



Calculating Time from Left to Right of Map px/s

$$\begin{array}{rcl}
 71^\circ 48' 56'' \text{ w} & = & (71 \cdot 60^m \cdot 60^s) \\
 & + & (48 \cdot 60^s) \\
 & + & 56 \\
 \hline
 & & 255600 \\
 & & 2880 \\
 & & 56 \\
 & & \hline
 & & 258536_s
 \end{array}$$

$$\begin{array}{rcl}
 70^\circ 13' 3'' \text{ w} & = & (70 \cdot 60^m \cdot 60^s) \\
 & + & (13 \cdot 60^s) \\
 & + & 3 \\
 \hline
 & & 252000 \\
 & & 780 \\
 & & 3 \\
 & & \hline
 & & 252783_s
 \end{array}$$

$$\begin{array}{r}
 258536 \\
 252783 \\
 \hline
 5753_s
 \end{array}$$

$$\frac{1585 \text{ px}}{5753_s} = .2755084 \text{ px/s}$$

Calculating time from Top to Bottom P/s

$$\begin{array}{rcl} 41^\circ 16' 0'' & = & (41 \cdot 60^m \cdot 60^s) \\ & + & (16 \cdot 60^s) \\ & + & 0 \\ \hline & & 147600 \\ & & 960 \\ & & \underline{0} \\ & & 148560 \end{array}$$

$$\begin{array}{rcl} 41^\circ 56' 39'' & = & (41 \cdot 60^m \cdot 60^s) \\ & + & (56 \cdot 60^s) \\ & + & 39 \\ \hline & & 147600 \\ & & 3360 \\ & & \underline{39} \\ & & 150999 \end{array}$$

$$\begin{array}{r} 150999 \\ - 148560 \\ \hline 2439_s \end{array}$$

$$895_{px} / 2439_s = .3669536_{px/s}$$

Calculating Time of Point on Map

$$\begin{array}{rcl} 71^\circ 20' 13'' & = & (71 \cdot 60^m \cdot 60^s) \\ & + & (20 \cdot 60^s) \\ & + & 13 \\ \hline & & 255600 \\ & & 1200 \\ & & \underline{13} \\ & & 256813 \end{array}$$

$$\begin{array}{rcl} 41^\circ 33' 24'' & = & (41 \cdot 60^m \cdot 60^s) \\ & + & (33 \cdot 60^s) \\ & + & 24 \\ \hline & & 147600 \\ & & + 1980 \\ & & \underline{24} \\ & & 149604 \end{array}$$

Calculating Pixel Point on Map

$$71^{\circ} 48' 56'' \rightarrow 71^{\circ} 20' 13''$$

$$258536 - 256813 = 1723, \text{ Difference}$$

$$\begin{array}{r} 1723 \\ \times .2755084^{\text{px/s}} \\ \hline \end{array}$$

$$474.70097 \rightarrow \text{Round up to } 475$$

$$41^{\circ} 56' 39'' \rightarrow 41^{\circ} 33' 24''$$

$$150999 - 149604 = 1395, \text{ Difference}$$

$$\begin{array}{r} 1395s \\ \times .3669536^{\text{px/s}} \\ \hline \end{array}$$

$$511.90027 \text{ Round up to } 512$$

Answer

$$475w \times 512h$$

$$474.70097w \times 511.90027h$$