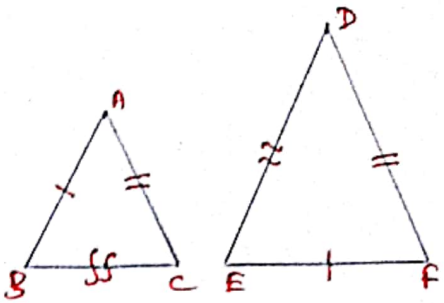
TRIANGLES

(PULKIT JAWAL)

MCQ Set 1

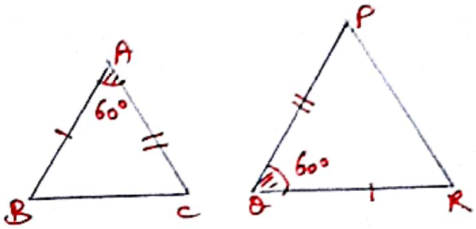
Q1. In the given 2 triangles ABC & DEF which similarity criteria is used (a) AA (b) SAS (c) AAA (d) SSS (e) None of these



Q2. In the figures of (Q1) if $\Delta ABC \sim \Delta FED$, then which is true:-

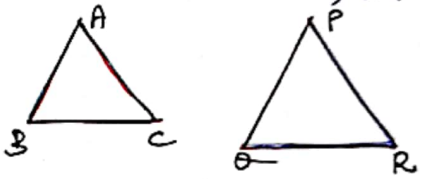
(a) $\frac{AB}{EF} = \frac{AC}{DE}$ (b) $\frac{BC}{DE} = \frac{CA}{FD}$ (c) $\frac{EF}{BC} = \frac{AC}{DF}$ (d) None of these

Q3. In the given figures of ΔABC & ΔPQR, the similarity condition is → (a) SSS (b) AA (c) AAA (d) None of these

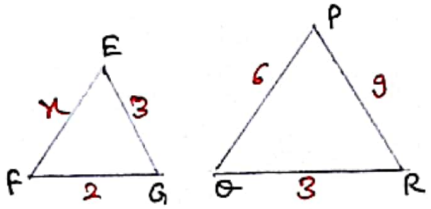


Q4. In the figures of Q3 if the $\Delta ABC \sim \Delta PQR$ and AB = 4cm, QR = 8cm and BC = 5cm, PR = 10cm. find $\frac{AC}{PQ}$ = ??

(a) 2:1 (b) 1:2 (c) 8:9 (d) None of these



Q5.



← If $\Delta EGF \sim \Delta RPQ$ then find x

(a) x=3 (b) x=9 (c) x=1 (d) None

Q6. Which statement is incorrect regarding similarity of 2 triangles.

(a) If 2 Δ's are similar then the ratio of their corresponding sides are equal.

(b) Ratio of their corresponding altitudes are also equal.

(c) Ratio of their corresponding medians are also equal.

(d) Ratio of their corresponding sides is equal to the square root of their corresponding areas.

(e) None of the above statement is incorrect.

Q7. If $\Delta ABC \sim \Delta DEF$ and AB = 1.5cm, EF = 9cm, DE = 4.5cm & BC = 2cm. Then ratio of FD:CA is (a) 1:3 (b) 9:1.5 (c) 5:1 (d) None of these

Q8. If $\Delta PQR \sim \Delta FGE$ and PQ = x, QR = 5y, GE = 25 and EF = 15, PR = 3 FG = 5.

(a) x=1, y=1 (b) x=5, y=1 (c) x=1, y=5 (d) None of these

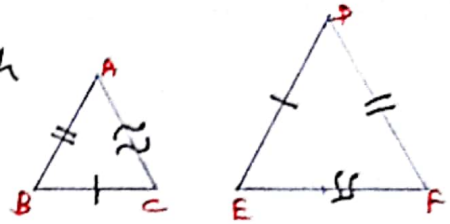
09. If $\Delta PQR \sim \Delta MNO$ then which is ~~correct~~ wrong :-

(a) $\frac{PQ}{MN} = \frac{QR}{NO}$ (b) $\frac{QR}{NO} = \frac{PR}{MO}$ (c) $\frac{QN}{RQ} = \frac{QP}{NM}$ (d) $\frac{PQ}{MN} = \frac{QR}{OM}$

10. If $\Delta EFG \sim \Delta ABC$ then which statement is incorrect.

(a) $\frac{EF}{AB} = \frac{FG}{BC} = \frac{GE}{CA}$ (b) $\angle F = \angle B$ (c) $\angle G = \angle C$ (d) $\angle E = \angle B$.

11. In these 2 Δ's if $\frac{AB}{DF} = \frac{BC}{DE} = \frac{AC}{EF}$ then which one is true ___



(a) $\Delta ABC \sim \Delta DEF$ (b) $\Delta ACB \sim \Delta DFE$

(c) $\Delta BCA \sim \Delta DEF$ (d) None of these

12. If in 2 triangles ABC & DEF, given that $\frac{CA}{FD} = \frac{BC}{FE} = \frac{AB}{DE}$ then

(a) $\Delta FDE \sim \Delta ABC$ (b) $\Delta CBA \sim \Delta FDE$ (c) $\Delta BCA \sim \Delta FDE$ (d) $\Delta FDE \sim \Delta CAB$

13. If in ΔPQR and ΔEFG, $\frac{PQ}{EF} = \frac{QR}{FG}$ then they will be similar if.

(a) $\angle G = \angle R$ (b) $\angle P = \angle G$ (c) $\angle E = \angle Q$ (d) $\angle R = \angle F$

14. If in ΔABC & ΔPQR, Given that $\frac{AB}{PR} = \frac{BC}{PQ} = \frac{CA}{QR}$ then ~~then they are similar~~ if (a) $\angle A = \angle P$ (b) $\angle C = \angle B$ (c) $\angle Q = \angle C$ (d) $\angle P = \angle Q$

15. If in ΔMNP & ΔABC given that $\frac{PN}{AB} = \frac{MN}{AC} = \frac{MP}{BC}$ then which is true when if ~~they are similar~~ $\Delta PQR \sim \Delta ABC$. (a) $\angle M = \angle C$ (b) $\angle P = \angle B$ (c) $\angle N = \angle A$ (d) All are true

16. If the ratio of the corresponding sides of 2 ~~Sides~~ similar triangles are in the ratio of 2:3. Then ratio of their corresponding altitudes will be :-

(a) 1:1 (b) $\sqrt{2}:\sqrt{3}$ (c) 3:2 (d) 2:3.

