

$$\begin{array}{ccccc}
 FX & \xleftarrow{F\pi_1} & FR & \xrightarrow{F\pi_2} & FY \\
 \uparrow c & & \uparrow e & & \uparrow d \\
 X & \xleftarrow{\pi_1} & R & \xrightarrow{\pi_2} & Y
 \end{array}$$

A commutative diagram showing the relationship between objects X , R , and Y and their images under a functor F . The top row consists of FX , FR , and FY , connected by arrows $F\pi_1$ (pointing left) and $F\pi_2$ (pointing right). The bottom row consists of X , R , and Y , connected by arrows π_1 (pointing left) and π_2 (pointing right). Vertical arrows c , e , and d point from X , R , and Y respectively to FX , FR , and FY . Equality signs ($=$) are placed between the vertical arrows c and e , and between e and d , indicating that $c = e$ and $e = d$.