

Practice Questions - Term 1

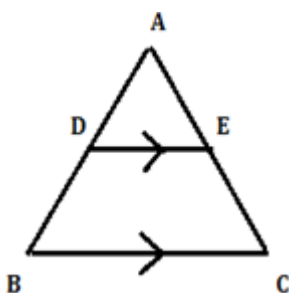
Date: 19/11/2021

Subject: Mathematics

Topic : Triangles

Class: X

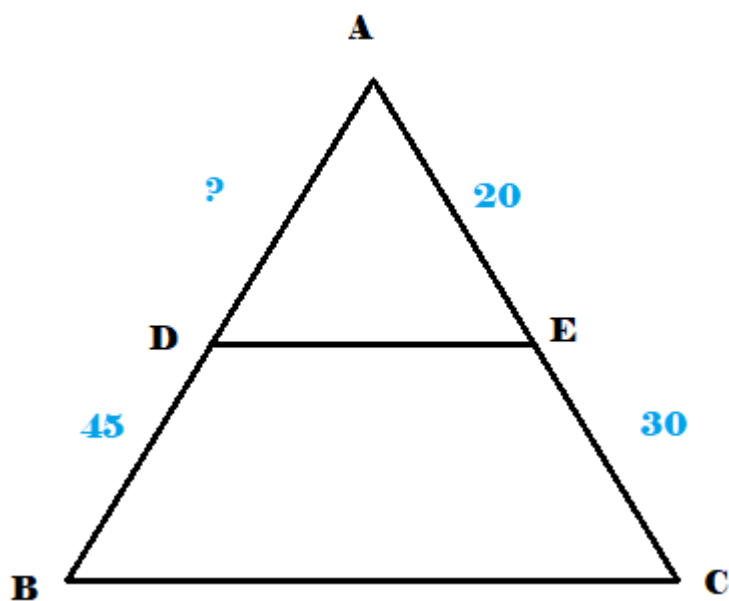
1. In $\triangle ABC$, $DE \parallel BC$ and $\frac{AD}{DB} = \frac{3}{5}$. If $AC = 5.6$ cm, then $AE =$ _____.



- A. 2.1 cm
- B. 2.4 cm
- C. 3.2 cm
- D. 3.6 cm

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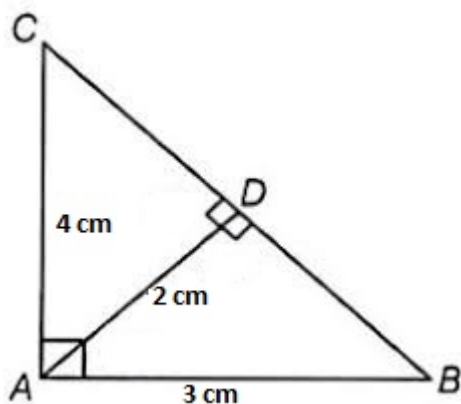
2. In the given figure, if $DE \parallel BC$ then find AD.



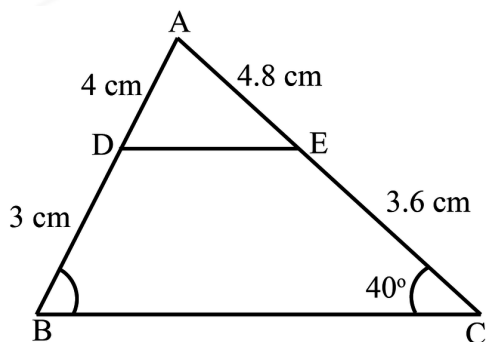
- A. 30 units
- B. 50 units
- C. 40 units
- D. 10 units

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3. Find CD, if AC = 4 cm, AB = 3 cm and AD = 2 cm.



