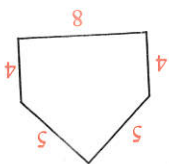
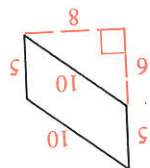


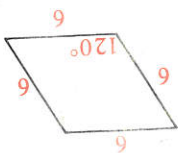
14.



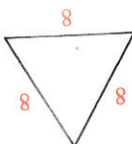
13.



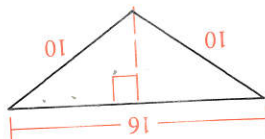
12.



11.



10.



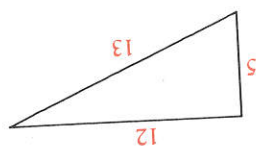
9.

Find the area of each figure.

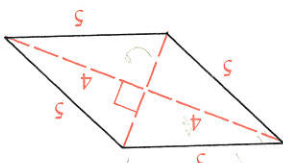
4	?	?	108	56	?	?	?	?
$h$	7 cm	11.5 m	?	14	$2\sqrt{2}$	$3\sqrt{6}$	?	$15xy$
$b$	8 cm	5.2 m	18	?	$3\sqrt{2}$	$6\sqrt{3}$	$5x$	$24\sqrt{2}$
1.	2.	3.	4.	5.	6.	7.	8.	

Exercises 1-8 refer to triangles. Complete the table.

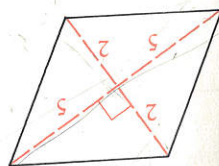
**Written Exercises**



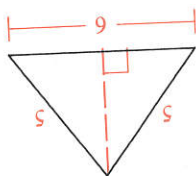
10.



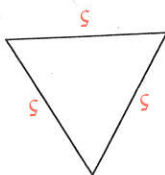
9.



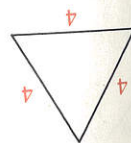
8.



7.

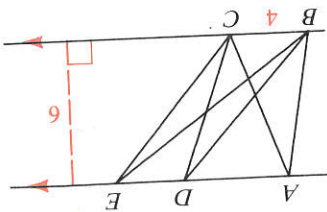


6.



5.

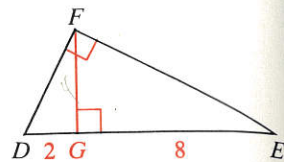
Find the area of each figure.



2. Find the area of  $\triangle ABC$ .
3. Find the area of  $\triangle DBC$ .
4. Find the area of  $\triangle EBC$ .

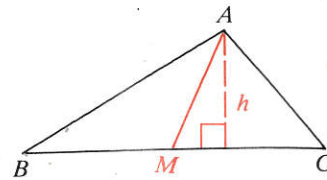
15. A parallelogram has sides 12 cm and 20 cm long. If the shorter altitude is 6 cm long, how long is the other altitude?

16.  $\overline{FG}$  is the altitude to the hypotenuse of  $\triangle DEF$ . Name three similar triangles and find their areas. (Hint: See Theorem 6-1 and Corollary 1 on page 248.)



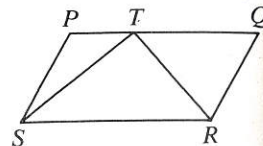
- B** 17. a. Let  $\overline{AM}$  be a median of  $\triangle ABC$ . If  $BC = 16$  and  $h = 5$ , find the areas of  $\triangle ABC$  and  $\triangle ABM$ .  
b. Write an outline of a proof that if  $\overline{AM}$  is a median of  $\triangle ABC$ , then

$$\text{Area of } \triangle ABM = \frac{1}{2} \cdot \text{Area of } \triangle ABC.$$



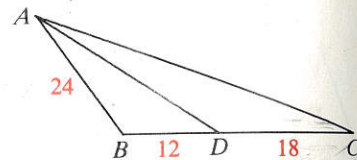
18. An isosceles triangle has sides 5 cm, 5 cm, and 8 cm long.  
a. Find its area.  
b. Find the lengths of the three altitudes.

19. If the area of parallelogram  $PQRS$  is 36, find the area of  $\triangle TRS$ .



20. Find the ratio of the areas of  $\triangle ABD$  and  $\triangle ADC$ .

21. If the area of  $\triangle ABC$  is 240, find the length of the altitude from  $C$  to  $\overleftrightarrow{AB}$ .



**Find the area of each figure.**

22. A rhombus with perimeter 40 and one diagonal 12  
23. A  $30^\circ$ - $60^\circ$ - $90^\circ$  triangle with hypotenuse 8  
24. An isosceles right triangle with hypotenuse  $x$   
25. An equilateral triangle with height 12  
26. A regular hexagon with perimeter 60  
27. A rectangle with length 24 inscribed in a circle with radius 13

28. Use the diagram shown at the right.

- a. Find the area of  $\square PQRS$ .  
b. Find the area of  $\triangle PSR$ .  
c. Find the area of  $\triangle OSR$ . (Hint: Refer to  $\triangle PSR$  and use Exercise 17.)  
d. What is the area of  $\triangle PSO$ ?  
e. What must the area of  $\triangle POQ$  be? Why? What must the area of  $\triangle OQR$  be?  
f. State what you have shown in parts (a)–(e) about how the diagonals divide a parallelogram.

