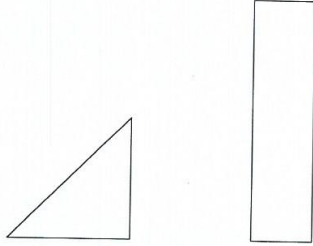


3. You have 1000 meters of fencing with which to build two enclosures. One enclosure will be an isosceles right triangle, and the other will be a rectangle that is four times as long as it is wide. The figure below shows the two shapes.



What should the dimensions of the rectangular enclosure be to **minimize** the combined total area of the two enclosures?

Consider the function $f(x) = 3 - \sqrt{2x - 1}$.

1. Find the domain and range of $f(x)$.

DOMAIN =

RANGE =

2. Compute the inverse function $f^{-1}(y)$. Show all steps. Indicate the domain for the inverse function.

3. Compute $f(f(1))$