

THIS PUZZLE IS, LIKE, CA-SA-TROPIC

The encryption cipher is different from problem to problem. If $B=5$ in the first problem, it equals 5 throughout that problem, but it may not equal 5, in any of the other problems. The relations are reciprocal: if $5=B$ in the first problem, then $5=B$ in all of that problem (but maybe not the others). These four division problems are in four different bases. One of them is base 8, one is base 10, one is base 11, and one is base 12; it is up to you to determine which is which.

$$\begin{array}{r}
 \text{GLQ} \\
 \hline
 \text{AXR} \left. \vphantom{\text{GLQ}} \right\} \text{BLTXVQ} \\
 \text{BQVH} \\
 \hline
 \text{NTVV} \\
 \text{JSTB} \\
 \hline
 \text{VXAQ} \\
 \text{VTHN} \\
 \hline
 \text{CN}
 \end{array}$$

$$\begin{array}{r}
 \text{CRK} \\
 \hline
 \text{DLM} \left. \vphantom{\text{CRK}} \right\} \text{LRJXWT} \\
 \text{RDPX} \\
 \hline
 \text{FSTW} \\
 \text{CDPR} \\
 \hline
 \text{RTFT} \\
 \text{MRKC} \\
 \hline
 \text{XKGV}
 \end{array}$$

$$\begin{array}{r}
 \text{LRF} \\
 \hline
 \text{ZLKE} \left. \vphantom{\text{LRF}} \right\} \text{PZXWAY} \\
 \text{PNYO} \\
 \hline
 \text{HEZA} \\
 \text{HXES} \\
 \hline
 \text{NYZY} \\
 \text{RXZA} \\
 \hline
 \text{WOH}
 \end{array}$$

$$\begin{array}{r}
 \text{ALBT} \\
 \hline
 \text{UT} \left. \vphantom{\text{ALBT}} \right\} \text{NOQPB} \\
 \text{LI} \\
 \hline
 \text{CQP} \\
 \text{CIO} \\
 \hline
 \text{SLB} \\
 \text{SCQ} \\
 \hline
 \text{NF}
 \end{array}$$