17. If the ratio of corresponding sides of 2 similar Δ's are in the ratio of 1:6. Then ratio of their corresponding medians will be (a) 1:6 (b) 6:1 (c) 36:1 (d) 1:1

18. If the ratio of corresponding sides of 2 similar Δ's are in ratio of 2:9 then ratio of their corresponding perimeter will be (a) 4:81 (b) 4:18 (c) 9:2 (d) None

19. If the ratio of sides of 2 similar Δ's are 2:5 then ratio of their corresponding areas = (a) 2:5 (b) 5:2 (c) $\sqrt{2}:\sqrt{5}$ (d) None

020. If $\Delta DEF \sim \Delta PQR$ and $\frac{FD}{RP} = \frac{EF}{QR} = \frac{5}{6}$ then $\frac{\text{Area}(\Delta DEF)}{\text{Area}(\Delta PQR)} = ??$

(a) 5:6 (b) 6:5 (c) 36:25 (d) 25:36

021. If $\Delta ABC \sim \Delta PQR$ and ratio of their corresponding sides is 2:3. Then ratio of their corresponding areas = ?? (a) $\sqrt{2}:\sqrt{3}$ (b) 4:9 (c) $\sqrt{3}:\sqrt{2}$ (d) 1:1

022 If $\Delta ABC \sim \Delta PQR$ and ratio of their corresponding sides is $x:y$. and ratio of their corresponding areas is 16:25. Then which relation is correct → (a) $x=y$ (b) $4x=5y$ (c) $5x=4y$ (d) None

023. If $\Delta PQR \sim \Delta EFG$ and Area of $\Delta EFG = 25cm^2$ and Area of $\Delta PQR = 121\,cm^2$ then GE:RP is (a) 5:11 (b) 11:5 (c) $\sqrt{5}:\sqrt{11}$ (d) $\sqrt{11}:\sqrt{5}$

024. If $\Delta ABC \sim \Delta DEF$, BC = 8cm, EF = 10cm, Area(ΔABC) = 160 cm^2 then area of (ΔDEF) = ?? (a) $200cm^2$ (b) $250cm^2$ (c) $350\,cm^2$ (d) None

025. The perimeter of 2 similar triangles ΔABC & ΔDEF are 120cm & 96cm. If FD = 8cm and then $(CA)^2$ = ?? (a) 10 (b) 100 (c) $\sqrt{10}$ (d) None

026 If $\Delta ABC \sim \Delta DEF$ and the ratio of their areas is 9:16. If the median of the ΔABC, "AL" is 6cm. Then median of ΔDEF "Dm" is. (a) 8cm (b) 16cm (c) 4cm

027 In similar Δs ABC & ΔDEF given that $\frac{\text{Area(of } \Delta ABC)}{\text{Area(of } \Delta DEF)} = \frac{3}{4}$. If the median of ΔABC AL is 6cm, find median of ΔDEF 'Dm' is → (a) $2\sqrt{3}$ (b) $4\sqrt{3}$ (c) $3\sqrt{3}$ (d) None of these

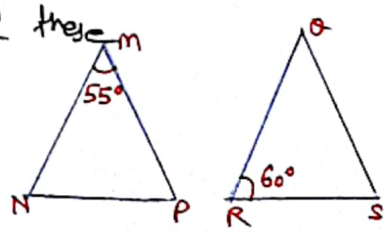
028. Given $\Delta ABC \sim \Delta PQR$ and $\angle P = 50°$, $\angle B = 60°$, find $\angle R = ??$.

(a) 50° (b) 60° (c) 110° (d) 70°

029 Given $\Delta EDF \sim \Delta PQR$, $\angle P = 70°$, $\angle D = 20°$, then $\angle R = ??$

(a) 70° (b) 20° (c) 90° (d) None of these

030 Given the figures of ΔPNM & ΔSRQ these are similar in nature. Then value of $\angle N$ and $\angle S$ is



(a) 60°, 55° (b) 60°, 65° (c) 115°, 65° (d) None

031. In the above figures of 2 Δs. if they are similar $\Delta PNM \sim \Delta SRQ$ then which is true

(a) $\frac{MN}{QR} = \frac{NP}{QS}$ (b) $\frac{PM}{QS} = \frac{NP}{MN}$ (c) $\frac{MP}{QS} = \frac{NP}{RS}$ (d) None of these

032. If $\Delta DEF \sim \Delta GHI$, DR and GN are 2 altitudes of ΔDEF & ΔGHI respectively. If $(DE)^2 : (GH)^2 = 5:9$, then the ratio of DR:GN is = ??

