1. Find the global extrema of the function  $f(x) = \sin(x) - \frac{x}{2}$  on the closed interval  $\left[0, \frac{\pi}{2}\right]$ .

2. Find the global extrema of the function  $f(x) = x - 2\sqrt{x}$  on the open interval (0,9).

1. Find the global extrema of the function  $f(x) = \frac{x}{2} + \cos(x)$  on the closed interval  $\left[0, \frac{\pi}{2}\right]$ .

2. Find the global extrema of the function  $f(x) = 8\sqrt{x} - x$  on the open interval (0, 25).