# Take-Away

Emily finally got to go home and visit her family (and do some free laundry!). Her little sister Leah was working on some math homework but was having some problems. Emily, being the good big sister that she is, was eager to give some help. Leah was stumped on trying to find the area of figure A.

30 ft

20ft

20 ft.
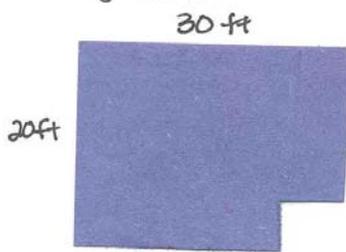
Leah knew how to find the area of a rectangle (bxh) but that's as far as she could get.

15ft

The idea of the take-away method popped into Emily's head. She described it in 3 easy steps.
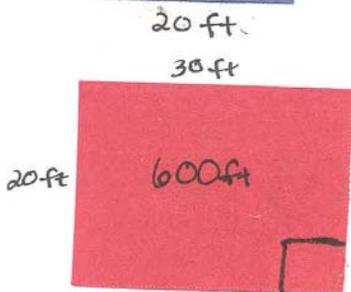
1. Find the area of the rectangle as if the little piece in the lower right hand corner was filled in.

Leah found 30 x 20 = 600

30 ft

20 ft   600ft
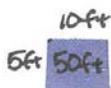
2. Find the area of the small rectangle. Leah figured one side was 30-20= 10 and the other was 20-15 =5 so she used bxh or 5 x10 =50

10ft

5ft 50ft

by Emily Lanie
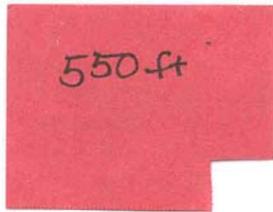
550ft

3. Lastly take the big rectangle area which was 600 and subtract the little rectangle which was 50.

Leah took 600-50 to get 550ft as the area of the figure A.

Leah was excited to use the method on figure B.

20 ft

10ft

12 ft.
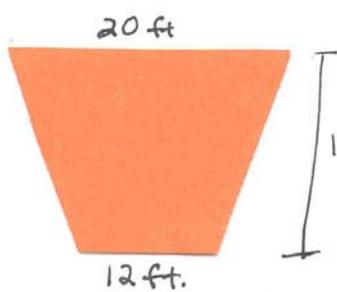
1. Leah added triangles to the side to make a rectangle. then she found its area.

$$20 \times 10 = 200$$

20 ft

200ft

10ft

20 ft.

10ft

10ft

4ft

4ft
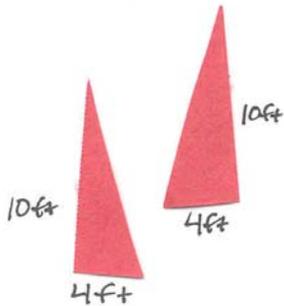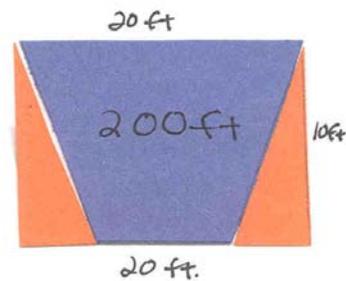
2. Then Leah found the area of each triangle by using ½(bxh).

$$\frac{10 \times 4}{2} = \frac{40}{2} = 20ft \quad \frac{10 \times 4}{2} = \frac{40}{2} = 20 ft$$

She added both triangles to get

$$20 + 20 = 40 ft.$$

160ft

3. For the last step Leah took the area of the big rectangle (200ft) and subtracted the two triangles (40ft). to get the answer. 200 − 40 = 160ft

Leah decided the take-away method worked best for her and made it easier to understand.

True Story
by: Emily Lanie