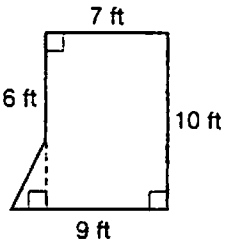
Name _____ Date _____ Class _____

SKILL 11: Area of Compound Shapes

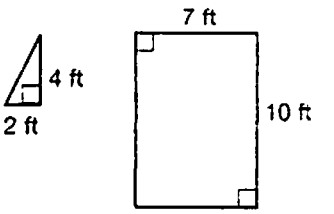
Not all geometric figures are shapes with which you are familiar. Some of them, however, can be divided into familiar shapes.

Example

Find the area of the figure.



This shape can be divided into a triangle and a rectangle.



Find the height of the triangle. Subtract the length of the known portion from the length of the opposite side: $10 - 6 = 4$.

Find the base of the triangle. Subtract the side of the rectangle from the base of the figure: $9 - 7 = 2$.

Area of a triangle $= \frac{1}{2}(b \times h)$
$= \frac{1}{2}(2 \times 4)$
$= \frac{1}{2}(8)$
$= 4 \text{ ft}^2$

Area of a rectangle $= b \times h$
$= 7 \times 10$
$= 70 \text{ ft}^2$

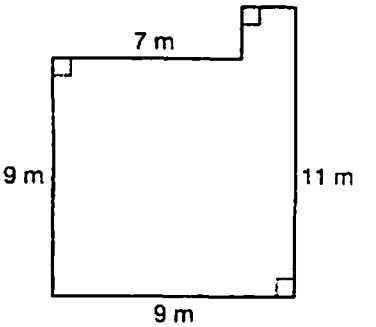
Total area = area of triangle + area of rectangle
$= 4 + 70$
$= 74$

The total area is 74 ft^2.

Guided Practice

Find the area of the figure shown.

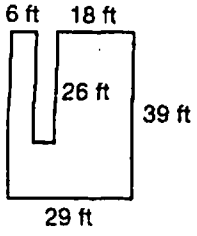
1. Divide the figure into two squares.
2. Find the length of a side of the large square. _____
3. Find the length of a side of the small square. _____
4. Find the area of the large square. _____
5. Find the area of the small square. _____
6. Find the total area. _____ + _____ = _____

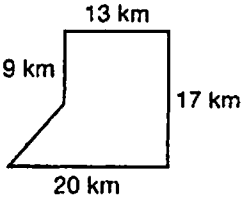


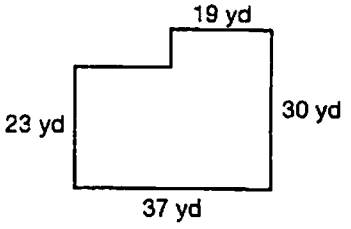
Name _____ Date _____ Class _____

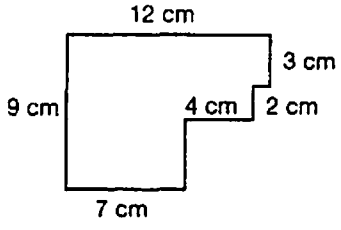
SKILL 11: Practice

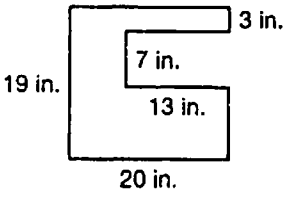
Find the area of each figure.

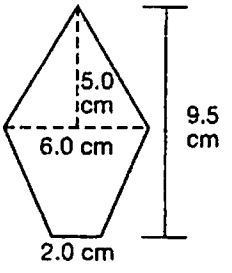
1. 

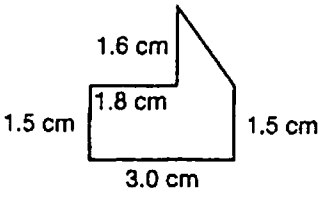
2. 

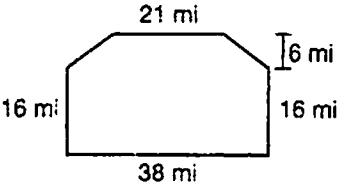
3. 

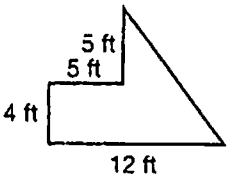
4. 

5. 

6. 

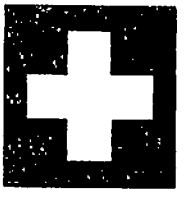
7. 

8. 

9. 

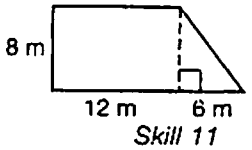
Solve.

10. The flag of Switzerland features a white cross on a red background.
    a. Each of the 12 sides of the cross has length 15 cm. Find the area of the white cross.
    b. The flag has dimensions 60 cm by 60 cm. Find the area of the red region.



TEST PREP

11. What is the area of the figure?



Skill 11

A $72\ m^2$ C $120\ m^2$
B $102\ m^2$ D $144\ m^2$

12. The area of a rectangle is $120\ m^2$. The length of the rectangle is 15 m. What is the width?

Skill 8

F 1,800 m H 8 m
G 105 m J 7 m