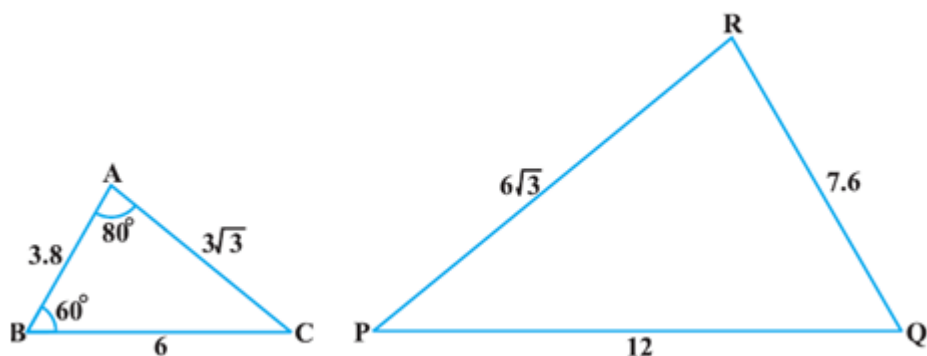
- A. $\frac{8}{3} \text{ cm}$
 B. $\frac{3}{8} \text{ cm}$
 C. $\frac{4}{3} \text{ cm}$
 D. $\frac{3}{4} \text{ cm}$
4. In $\triangle ABC$, point D and E lies on the line AB and AC respectively as shown in the figure. Find the measure of $\angle AED$.



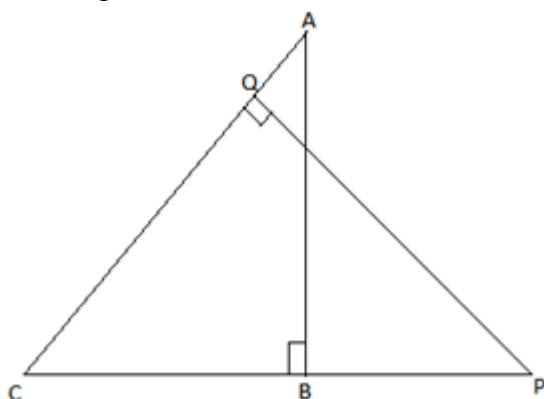
- A. 65°
 B. 40°
 C. 75°
 D. 70°

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5. Observe the given triangles and find the value of $\angle P$.



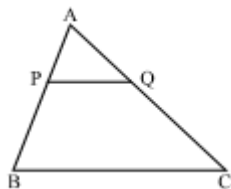
- A. 60°
 B. 40°
 C. 50°
 D. 65°
6. In the figure, AC = 10cm, PC = 15cm, PQ = 12 cm, find PB.



- A. 6 cm
 B. 7 cm
 C. 8 cm
 D. 9 cm

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7. In a $\triangle ABC$, points P and Q are on sides AB and AC respectively. If $AP = 3$ cm, $PB = 6$ cm. $AQ = 5$ cm and $QC = 10$ cm, then $BC = \underline{\hspace{2cm}}$.

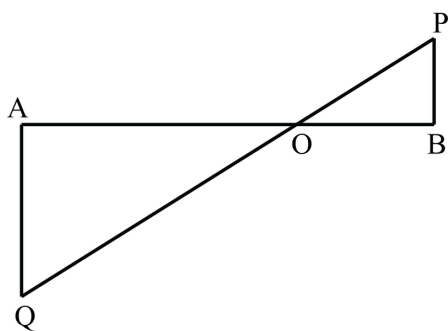


- A. $4PQ$
 - B. $\frac{PQ}{2}$
 - C. $3PQ$
 - D. PQ^2
8. Two isosceles triangles have equal angles and their areas are in the ratio 16 : 25. The ratio of corresponding heights is :
- A. 4: 5
 - B. 5: 4
 - C. 3: 2
 - D. 5: 7

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9. In the figure given below, sides PB and QA are perpendiculars drawn to the line segment AB.

