

* Missionaries & Cannibals Problem

M C I 0 Target M C
 000 xxx  

$(M, C, 0)$

$(3, 3, 0) \xrightarrow{1M1C}$

00 xxx $\xrightarrow{(2, 2, 0)}$ 0 x

00 xxx $\xleftarrow{1M}$ x

000 xxx $\xrightarrow{(3, 2, 1)}$ x

000 $\xrightarrow{(3, 0, 0)}$ xxx

000 x $\xrightarrow{(3, 1, 1)}$ xx

0 x $\xrightarrow{2M}$ xx

0 x $\xrightarrow{(1, 1, 0)}$ 00xxx

00 xxx $\xleftarrow{1C1M}$ 0 x

$$\begin{array}{ccc} 00 & xx & \cdot \xrightarrow{2M} 0x \\ \hline & & (2, 2, 0) \end{array}$$

$$\begin{array}{ccc} xx & : & \xleftarrow{1C} \cdot 000x \\ \hline & & (0, 3, 1) \end{array}$$

$$\begin{array}{ccc} xxx & \cdot & \xrightarrow{2C} 000 \\ \hline & & (0, 1, 0) \end{array}$$

$$\begin{array}{ccc} x & \xleftarrow{1C} \cdot & 000xx \\ \hline & & (0, 2, 1) \end{array}$$

$$xx \cdot \quad 000x$$

$$\begin{array}{ccc} \cdot & \xrightarrow{2C} & 000xx \\ \hline & & (0, 0, 0) \end{array}$$

* Path cost = 11