

$$\begin{array}{ccccc}
 & & & & 0 \\
 & & & & \curvearrowright \\
 & & 0 & & \\
 & & \nearrow & & \\
 0 & \xrightarrow{0 \mapsto (0,0)} & 0 \oplus 0 & \xrightarrow{(0,0) \mapsto 0} & 0 \\
 \curvearrowleft & & & & \curvearrowright
 \end{array}$$

$$\begin{array}{ccccc}
 & & & & 0 \\
 & & & & \curvearrowright \\
 & & 0 & & \\
 & & \nearrow & & \\
 \mathbb{Z} & \xrightarrow{x \mapsto (2x,0)} & 2\mathbb{Z} \oplus 0 & \xrightarrow{(x,0) \mapsto x \bmod 2} & \mathbb{Z}_2 \\
 \curvearrowleft & & & & \curvearrowright
 \end{array}$$

$$\begin{array}{ccccc}
 & & & & 0 \\
 & & & & \curvearrowright \\
 & & 0 & & \\
 & & \nearrow & & \\
 \mathbb{Z} & \xrightarrow{x \mapsto (2x,x)} & 2\mathbb{Z} \oplus \mathbb{Z} & \xrightarrow{(x,y) \mapsto x-y} & \mathbb{Z} \\
 \curvearrowleft & & & & \curvearrowright
 \end{array}$$

$$\begin{array}{ccccc}
 & & & & 0 \\
 & & & & \curvearrowright \\
 & & 0 & & \\
 & & \nearrow & & \\
 0 & \xrightarrow{\quad} & 0 & \xrightarrow{\quad} & 0 \\
 \curvearrowleft & & & & \curvearrowright
 \end{array}$$