cm (D) 4.7 cm

Q21---

In figure 3, if DE || BC then x equals :

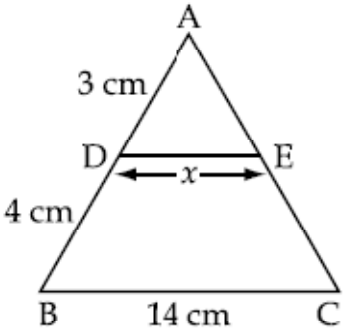
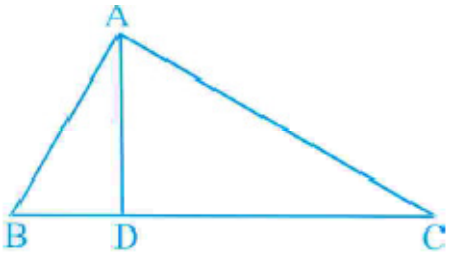


Figure 3

(A) 6 cm (B) 7 cm (C) 3 cm (D) 4 cm

Q22-- $\angle BAC = 90°$ and $AD \perp BC$. Then,



(A) $BD \cdot CD = BC^2$ (B) $AB \cdot AC = BC^2$

(C) $BD \cdot CD = AD^2$ (D) $AB \cdot AC = AD^2$

Q23---

The lengths of the diagonals of a rhombus are 16 cm and 12 cm. Then, the length of the side of the rhombus is

(A) 9 cm (B) 10 cm (C) 8 cm (D) 20 cm

Q24--

If $\Delta ABC \sim \Delta EDF$ and ΔABC is not similar to ΔDEF, then which of the following is not true?

(A) $BC \cdot EF = AC \cdot FD$ (B) $AB \cdot EF = AC \cdot DE$

(C) $BC \cdot DE = AB \cdot EF$ (D) $BC \cdot DE = AB \cdot FD$

Q25--

If in two triangles ABC and PQR, $\frac{AB}{QR} = \frac{BC}{PR} = \frac{CA}{PQ}$, then

(A) $\Delta PQR \sim \Delta CAB$ (B) $\Delta PQR \sim \Delta ABC$

(C) $\Delta CBA \sim \Delta PQR$ (D) $\Delta BCA \sim \Delta PQR$

Q26---

In Fig.6.3, two line segments AC and BD intersect each other at the point P such that PA = 6 cm, PB = 3 cm, PC = 2.5 cm, PD = 5 cm, ∠ APB = 50° and ∠ CDP = 30°. Then, ∠ PBA is equal to

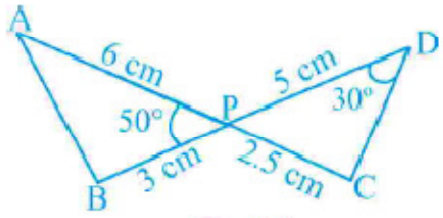


Fig. 6.3

(A) 50° (B) 30° (C) 60° (D) 100°

Q27---

If in two triangles DEF and PQR, ∠D = ∠Q and ∠R = ∠E, then which of the following is not true?

(A) $\frac{EF}{PR}=\frac{DF}{PQ}$ (B) $\frac{DE}{PQ}=\frac{EF}{RP}$

(C) $\frac{DE}{QR}=\frac{DF}{PQ}$ (D) $\frac{EF}{RP}=\frac{DE}{QR}$

Q28---

In triangles ABC and DEF, ∠B = ∠E, ∠F = ∠C and AB = 3 DE. Then, the two triangles are

(A) congruent but not similar (B) similar but not congruent

(C) neither congruent nor similar (D) congruent as well as similar

Q29—

It is given that Δ ABC ~ Δ PQR, with $\frac{BC}{QR}=\frac{1}{3}$. Then, $\frac{ar\,(PRQ)}{ar\,(BCA)}$ is equal to

(A) 9 (B) 3 (C) $\frac{1}{3}$ (D) $\frac{1}{9}$

Q30—

It is given that $\Delta ABC \sim \Delta DFE$, $\angle A = 30°$, $\angle C = 50°$, AB = 5 cm, AC = 8 cm and DF = 7.5 cm. Then, the following is true:

(A) DE = 12 cm, $\angle F = 50°$ (B) DE = 12 cm, $\angle F = 100°$

(C) EF = 12 cm, $\angle D = 100°$ (D) EF = 12 cm, $\angle D = 30°$

Q31--

If in triangles ABC and DEF, $\frac{AB}{DE} = \frac{BC}{FD}$, then they will be similar, when

(A) $\angle B = \angle E$ (B) $\angle A = \angle D$

(C) $\angle B = \angle D$ (D) $\angle A = \angle F$

Q32--

If $\Delta ABC \sim \Delta QRP$, $\frac{ar(ABC)}{ar(PQR)} = \frac{9}{4}$, AB = 18 cm and BC = 15 cm, then PR is equal to

(A) 10 cm (B) 12 cm (C) $\frac{20}{3}$ cm (D) 8 cm

Q33---

If S is a point on side PQ of a ΔPQR such that PS = QS = RS, then

(A) $PR \cdot QR = RS^2$ (B) $QS^2 + RS^2 = QR^2$

(C) $PR^2 + QR^2 = PQ^2$ (D) $PS^2 + RS^2 = PR^2$