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Housekeeping

```
clc;  
clear all;  
close all;
```

Create Mach and Cp vectors

```
M_vec = linspace(0,1,1000);  
Cp = -0.41./(sqrt(1-M_vec.^2));  
Cp_cr = (2./(1.4.*M_vec.^2)).*(((1+(.4./2).*M_vec.^2)./(1+(.4./2))).^(1.4/.4)) - 1);
```

Find the intersection

```
[~,index] = min(abs(Cp-Cp_cr));  
Mach_cr = M_vec(index)
```

Mach_cr =

0.7437

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