(a) 5:9 (b) 5:3 (c) $\sqrt{5}:\sqrt{3}$ (d) $\sqrt{5}:3$

033. If $\Delta ABC \sim \Delta PQR$, AM and PN are 2 medians of Δ's. If $(AC)^2 : (PR)^2 = 9:4$ then ratio of their medians AM:PN is →

(a) 9:4 (b) 4:9 (c) 3:2 (d) 2:3

034. The areas of 2 similar Δ's are $169\,cm^2$ and $144\,cm^2$, if the longest side of largest Δ is 26cm then the longest side of other Δ is ___

(a) 12cm (b) 14cm (c) 19cm (d) 22cm (e) 24cm

035. If $\Delta ABC \sim \Delta DEF$ then, and $\angle A = 47°$, $\angle E = 83°$ then $\angle C$ = ??

(a) 60° (b) 47° (c) 83° (d) None of these

036. In Δ's ABC & DEF, $\angle A = \angle B = 40°$, AB:ED = AC:EF and $\angle F = 65°$, then value of $\angle B$ = ?? (a) 35° (b) 65° (c) 75° (d) 85°

037. In Δs PQR & DEF, $\angle P = \angle E = 56°$, $\angle Q = 70°$, $\frac{PQ}{EF} = \frac{QR}{DF}$, find $\angle D$ & $\angle F$

(a) 60°, 70° (b) 70°, 60° (c) 60°, 50° (d) None

038. In Δ PQR and Δ GHI, if $\frac{PQ}{GH} = \frac{QR}{HI} = \frac{GI}{PR} = \frac{1}{7}$ then Area (ΔPQR) : Area (ΔGHI)

(a) 49:1 (b) $\sqrt{7}:1$ (c) $1:\sqrt{7}$ (d) 1:49

039. If in 2 triangles PQR and GHI if $\frac{PQ}{GH} = \frac{QR}{HI} = \frac{RP}{IG}$ then which is true.

(a) $\Delta PQR \sim \Delta GHI$ (b) $\Delta QRP \sim \Delta HIG$ (c) $\Delta RQP \sim \Delta IHG$ (d) All are true

040 If in 2 Δs ABC and Δ DEG if $\frac{AB}{DE} = \frac{BC}{EG} = \frac{CA}{GD}$ then

(a) $\Delta CBA \sim \Delta DEG$ (b) $\Delta EGD \sim \Delta BCA$ (c) $\Delta ABC \sim \Delta DGE$ (d) None

041. Given that $\Delta ABC \sim \Delta PQR$ such that Area(ΔABC) = 4. Area(ΔPQR). If BC = 12cm then QR = ??

(a) 24cm (b) 12cm (c) 10cm (d) None

042. If $\Delta ABC \sim \Delta PQR$ with $\frac{BC}{QR} = \frac{1}{3}$ then $\frac{\text{Area } \Delta PQR}{\text{Area } \Delta ABC}$ = ??

(a) $\frac{1}{\sqrt{3}}$ (b) $\frac{1}{3}$ (c) $\frac{1}{9}$ (d) 9 (e) None of these

043. In ΔABC & ΔDEF, $\angle B = \angle E$, $\angle F = \angle C$, $AB = 3DE$. Then 2 Δ's are :-

(a) Congruent but not similar. (c) Neither Similar nor Congruent.

(b) Similar but not Congruent. (d) Congruent as well as Similar.

044. In ΔABC & ΔDEF, $\angle A = \angle E$, $\angle B = \angle F$, then which is Incorrect.

(a) $\frac{BC}{DF} = \frac{AC}{DE}$ (b) $\frac{AB}{DE} = \frac{BC}{DF}$ (c) $\frac{AB}{EF} = \frac{AC}{DE}$ (d) $\frac{BC}{DF} = \frac{AB}{EF}$

045. The peimeter of 2 similar Δs are 30cm & 20cm. If one altitude of former triangle is 12cm. then length of the altitude of later Δ is ⟶

(a) 8 (b) 12 (c) 10 (d) 15 (e) None

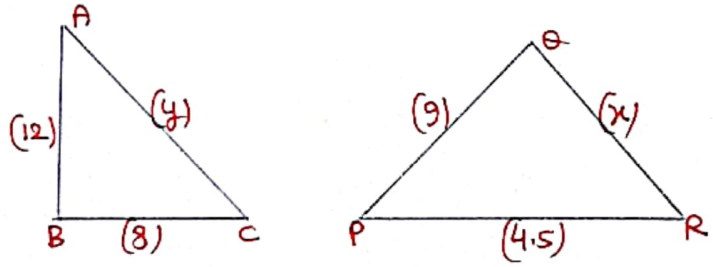
046. If $\Delta ABC \sim \Delta DEF$, $AB = 4$, $DE = 6$, $EF = 9$, $FD = 12$, Peimeter ΔABC = ??

(a) 16 (b) 13 (c) 15 (d) 18.

047. If $\Delta ABC \sim \Delta DFE$, $\angle A = 80°$, $\angle C = 50°$, $AB = 5$, $AC = 8$, $DF = 7.5$. Which is true. (a) $DE = 12$, $\angle F = 50°$ (b) $DE = 12$, $\angle F = 100°$

(c) $EF = 12$, $\angle D = 100°$ (d) $EF = 12$, $\angle D = 30°$.

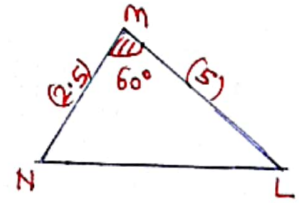
048.

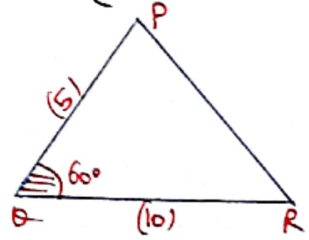


find those values of x & y which makes. $\Delta ABC \sim \Delta PQR$.

