Introduction to Commutative Algebra and algebraic Geometry
Presence Exercise to Sheet 10

Exercise 1.
Let X be an affine variety and let $Y \subset X$ be closed. Endow Y with the subspace topology. Show: The inclusion map $i : Y \hookrightarrow X$ is a morphism of spaces with functions, $i^*(\mathcal{O}_X(X)) = \mathcal{O}_Y(Y)$ and $\ker(i^*) = I_X(Y)$.

This finishes the proof of Lemma 3.3.8.

Exercise 2.
Let K be an algebraically closed field.
Prove: The line L described by $3x + 4y = 7$ in $\mathbb{K}^2$ is isomorphic to $\mathbb{K}^1$.