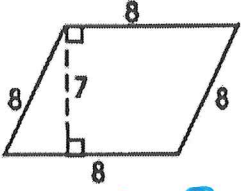Name: **Key**   Date: _____

Recalling Area, Finding Missing Length Figures Homework
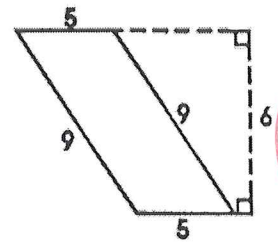
Find the area of each figure.
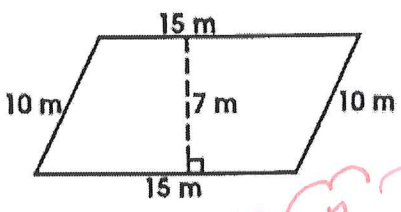
1.

8
8 | 7 | 8
8

$A = 8 \cdot 7$
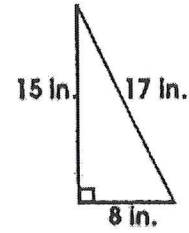$A = 56 \, u^2$

2.

5
9
9
6
5

$A = 5 \cdot 6$
$A = 30 u^2$

3.

15 m
10 m | 7 m | 10 m
15 m

$A = 15 \cdot 7$ $A = 105 m^2$

4.

15 in.   17 in.
8 in.

$A = \frac{1}{2} \, 8 \cdot 15$
$A = 60 \, in^2$

5.

10 | 8
13
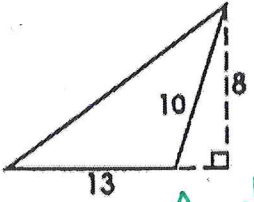
$A = \frac{1}{2} 13 \cdot 8$
$A = 52 \, units^2$

6.

6
4
10
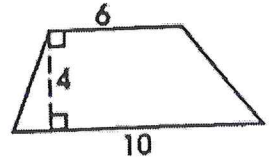
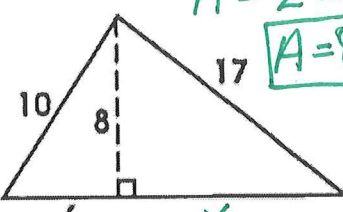$A = \frac{1}{2}(10+6)4$
$A = 32 \, units^2$

7.

7 in.
5 in.
9 in.

$A = 9 \cdot 5$
$A = 45 in^2$

8.

5
3
4
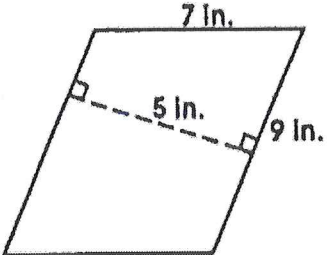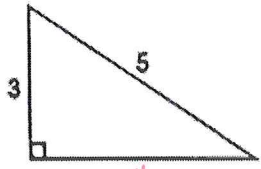
by Pyth. thm

$A = \frac{1}{2} \, 4 \cdot 3$
$A = 6 \, units^2$

9.

$A = \frac{1}{2} \cdot 21 \cdot 8$

$A = 84 u^2$

10 17
8

10/8

6   x

$x^2 + 8^2 = 17^2$

$x = 15$

10.

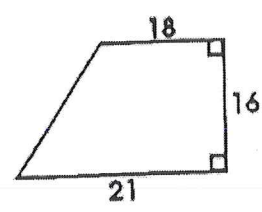18

17   h = 15   17

8   18   8
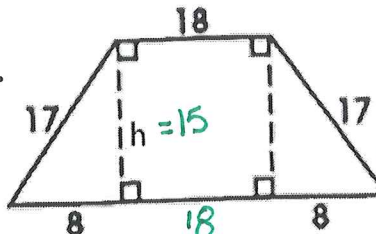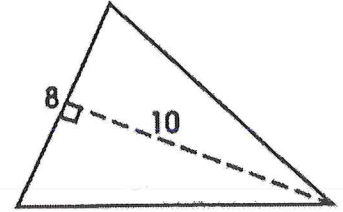
$A = \frac{1}{2}(18+34)15$

$A = 390 \text{ units}^2$

11.

8   10
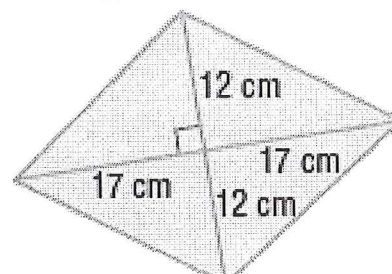
$A = \frac{1}{2} \cdot 8 \cdot 10$

$A = 40 \text{ units}^2$

12.

18

16

21
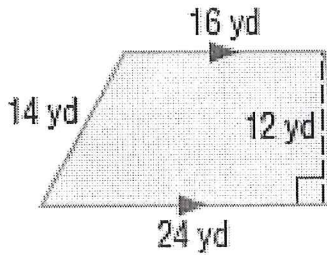
$A = \frac{1}{2}(21+18)16$

$A = 312 \text{ units}^2$

13.