(a) $x = y = 5$ (b) $x = 6$, $y = 5$ (c) $x = 6$, $y = 6$ (d) None

049. In these 2 Δs MNL & PQR which is true.

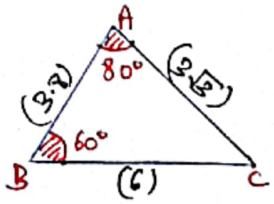


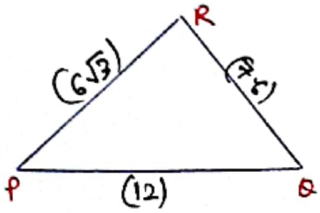


(a) $\Delta MNL \sim \Delta PQR$ (b) $\Delta LMN \sim \Delta PQR$

(c) $\Delta PQR \sim \Delta LMN$ (d) $\Delta LMN \sim \Delta RQP$

050. In these fijure of 2 Δs ABC & PQR. The value of $\angle P = ?$

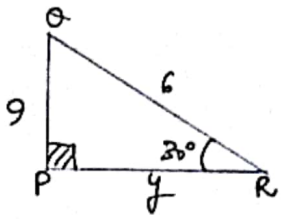


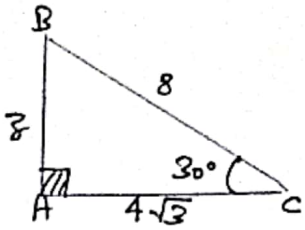


(a) 60° (b) 80° (c) 40° (d) 100°

051. Areas of 2 similar Δ's are in the ratio of 4:9. Then sides of Δ's are in the ratio of (a) 2:9 (b) 3:2 (c) 2:3 (d) 16:81

052 ~~If~~ ~~$\triangle ABC \sim \triangle PQR$~~ Given 2 Δ's. ABC & PQR find $(y+z) = ??$





(a) $2\sqrt{3}$ (b) 12 (c) $3\sqrt{3}+12$

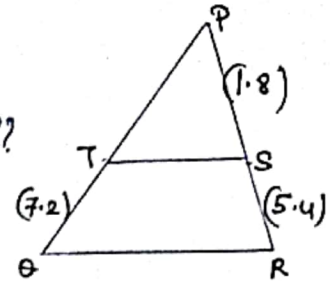
(d) $4\sqrt{3}+12$

052

(TRIANGLES) (PULKIT JAIWAL)

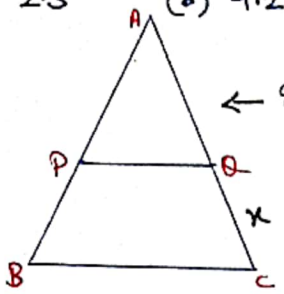
MCQ Set-2

Q1. In this ΔPQR, $TQ = 7.2$cm, $SR = 5.4$cm, $PS = 1.8$cm. find $PT = ??$



(a) 2.3 (b) 4.2 (c) 2.4 (d) None

Q2. In this figure of ΔABC, find x. if $AP = 1.5$cm, $PB = 3$cm, $AQ = 1.3$cm.



(a) 1.5 (b) 6.2 (c) 2.6 (d) None

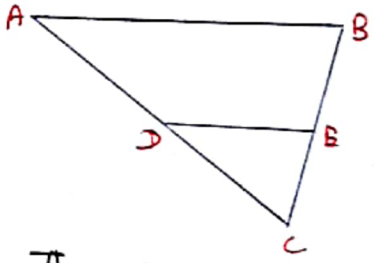
Q3. In a ΔABC, E and F are the points on the sides AB and AC respt. If $AE = 3.9$ cm, $EB = 3$cm, $AF = 3.6$cm & $FC = 2.4$cm. Then which is incorrect.

(a) $EF \parallel BC$ (b) EF is not parallel to BC (c) $\frac{AF}{FC} = 1.5$ (d) $\frac{AE}{EB} = 1.3$.

Q4. In ΔPQR, E & F are points on the sides of PQ & PR. such that $PE = 4$, $QE = 4.5$, $PF = 8$, $FR = 9$. Which is ~~false~~ incorrect.

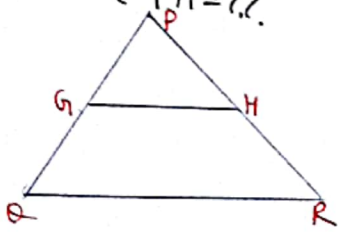
(a) $EF \parallel QR$ (b) $\frac{PE}{QE} = \frac{PF}{FR}$ (c) $\frac{PE}{PQ} = \frac{PF}{PR}$ (d) All of them are correct.

Q5. In this ΔABC, Given $DE \parallel AB$, Given that $AD = (3x+19)$, $DC = (x+3)$, $EC = x$, $EB = (3x+4)$



(a) 6 (b) 20 (c) 15 (d) 2 (e) None

Q6. In ΔPQR, $GH \parallel QR$, If $PQ = 12$, $PG = 4$, $PR = 24$cm. Then $PH = ??$



(a) 8cm (b) 24cm (c) 6cm (d) Can't determine

Q7. In the figure of Q6. of ΔPQR. if $\frac{PG}{GQ} = \frac{PH}{HR}$ then we can say that

(a) G and H are the midpoints of PQ & PR.

(b) $GH \parallel QR$

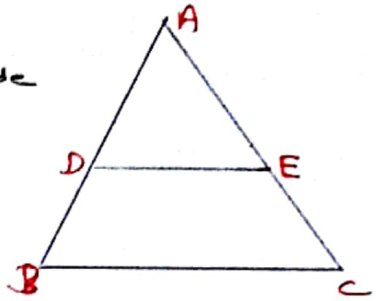
(c) $\frac{GH}{QR} = \frac{PQ}{PR}$

(d) None.

