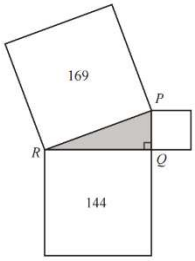
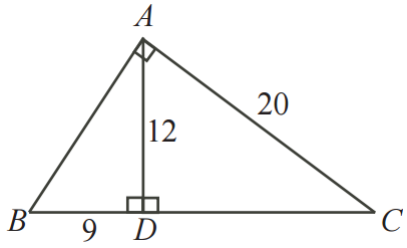
Name:_____ Math 8 Honours: Ch4 Review: Pythagorean Problems: Date:_____

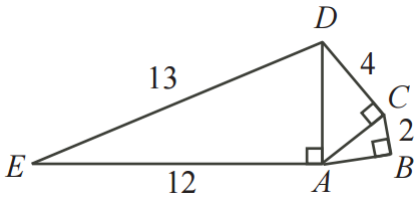
1. What is the area of the little square?



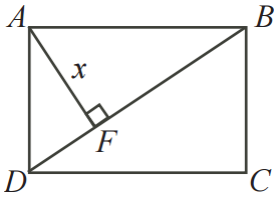
2. What is the perimeter of the triangle?



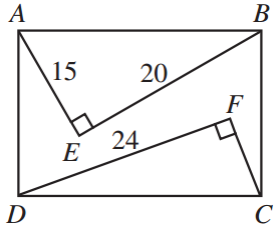
3. In the diagram, ED =13, EA = 12, DC =4, and CB=2. Determine the length of AB.



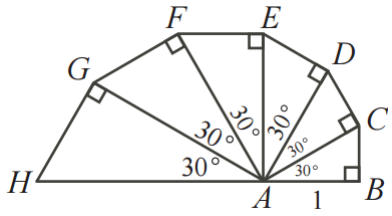
4. If AB=44, and CB=33, then what is the length of "x"?



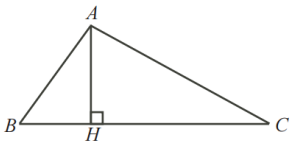
5. What is the length of CF?



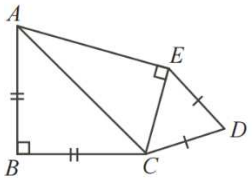
6. What is the length of AH?



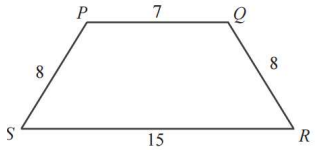
7. In the diagram, AB =10, AH=8, and the area of triangle ABC is 84. What is the perimeter of triangle ABC?



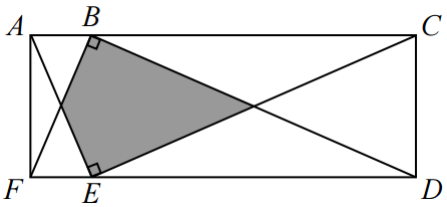
8. Given that AB=BC= $2\sqrt{2}$, $\angle EAB = 75°$, $\angle CDE = 60°$, and DE=CD, what is the perimeter of ABCDE?.



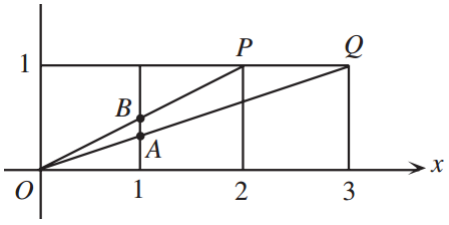
9. Determine the length of PR.



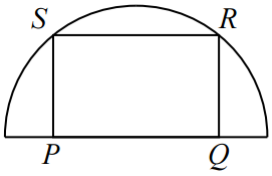
10. In the triangle, AC =200 and CD =50. Triangles ACE and FDB are congruent. What is the area of the shaded region? (Euclid 2015)



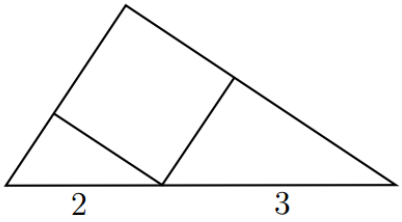
11. What is the length of AB?



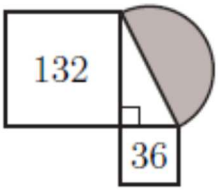
12. If PQ=20 and SP=15, then what is the area of the semi-circle?



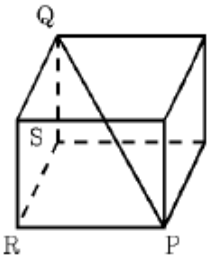
13. Given the square in the triangle, what is the area of the square?



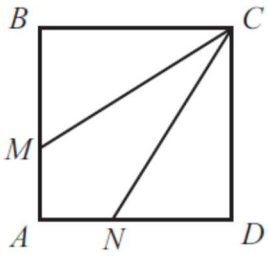
14. Squares are erected on the legs of a right-angled triangle. These squares have areas 36 and 132 as shown. A semicircle (Shaded) is drawn with hypotenuse as diameter. What is the area of the semi-circle? Give your answer in terms of pi.



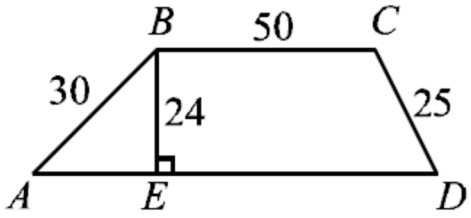
15. Given that RS = 4cm, PR = 7cm, and QS = 5cm, what is the length of QP?



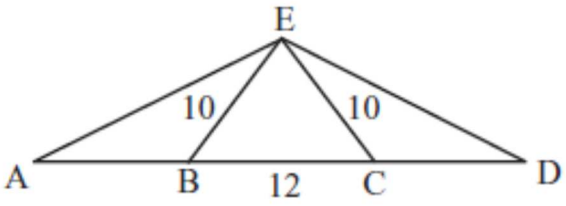
16. Square ABCD has sides of length 3. Segments *CM* and *CN* divide the squares area into three equal part. How long is segment *CM?*



17. What is the perimeter of trapezoid ABCD?



18. Points A, B, C, and D lie on a line, in that order, with AB=CD and BC=12. Point *E* is not on the line, and *BE=CE=10*. The perimeter of ΔAED is twice the perimeter of ΔBEC. Find *AB.*



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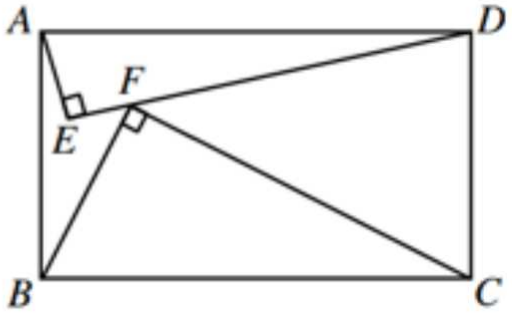
In the diagram, right-angled triangles AED and BFC are constructed inside rectangle $ABCD$ so that F lies on DE. If $AE = 21$, $ED = 72$ and $BF = 45$, what is the length of AB?



19. Challenge:

(b) The deck AB of a sailboat is 8 m long. Rope extends at an angle of 60° from A to the top (M) of the mast of the boat. More rope extends at an angle of θ from B to a point P that is 2 m below M, as shown. Determine the height MF of the mast, in terms of θ.