12 cm

17 cm

17 cm   12 cm
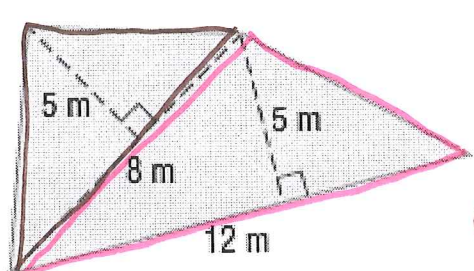
$A = \frac{1}{2} 24 \times 17 + \frac{1}{2} 24 \times 17$

$A = 408 \text{ cm}^2$

14.

16 yd

14 yd   12 yd

24 yd

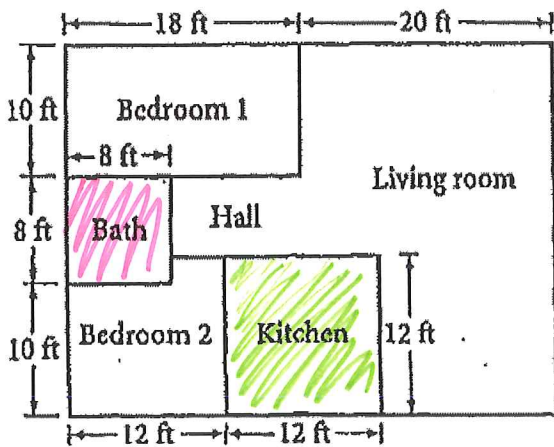$A = \frac{1}{2}(24+16)12$

$A = 240 \text{ yd}^2$

15.

5 m   5 m

8 m

12 m

$A = \frac{1}{2}(12 \cdot 5)$

$A = \frac{1}{2}(8 \cdot 5)$

$A_T = 50 m^2$

16. The Sibleys are tiling their kitchen and bathroom. Find the area of the bathroom and kitchen. If each tile is 6 inches by 6 inches, how many tiles will the Sibleys need?
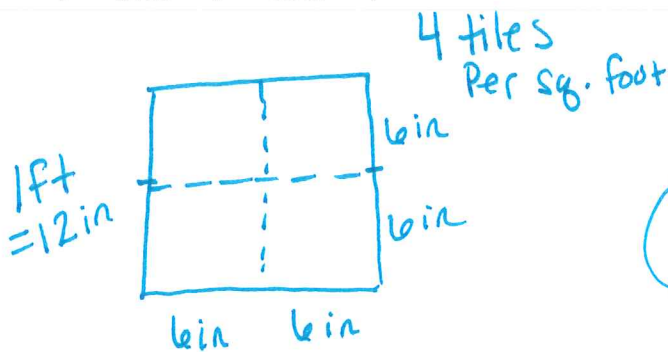
Diagram labels:
- 18 ft, 20 ft (top)
- 10 ft, Bedroom 1
- 8 ft
- Living room
- 8 ft, Bath, Hall
- Bedroom 2, Kitchen, 12 ft
- 10 ft
- 12 ft, 12 ft (bottom)

$Bath = 8 \cdot 8 = 64 ft^2$

$Kitchen = 12 \cdot 12 = 144 ft^2$

total Area: $64 + 144$

total area: $208 ft^2$

4 tiles per sq. foot

1 ft = 12 in

6 in, 6 in, 6 in, 6 in

$208 ft^2 \times 4$

total tiles = 832 tiles

17. The Smiths are planning to carpet part of their house. The carpet they plan to buy is sold by the square yard. Find the amount of carpeting needed to cover the living room, den, and hall if all are rectangular rooms. (3 ft = 1 yd)

Diagram labels:
- 5 ft, 30 ft (top)
- Pantry, Kitchen, 7 ft
- Bath
- Hall, Living room, 13 ft
- 9 ft, Den
- 15 ft, 5, 15 ft
- 35 ft
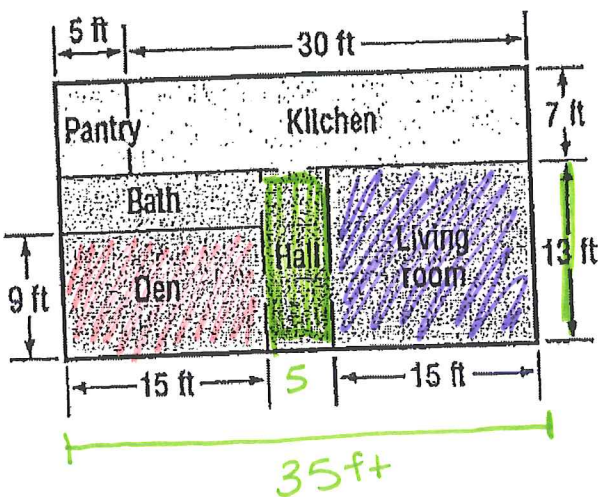
Living room: $13 \times 15 = 195 ft^2$

Den: $9 \times 15 = 135 ft^2$

Hall: $13 \times 5 = 65 ft^2$

total area: $395 ft^2$

Convert to yards:

$\dfrac{395}{9} = 43.\overline{8} yd$ of carpeting

$3.3 = 9 ft^2$ 1 yd = 3 ft

1 yd = 3 ft