08. XY is drawn parallel to the base BC of a ΔABC cutting AB at X and AC at Y. If $AB = 4BX$ & $YC = 2cm$ then $AY = ??$ (a) 2 (b) 4 (c) 6 (d) 8

09. In a ΔPQR, EG is drawn parallel to QR, cutting PQ at E and PR at G. If $PQ : EQ = 4:1$. and $GR = 2cm$. Then $PG = ??$

(a) 2 (b) 4 (c) 8 (d) None of these



10. If the ΔABC, $DE \parallel BC$, & given that $AD = x cm$, $DB = (6-x) cm$, $EC = 14cm$, $AE = 10cm$. then $DB = ??$

(a) 3cm (b) 2cm (c) 2.5cm (d) 20cm.

11. If a line divides any 2 sides of a triangle in the same ratio then that line is _____ to the third side.

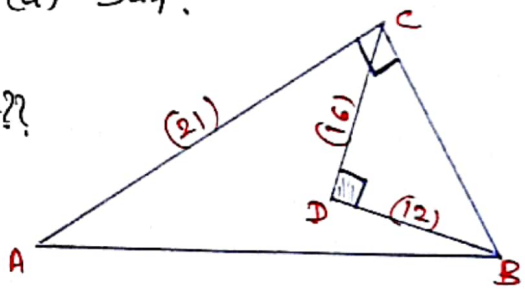
(a) Perpendicular (b) Intersected (c) Parallel (d) transversal.

12. In ΔABC, D & E are the points on side AB & AC. such that $DE \parallel BC$. & $AD : DB = 3:1$. If $EA = 3.3cm$. then $AC = ??$

(a) 1.1cm (b) 4cm (c) 4.4cm (d) 5cm.

13. In this figure of right angled ΔABC, $AB = ??$

(a) 25cm (b) 29cm (c) 33cm (d) 35cm

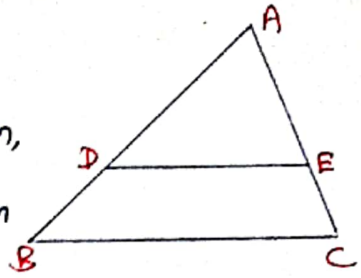


TRIANGLES

(PULKIT JHAWAR)

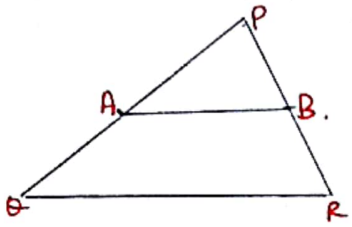
(MCQ SET-3)

Q1. In the figure of ΔABC, $DE \parallel BC$, $AD = 3cm$, $BD = 4cm$, $BC = 14cm$ then $DE = ??$ (a) 7cm (b) 6cm (c) 4cm (d) 3cm



Q2. In the same ΔABC of above (Q1.) given that $DE \parallel BC$, given that $DB = 3cm$, $AB = 5cm$, $ED = 4cm$ find $BC = ??$ (a) 6cm (b) 4cm (c) 8cm (d) 10cm

Q3.



In this figure of ΔPQR, if $AB \parallel QR$, $AB = 3cm$, $QR = 9cm$, $PR = 6cm$. Then length of $PB = ??$

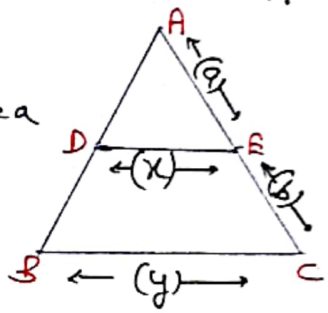
(a) 4cm (b) 6cm (c) 2cm (d) None

Q4. P and Q are the points on the sides AB & AC of ΔABC, such that $AP = 3.5cm$, $PB = 7cm$, $AQ = 3cm$, $QC = 6cm$, $PQ = 4.5cm$. Then $BC = ??$

(a) 4.5 cm (b) 3cm (c) 13.5cm (d) None

Q5. In this figure of ΔABC, $DE \parallel BC$, if $DE = x$, $BC = y$, $AE = a$ then which relation is true?

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

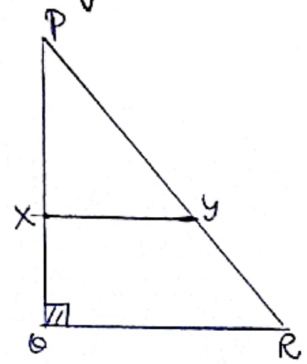


Q6. P and Q are the points on the sides of ΔABC, sides are AB & AC. such that $AP = y$, $PB = x$, $PQ = m$, $BC = n$. then which relation is true.

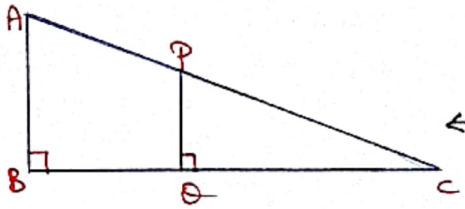
(a) $mx + my = ny$ (b) $ny + my = mx$ (c) $-mx + my = ny$ (d) None

Q7. In this figure of ΔPQR right angled at Q. if $XY \parallel QR$, $PQ = 6cm$, $PY = 4cm$ and $\frac{PX}{XQ} = \frac{1}{2}$ then $\frac{PR}{QR} = ??$

(a) $\frac{2}{3}$ (b) $\frac{2}{2}$ (c) $\frac{2}{\sqrt{3}}$ (d) $\frac{\sqrt{3}}{2}$



Q8.

