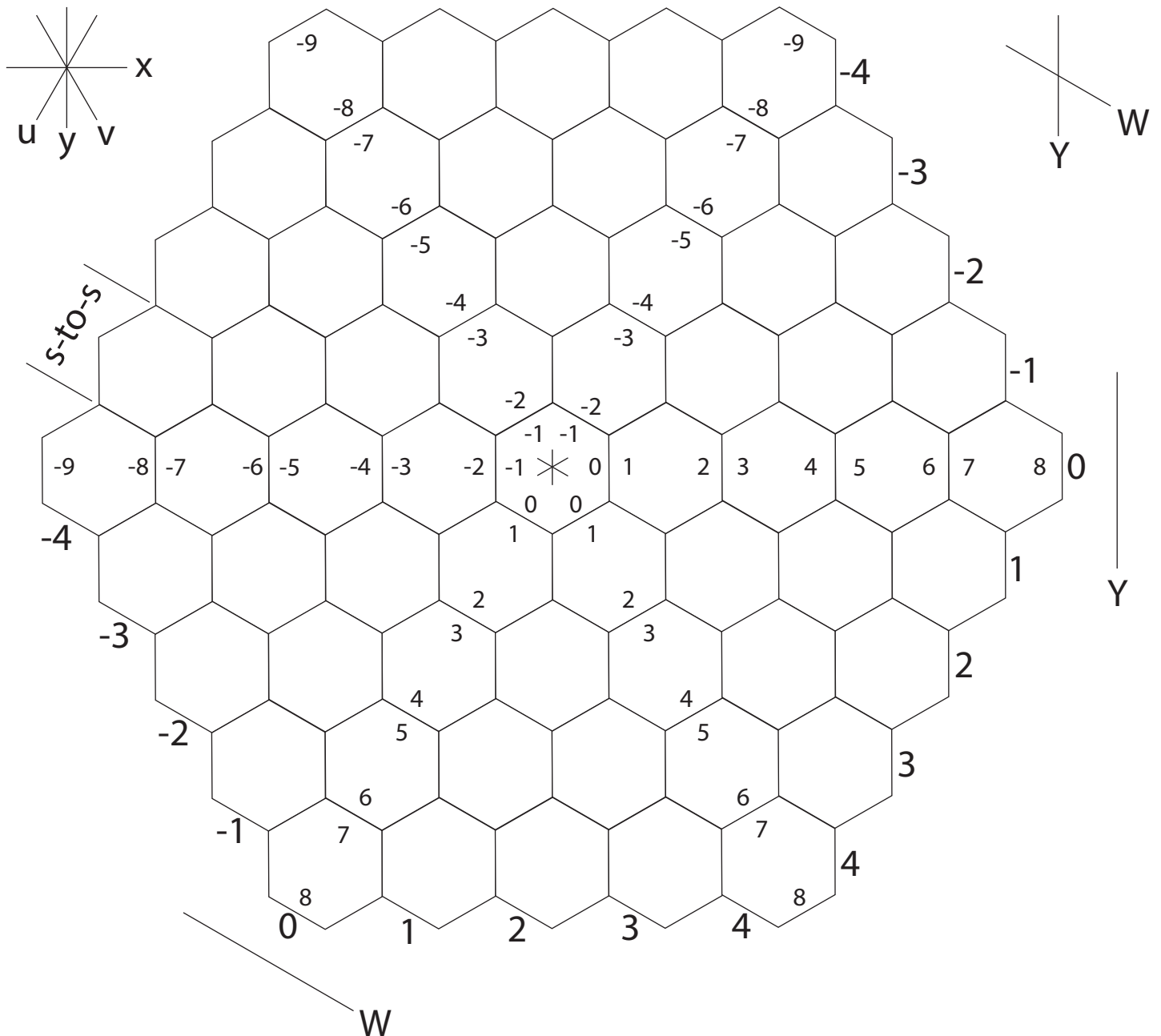


Convert Mouse Coordinates to Hex Grid Coordinates



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

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

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

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

$$W = \text{floor} \frac{x_{\text{halfcell}} + v_{\text{halfcell}} + 2}{3}$$

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

"floor" - rounded down to integer

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Amit Patel of Red Blob Games corrected an error in the equation for W.

Christopher Field corrected an error in the equations for x, u, and v half cells.