

$$a \longmapsto \phi(a)$$

$$\begin{array}{ccc}
 R & \xrightarrow{\phi} & K \\
 \searrow \iota & & \uparrow \exists! \Phi \\
 a & & Q(R) \\
 \searrow & & \\
 & & \frac{a}{1}
 \end{array}
 \qquad
 \begin{array}{c}
 \phi(a) \\
 \uparrow \\
 \frac{a}{1}
 \end{array}$$