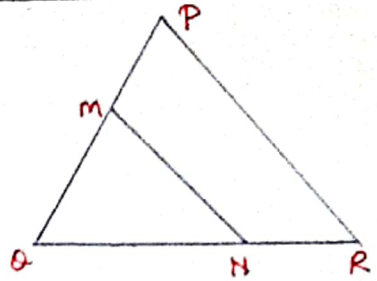


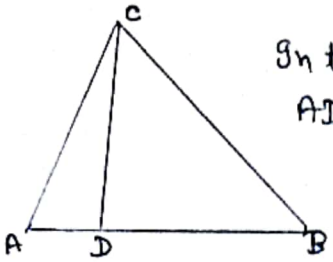
In the given figure of ΔABC. if $PQ \parallel AB$, $PQ = 3cm$, $QC = 4cm$, $BQ = 16cm$, then $AB = ??$

(a) 7.5cm (b) 15cm (c) 30cm (d) None of these

Q9. In this figure of ΔPQR, $MN \parallel PR$ if $QN : NR = 4 : 9$ and $PQ = 11.7$ cm. then $QM = ??$

(a) 3.6 (b) 6.2 (c) 2.4 (d) None of these

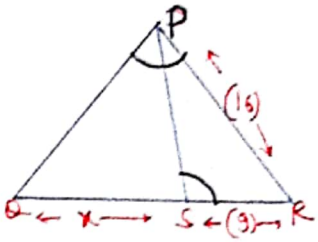


Q10. 

In this figure of ΔACB, $\angle ACB = \angle CDA$, & $AC = 8$cm. $AD = 3$cm then $BD = ??$

(a) $\frac{22}{3}$ cm (b) $\frac{26}{3}$ cm (c) $\frac{55}{3}$ cm (d) $\frac{64}{3}$ cm

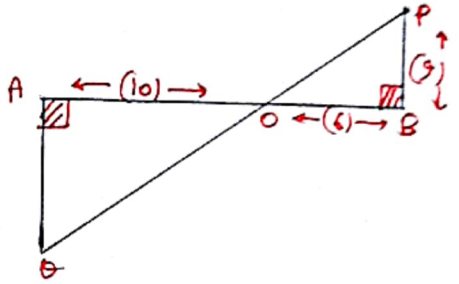
Q11. In this figure of ΔPQR given that $\angle QPR = \angle PSR$. find 'x'

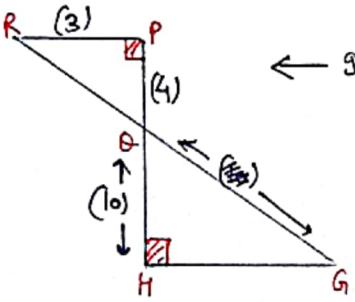


(a) $\frac{256}{3}$ (b) $\frac{229}{3}$ (c) $\frac{225}{3}$ (d) None

Q12. In this figure $OA \perp AQ$ & $PB \perp OB$. then find $AQ = ??$

(a) 15 (b) 8 (c) 5 (d) 9



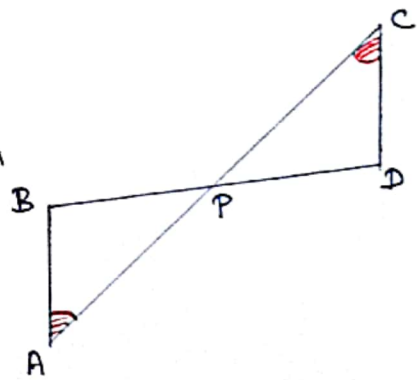
Q13. 

← In this figure of $QP \perp RP$ and $QH \perp HG$. find $HG = ??$.

(a) 7.5 (b) 6.5 (c) 3.5 (d) None

Q14. In this figure $\angle A = \angle S$, $AB = 6$cm, $BP = 15$cm, $AP = 12$ cm and $CP = 4$cm. then $PD : CD = ??$

(a) 2:5 (b) 5:2 (c) 3:4 (d) None



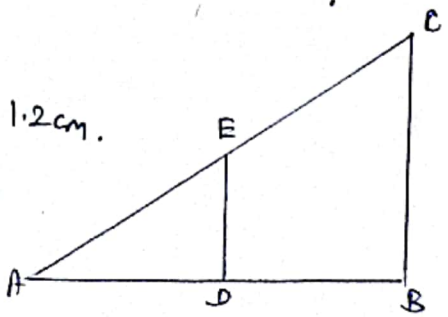
Q15. In an isosceles ΔABC if $AC = BC$ and $AB^2 = 2AC^2$ then value of $\angle C = ??$ (a) 45° (b) 90° (c) 80° (d) None

Q16. In an isosceles ΔPQR if $QP = RP$ & $QR^2 = 2RP^2$ then $\angle Q = ??$.

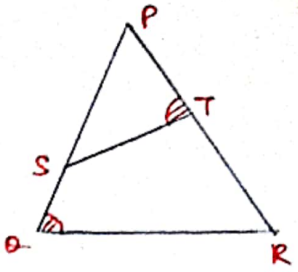
(a) 45° (b) 90° (c) 30° (d) None

Q17. In this ΔABC, given $AE = 1.5$cm, $EC = 3$cm, $ED = 1.2$cm. and $\Delta ADE \sim \Delta ABC$. then $BC = ??$

(a) 4.5 (b) 1.5 (c) 2.4 (d) 3.6



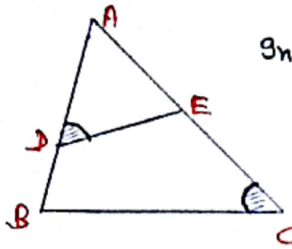
Q18. In this ΔPQR if $\angle PQR = \angle PTS$ then which is true.



(a) $\Delta QPR \sim \Delta TSP$ (c) $\Delta QRP \sim \Delta TPS$

(b) $\Delta QPR \sim \Delta TPS$ (d) None of these

Q19. In this figure of ΔABC if $\angle D = \angle C$. then which is false



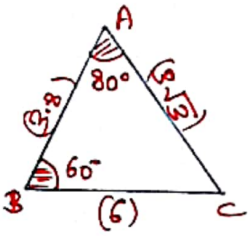
(a) $\Delta DAE \sim \Delta CAB$. (c) $\Delta ADE \sim \Delta ACB$.

