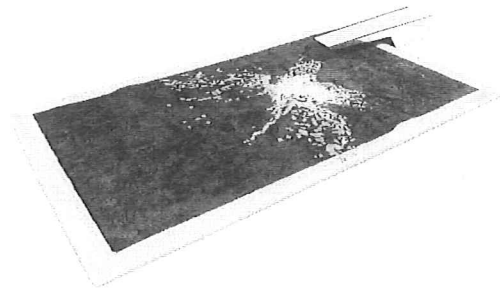


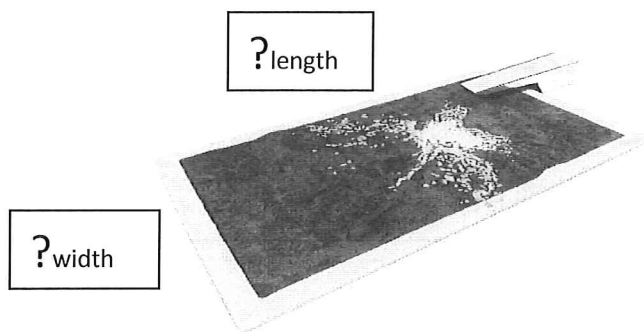
Building a pool



Brennan is building a swimming pool in his backyard. He has an area of 180m^2 . He plans to make a 1 m walkway around his rectangular pool, on all sides. Brennan wants his pool to be twice as long as it is wide.

What are the maximum dimensions of Brennan's pool?

(just the pool dimensions-not the walkway)



What are the maximum dimensions of Brennan's pool?

? length

? width

x

y

$$\begin{aligned}\text{Total available area} &= 180 \text{ m}^2 \\ (x+2)(2x+2) &= 180 \text{ m}^2 \\ 2x^2 + 6x + 4 &= 180\end{aligned}$$

$x = -11$ or $x = 8$
since -11 m doesn't make sense
 x must $= 8$ m

width 8m
length 16m.