1. A rectangle has an area of 120 cm^2. Its length and width
are whole numbers. How many possibilities for the length and
width are there? Which possiblity gives the smallest perimeter?

2. Roberto is shopping in a large department store with many floors.
He enters the store on a floor in the middle of the building from a
skyway attached to an adjacent building, and immediately goes to the
credit department which is on that floor. After making sure his credit is
good, he goes up three floors to the housewares department. Then he
goes down five floors to the children's department. Then he goes up
six floors to the to the top floor where TV's are. Next, he goes down
two floors to the furniture department. Finally, he goes down ten floors
to the main entrance of the store, which is on the first floor, and leaves
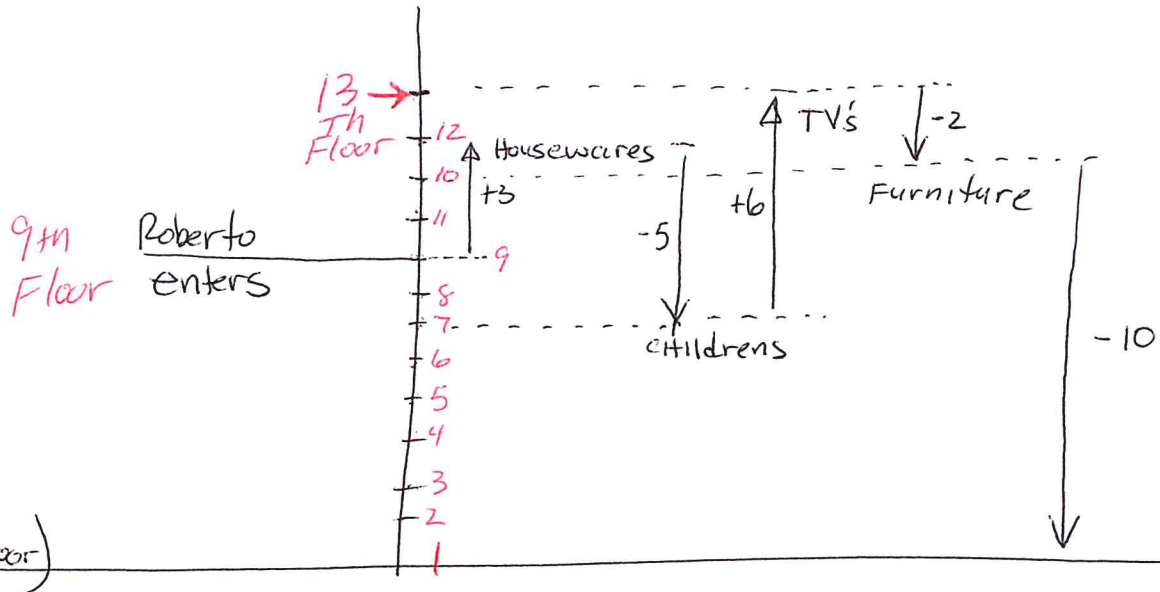the building. On what floor did Roberto enter the building?

$L \cdot W = 120$

①

L	W	Perimeter $= 2L + 2W$
1	20	242
2	60	124
3	40	86
4	30	68
5	24	58
6	20	52
8	15	46
10	12	44

8 Rectangles are possible

A 10×12 rectangle produces the smallest perimeter of 44cm

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②

13 →
13th Floor

12

10 Housewares +3

11

9

8

7 Childrens

6

5

4

3

2

TVs ↓ −2

Furniture

−5 +6

−10

9th Floor Roberto enters

Ground (1st floor)

Roberto entered the store on the 9th floor