

Written Exercises

Complete the tables. Exercises 1–16 refer to rectangles. p is the perimeter.

A 1. 2. 3. 4. 5. 6. 7. 8.

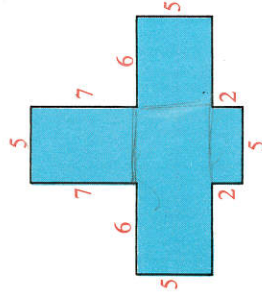
b	12 cm	8.2 cm	16 cm	?	$3\sqrt{2}$	$\sqrt{6}$	$2x$	$4k - 1$
h	5 cm	4 cm	?	8 m	$4\sqrt{2}$	$\sqrt{2}$	$x - 3$	$k + 2$
A	?	?	80 cm^2	120 m^2	?	?	?	?

9. 10. 11. 12. 13. 14. 15. 16.

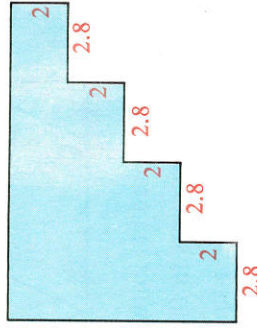
b	9 cm	10 cm	16 cm	$x + 5$	$a + 3$	$k + 7$	x	?
h	4 cm	?	?	x	$a - 3$?	?	y
A	?	?	?	?	?	?	$x^2 - 3x$	$y^2 + 7y$
p	?	30 cm	42 cm	?	?	$4k + 20$?	?

Consecutive sides of the figures below are perpendicular. Find the area of each figure.

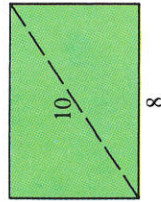
B 17.



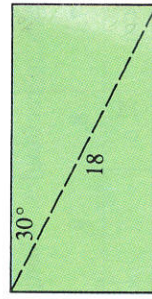
18.



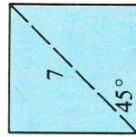
19.



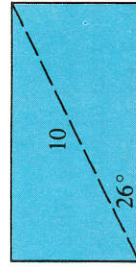
20.



21.



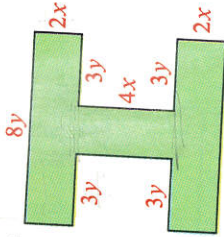
22.



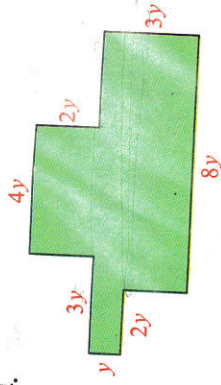
(Give answer correct to the nearest tenth.)

For Exercises 23 and 24, find the area in terms of x or y , or both.

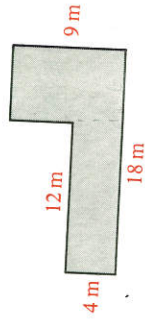
23.



24.



25. How much will it cost to blacktop the driveway shown if blacktopping costs \$4.00 per square meter?



26. A walk 2.5 m wide surrounds a rectangular grass plot 45 m long and 25 m wide. Find the area of the walk.

27. The diagonals of a square are $6\sqrt{2}$. What is the area?

28. The diagonals of a square are 8 cm. What is the area?

29. The diagonals of a rectangle are 12 cm and intersect at a 60° angle. Find the area of the rectangle.

30. The lengths of the sides of three squares are s , $s + 1$, and $s + 2$. The total area of the squares is 365. Find the value of s .

31. A rectangle is three times as long as it is wide, and its area is 432 cm^2 . Find its dimensions.

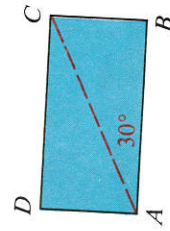
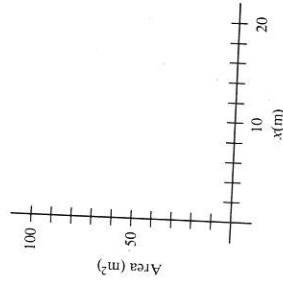
32. a. Suppose you had 40 m of fencing with which to make a rectangular enclosure for a dog. If one side of the rectangle is x m long, explain why the other side is $(20 - x)$ m long.

b. Express the area of the enclosure in terms of x .

c. Complete the table and graph the area using the values found.

x	2	4	8	10	12	16	18	20
Area	?	?	?	?	?	?	?	?

d. Give the dimensions of the enclosure having the greatest area.



C 33. If rectangle $ABCD$ has area $64\sqrt{3}$, find its length and width.