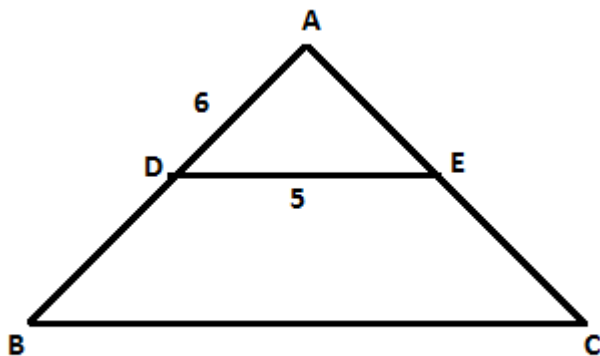
If $PO = 6$ cm, $QO = 9$ cm and area of $\triangle POB = 120$ cm^2 , then the area of $\triangle QOA$ is



- A. 360 cm^2
- B. 270 cm^2
- C. 240 cm^2
- D. 290 cm^2
10. If D is a point on the side BC of a triangle ABC such that $\angle ADC = \angle BAC$ then, $CA^2 = \underline{\hspace{2cm}}$.
- A. $BC \cdot CD$
- B. $BD \cdot DC$
- C. $BC \cdot BC$
- D. $AD \cdot DC$

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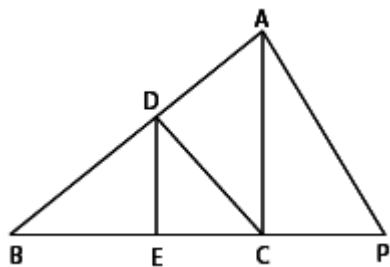
11.



In the given figure, $DE \parallel BC$. If $AD = 6$ cm, $AB = 24$ cm and $DE = 5$ cm, then $BC =$ ____ cm.

- A. 5
 - B. 10
 - C. 20
 - D. 24
12. In the given figure, $DE \parallel AC$, $DC \parallel AP$, $BC = 4$ cm and $BP = 6$ cm.

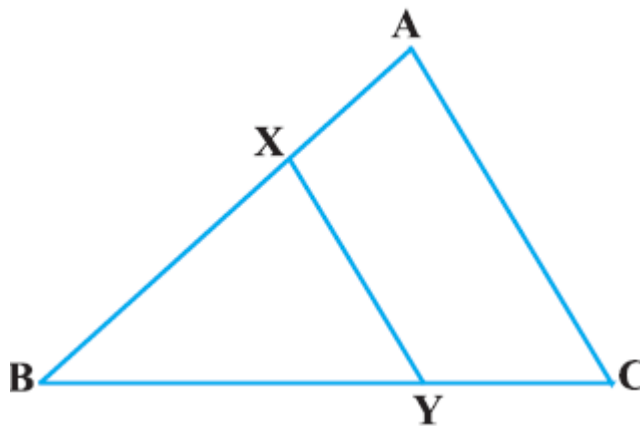
Find the value of $\frac{BE}{EC}$.



- A. 1 : 2
- B. 2 : 1
- C. 1 : 3
- D. 3 : 1

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13. The line segment XY is parallel to side AC of $\triangle ABC$ and it divides the triangle into two parts of equal areas. Find the ratio $\frac{BX}{AB}$.



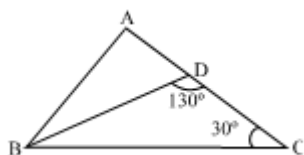
- A. $\frac{1}{\sqrt{2}}$
- B. $\frac{1}{2}$
- C. $\frac{4}{1}$
- D. $\frac{\sqrt{2}}{1}$
14. A tower of height 24 m casts a shadow 50 m and at the same time, a girl of height 1.8 m casts a shadow. Find the length of her shadow.
- A. 3 m
- B. 3.25 m
- C. 3.5 m
- D. 3.75 m

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15. If ABC is an equilateral triangle of side $4a$, then the length of its altitude is _____.