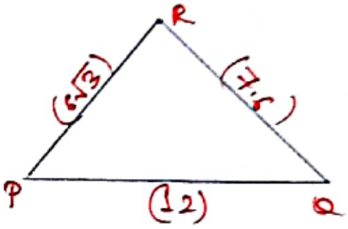
(b) $\Delta EAD \sim \Delta BAC$ (d) $\Delta ABC \sim \Delta AED$

Q20. In the figure of ΔABC of (Q19.) if $\angle D = \angle C$ then ratio of corresponding sides will be.

(a) $\frac{DA}{CA} = \frac{AE}{AB} = \frac{DE}{CB}$. (b) $\frac{EA}{BA} = \frac{AD}{AC} = \frac{BA}{EA}$ (c) $\frac{AD}{DB} = \frac{AE}{EC} = \frac{DE}{BC}$ (d) None

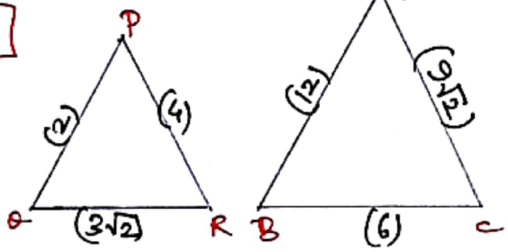
Q21. Observe the following triangles and then find $\angle P$.





(a) 80° (b) 60° (c) 40° (d) None

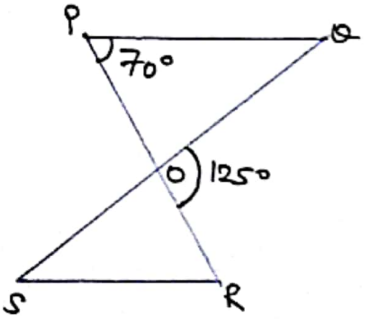
Q22.



Observe the Δ's PQR & ΔABC. and determine $\angle Q = ??$.

(a) $\angle R$ (b) $\angle C$ (c) $\angle B$ (d) $\angle A$

Q23 In this figure $PQ \parallel SR$. and $\Delta OPQ \sim \Delta ORS$.



then value of $\angle OSR$ is.

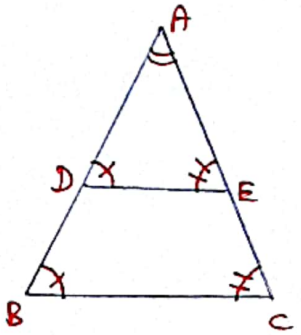
(a) 125° (b) 50° (c) 55° (d) None

Q24. Triangle ABC & BDE are 2 equilateral Δs such that D is mid point of BC.

Then the ratio of areas of ΔBDE to ΔABC is.

(a) 2:1 (b) 1:2 (c) 4:1 (d) None

Q25. In ΔABC, $BC = 8cm$, $DE = 6cm$, area $\Delta ADE = 45m^2$.



then area $\Delta ABC = ??$

(a) $60m^2$ (b) $70m^2$ (c) $80m^2$. (d) None

026. A boy walks 200m towards East & then 150m towards North. The distance between of the boy from the starting point is →
(a) 350m (b) 250m (c) 800m (d) 225m.

027. A man goes 15m due west and then 8m due north. How far is he from the starting point? (a) 7m (b) 10m (c) 17m (d) 23m.

028. A man goes 24m towards west and then 7m towards North. Determine the distance of man from starting point? (a) 31m (b) 17m (c) 25m (d) 26m

029. A ladder 25m long just reaches the top of a building 24m high from the ground. what is the distance of the foot of the ladder from the building (a) 7m (b) 14m (c) 21m (d) 24.5m

030 A ladder is placed against a wall such that its foot is at a distance of 2.5m from the wall and its top reaches a window 6m above the ground. The length of the ladder is. (a) 6.5m (b) 7.5m (c) 8.5m (d) 9.5m

031. A vertical pole of length 6m casts a shadow of 4m long on the ground and at the same time a tower casts a shadow 28m long. find the height of tower. (a) 42m (b) 46m (c) 6/7 (d) 7/6 (e) None

032 A vertical stick 1.8m long casts a shadow 45cm long on the ground. at the same time, what is the length of the shadow of pole 6m high?
(a) 1.5cm (b) 1.5m (c) 150m (d) None

033. ΔABC & ΔBDE are 2 equilateral Δ such that $BD = \frac{2}{3}BC$. The ratios of the areas of triangles ΔABC & ΔBDE is.
(a) 4:9 (b) 9:4 (c) 2:3 (d) 8:2 (e) None

034. Given that ΔPQR & ΔQEF are 2 equilateral Δ. such that $EF = \frac{QR}{6}$ then $\frac{\text{Area}(\Delta QEF)}{\text{Area}(\Delta PQR)} = ??$ (a) 36:1 (b) 1:36 (c) 1:6 (d) None

035. The length of the altitude of an equilateral Δ of side 8m is = ??
(a) $2\sqrt{3}$cm (b) $3\sqrt{3}$cm (c) $4\sqrt{3}$cm (d) $5\sqrt{3}$cm.

