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## Finding Lyapunov Functions

### Finding Lyapunov Functions

0.0/15.0 points (graded)

Consider the system given by

$$\begin{aligned}\dot{x}_1 &= x_2 - x_1^3 \\ \dot{x}_2 &= -x_2^3 - x_1.\end{aligned}$$

Find a Lyapunov function  $V(x_1, x_2)$  for this system in order to prove global asymptotic stability to the origin. Type in your answer in the MATLAB window below.

```
1 syms x1 x2 real;
2 V = ; % Type in your answer here in terms of x1 and x2
3
```

Unanswered

Run Code

Submit

You have used 0 of 3 attempts

