Name: $\qquad$

In one right orthogonal Cartesian coordinate system, vector $\boldsymbol{a}$ has coordinates $\{2,3\}$. What are the coordinates of vector $\boldsymbol{a}$ in a coordinate system with the same origin, type and scaling that is rotated $50^{\circ}$ from the original coordinate system? Show your work.

In one right orthogonal Cartesian coordinate system, vector $\boldsymbol{a}$ has coordinates $\{2,3\}$. What are the coordinates of vector $\boldsymbol{a}$ in a coordinate system with the same origin, type and scaling that is rotated $-30^{\circ}$ from the original coordinate system? Show your work.

