## Exercise 10

Express the side length of a square as a function of the length $d$ of the square's diagonal. Then express the area as a function of the diagonal length.

## Solution

Side Length: $\quad x=d \cos 45^{\circ}=\frac{d}{\sqrt{2}}$
Area: $\quad A=x^{2}=\frac{d^{2}}{2}$