- A. $2\sqrt{3}a$
- B. $7\sqrt{9}a$
- C. $4\sqrt{3}a$
- D. $5\sqrt{2}a$

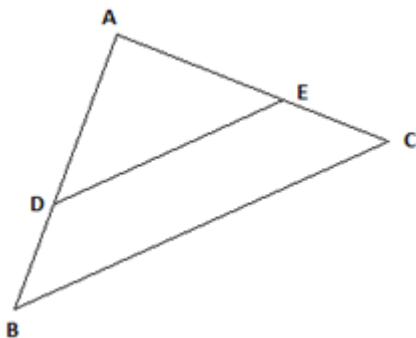
16. In the adjoining figure, $AB = 10$ cm, $BC = 15$ cm $AD : DC = 2 : 3$, then $\angle ABC$ is equal to -



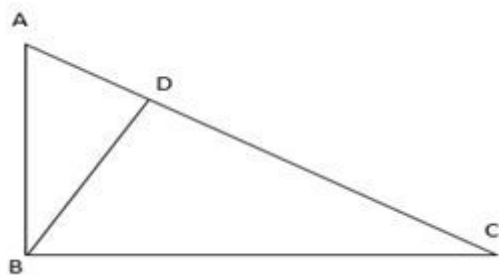
- A. 30°
- B. 40°
- C. 45°
- D. 110°

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17. In $\triangle ABC$, $AC = 15$ cm and $DE \parallel BC$. If $\frac{AD}{DB} = \frac{2}{1}$, then $EC =$ _____.



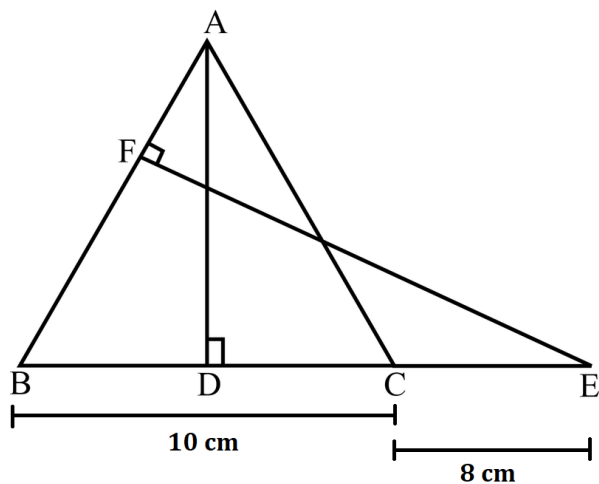
- A. 5 cm
B. 10 cm
C. 7.5 cm
D. 12.5 cm
18. $\triangle ABC$ is a right angled triangle, right angled at B. BD is perpendicular to AC. What is $AC \cdot DC$?



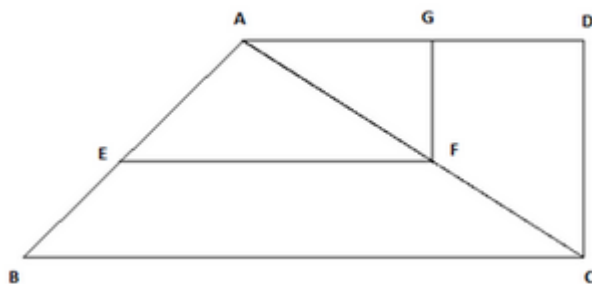
- A. $BC \cdot AB$
B. BC^2
C. BD^2
D. $AB \cdot AC$

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19. $\triangle ABC$ is an isosceles triangle in which $AB = AC = 13$ cm. If area of $\triangle ADC$ is 169 cm^2 , then area of $\triangle EFB$ is equal to



- A. 196 cm^2
 B. 324 cm^2
 C. 169 cm^2
 D. 396 cm^2
20. If $BC \parallel EF$ and $FG \parallel CD$ then, $\frac{AE}{AB} = \underline{\hspace{2cm}}$.



- A. $\frac{AG}{CD}$
 B. $\frac{GD}{AC}$
 C. $\frac{AG}{AD}$
 D. $\frac{CF}{AF}$