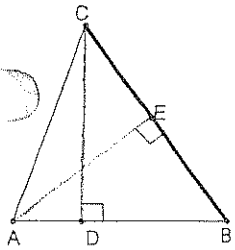
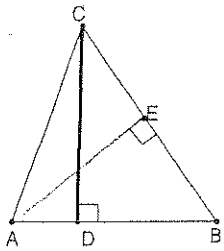
AREA #2 Name _____

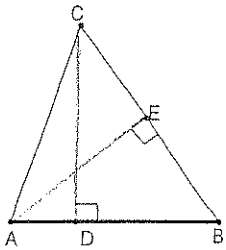
In ΔABC, $\overline{CD} \perp \overline{AB}$ and $\overline{AE} \perp \overline{BC}$, find the highlighted segment if:



1. AB = 8', CD = 9', AE = 6'



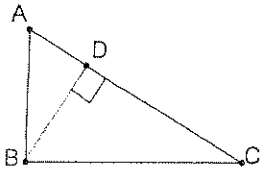
2. AB = 11', AE = 5', BC = 15'



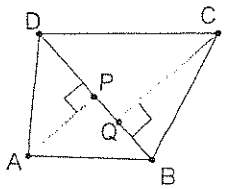
3. CD = 14', AE = 10', BC = 21'

4. The diagonals of a rhombus are 20" and 24" Find the area of the rhombus.

5. The length of the hypotenuse $\overline{AC}$ of right ΔABC is 30 cm. AB = 18 cm. Find the area of ΔABC and the length of BD.



6. If AP = 10 and CQ = 15 find this ratio:

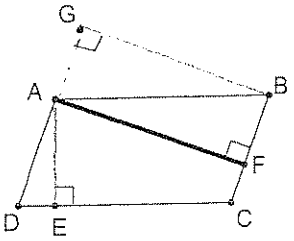


$$\frac{area\Delta ABD}{area\Delta BCD}$$

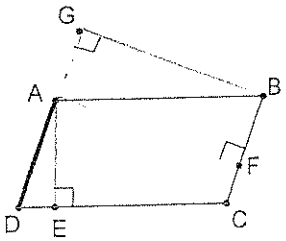
7. The lengths of the sides of a parallelogram are 8 in and 10 in. If the length of an altitude to a longer side is 4 in, find the length of an altitude to a shorter side.

1. 12 ft 2. $6\frac{9}{11}$ ft 3. 15 ft 4. 240 sq in 5. 216 cm^2, 14.4 cm 6. 2:3 7. 5 in

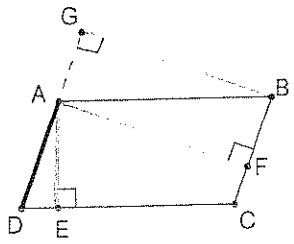
Given parallelogram ABCD with $\overline{AE} \perp DC$, $AF \perp BC$, and $BG \perp DG$. Find the highlighted segment. If:



8. AE = 7', DC = 12', BC = 14'

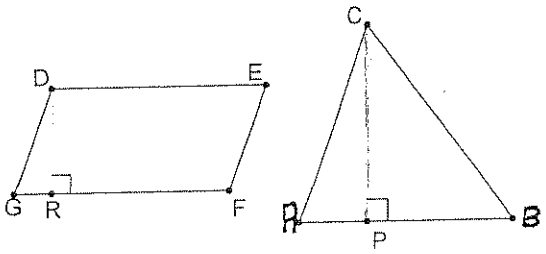


9. AE = 10', AB = 18', GB = 15'

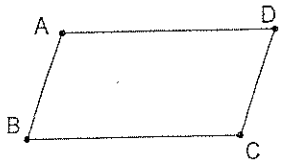


10. AF = 6'. DC = 14', AE = 8'

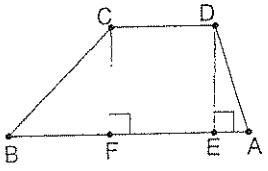
11. If area of $\triangle ABC$ = area parallelogram DEFG and AB = DE, what is the ratio of CP to DR?



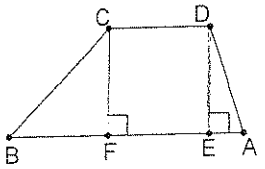
12. In parallelogram ABCD, AD = 14" and $m\angle B = 60°$ Find the length of the altitude form A to $\overline{CD}$



13 – 15 Find the area of trapezoid ABCD where $\overline{CF} \perp \overline{BA}$ and $\overline{DE} \perp \overline{BA}$ if:



13. AB = 12', DC = 6', DE = 4'



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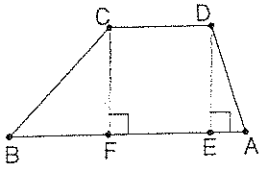
14. AB = 9, DC = 5, CF = 3



15. AE = 4', FB = 6', DC = 6', DE = 5'

8. 6 ft 9. 12 ft 10. $18\frac{2}{3}$ ft 11. 2:1 12. $7\sqrt{3}$ in 13. 36 sq' 14. 21 ft^2 15. 55 ft^2