What dimensions must a water tank have in order to hold 4500 m3 of water and the shape of its base to have the maximum area?

The tank has a rectangular shape and its capacity in water is 4500 m3.
(This work can be done on the computer using a suitable software program.)

1. What should be its internal dimensions, so that its height is equal to 5m and the area of the base is the maximum possible?

   (a) Construct a table with all possible values that dimensions can have in integers.

Table 1: The internal dimensions of the tank.

Length (m)	Width (m)	Height (m)	Base area (m²)	Area Perimetre (m)	Capacity (m³)

(b) Study the values of the table and write your observations.

(c) Construct a graph that shows the values of the area of the base of the tank when the length of its base changes.