1. Find the arc length of the curve $y=\frac{\sqrt{x}^{3}}{3}$ from $x=0$ to $x=60$.
2. Find the arc length of the curve $y=\frac{{\sqrt{x^{2}+2}}^{3}}{3}$ from $x=0$ to $x=1$.
3. Find the arc length of the curve $y=\frac{x^{4}}{4}+\frac{1}{8 x^{2}}$ from $x=1$ to $x=2$.
4. Find the arc length of the curve $y=3 \ln (x)-\frac{x^{2}}{24}$ from $x=1$ to $x=6$.
