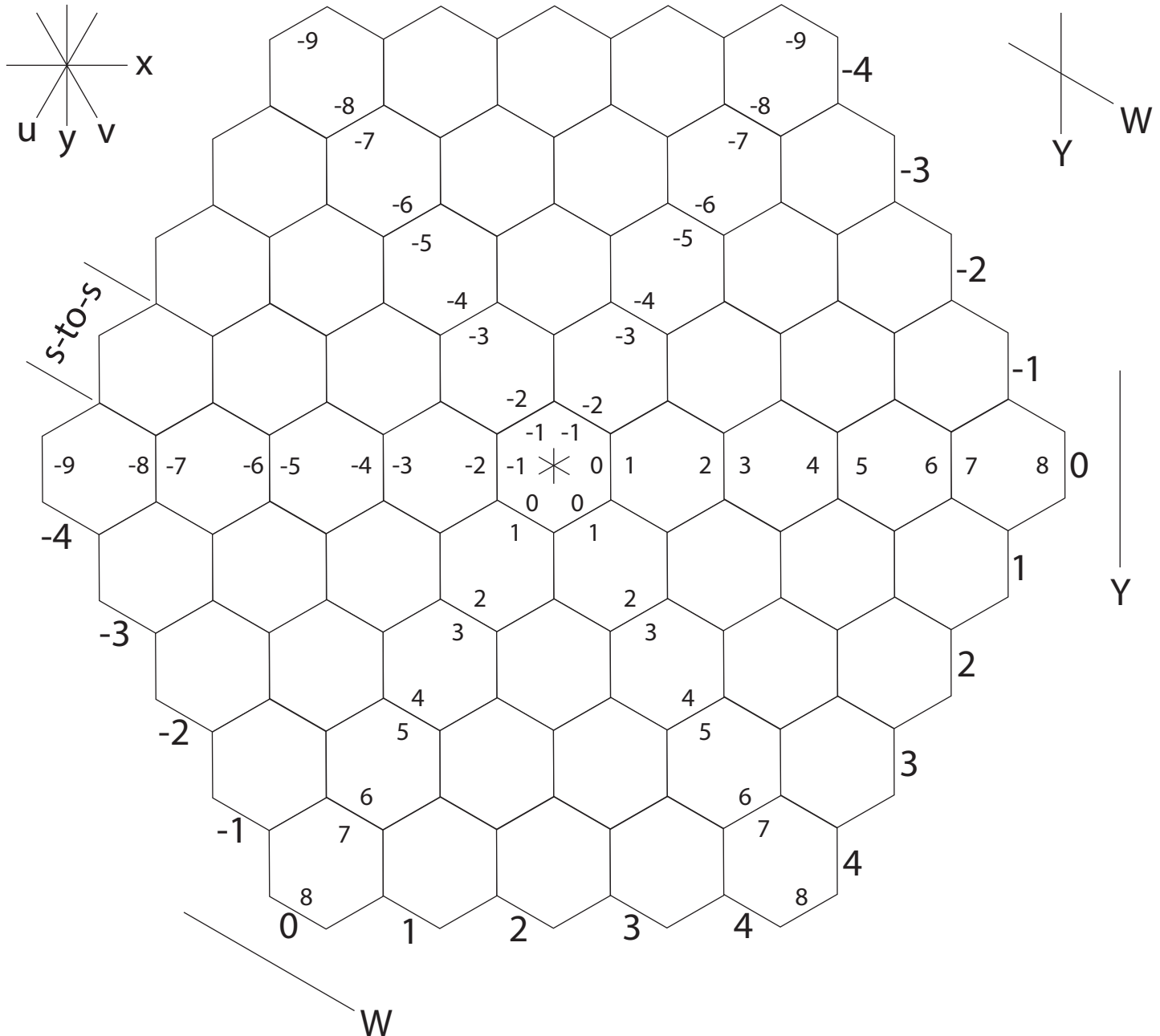


Convert Mouse Coordinates to Hex Grid Coordinates



$$u = \frac{\sqrt{3}y - x}{2} \quad v = \frac{\sqrt{3}y + x}{2}$$

$$x_{\text{halfcell}} = \text{floor} \frac{x}{2 * s\text{-to-}s}$$

$$u_{\text{halfcell}} = \text{floor} \frac{u}{2 * s\text{-to-}s}$$

$$v_{\text{halfcell}} = \text{floor} \frac{v}{2 * s\text{-to-}s}$$

$$W = \text{floor} \frac{x_{\text{halfcell}} + 1}{2}$$

$$Y = \text{floor} \frac{u_{\text{halfcell}} + v_{\text{halfcell}} + 2}{3}$$

"floor" - rounded down to integer