036. In an equilateral Δ, ABC. if $AD \perp BC$. then $(AD)^2 = ??$

(a) $3(BD)^2$ (b) $3(DC)^2$ (c) $4(BD)^2$ (d) Both either (a) OR (b)

037. In an equilateral ΔABC if $AD \perp BC$ then which one is true.

(a) $4AD^2 = 3AB^2$ (b) $5AD^2 = 3AB^2$ (c) $4AD^2 = 2AB^2$ (d) None

038. In an equilateral ΔABC, D is a midpoint of AB and E is the midpoint of AC Then area (ΔABC) : ar $(\Delta ADE) = ??$ (a) 1:4 (b) 4:1 (c) 1:2 (d) 2:1

039. The length of the hypotenuse of an isosceles right angled Δ. whose side is $4\sqrt{2}$ cm is (a) 12cm (b) 8cm (c) $8\sqrt{2}$ cm (d) $12\sqrt{2}$ cm

040. In an isosceles right Δ given side = 6m. then length of hypotenuse.

(a) $2\sqrt{6}$ (b) $6\sqrt{2}$ (c) 72 (d) None

041. ΔABC is an isosceles Δ in which $\angle C = 90°$. If AC = 6cm then AB = ??

(a) 6cm (b) $6\sqrt{2}$cm (c) $2\sqrt{6}$ (d) None

042. The triangle in which the perpendicular from the vertex to the base bisects the base in 2 equal parts. (a) Isosceles Δ (b) Scalene Δ

(c) Right Δ (d) None

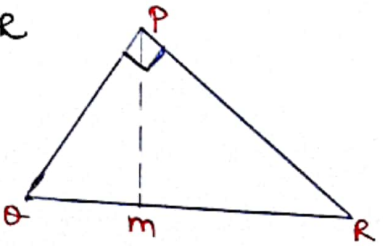
043. In ΔABC, $\angle B = 90°$ and BD is perpendicular to AC, if AD = 8cm, DC = 2cm find the value of BD = ?? (a) 16 (b) 64 (c) 8 (d) 4

044. In a right angled ΔABC which is right angled at 'B'. If AC = 9cm, AD = 3cm then BD = ?? (a) $2\sqrt{2}$cm (b) 6 (c) 36 (d) $3\sqrt{2}$.

045. In the given triangle PQR., $\angle P = 90°$ and $PM \perp QR$ then which is correct relation

(a) $PM^2 = QM \times MR$ (b) $QM^2 = PM \times MR$ (c) $PR^2 = QM^2$

(d) None of these.



046 In a ΔPQR, $\angle Q = 90°$ and $QM \perp PR$, given $QM = 3\sqrt{2}$cm, PM = 3cm, MR = xcm. then x = ?? (a) 12 (b) 6 (c) 36 (d) Can't determine.

047 In ΔABC, AB = $6\sqrt{3}$cm, AC = 12cm & BC = 6cm. then $\angle B = ??$

(a) 30° (b) 45° (c) 120° (d) None of these.

Q48. In ΔABC, given that AD is the internal bisector of $\angle BAC$ or $\angle A$. If $BD = 4cm$, $DC = 5cm$, $AB = 6cm$ then $AC = ??$

(a) 4.5cm (b) 7cm (c) 4.8cm (d) 7.5cm

Q49. In ΔPQR, PG is the angle bisector of $\angle P$. if $QP = 6cm$, $RP = 5cm$. $QG = 3cm$ find $GR = ??$ (a) 3.6cm (b) 1.5cm (c) 2.5cm (d) None

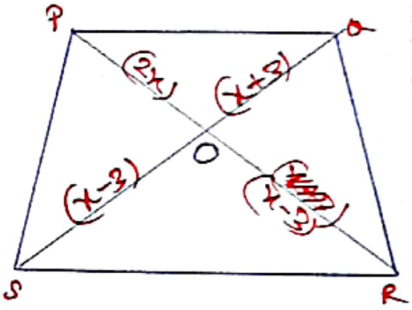
Q50. In ΔABC, AD is the internal bisector of $\angle A$. If $AB = 10cm$, $AC = 14cm$. & $BC = 6cm$. then $CD = ??$ (a) 4.8cm (b) 2.5cm (c) 3.5cm (d) None

Q51. Diagonals of the trapezium ABCD, $AB \parallel DC$ intersect each other at pt. 'O' If $AB = 2CD$. Find the ratio of the area of ΔAOB & ΔCOD.

(a) 1:4 (b) 4:1 (c) 1:2 (d) 2:1 (e) None

Q52. Given PQRS is a trapezium in which $PQ \parallel RS$, and diagonals QS & PR are intersects at O. if $QP = (3x-1)cm$, $QR = (2x+1)cm$, $QO = (5x-3)cm$, $QS = (6x-5)cm$ then value of x will be (a) 2 (b) 3 (c) 4 (d) 2.5.

Q53. In the trapezium PQRS $PQ \parallel RS$, find 'x'.



(a) 2 (b) 2.5 (c) 3 (d) 3.5.

Q54. In the figure of trapezium PQRS of (Q53) which is true:

(a) $\frac{QP}{QO} = \frac{QS}{QR}$ (b) $\frac{QP}{QR} = \frac{QO}{QS}$ (c) $\frac{QP}{QR} = \frac{QO}{QS}$ (d) None

Q55. Given that ABCD is a trapezium in which $AB \parallel DC$. & $CD = 2AB$. If Area of $\Delta AOB = 48cm^2$ then are $\Delta COD = ??$

(a) $48cm^2$ (b) $96cm^2$ (c) $192cm^2$ (d) None

Q54. In Rhombus of side 10cm, If one diagonal is 12cm, Then length of other diagonal is $= ??$ (a) 20 (b) 18 (c) 16 (d) 22

Q55 In a Rhombus if the diagonals are 24cm & 10cm. Then perimeter of Rhombus is (a) 68cm (b) 58cm (c) 100cm (d) None

Q56. If diagonals of Rhombus are 12cm & 16cm. Then perimeter of Rhombus.

(a) 20cm (b) 40cm (c) 28cm (d) 56cm.

Q57.