$\qquad$

1. (10 points) Find the global extrema of the function $f(x)=x-2 \sqrt{x}$ on the closed interval [0, 9].
2. (10 points) Find the global extrema of the function $f(x)=\sin (x)-\frac{x}{2}$ on the open interval $\left(0, \frac{\pi}{2}\right)$.
3. (10 points) Find the global extrema of the function $f(x)=8 \sqrt{x}-x$ on the closed interval $[0,25]$.
4. (10 points) Find the global extrema of the function $f(x)=\frac{x}{2}+\cos (x)$ on the open interval $\left(0, \frac{\pi}{2}\right)$.
