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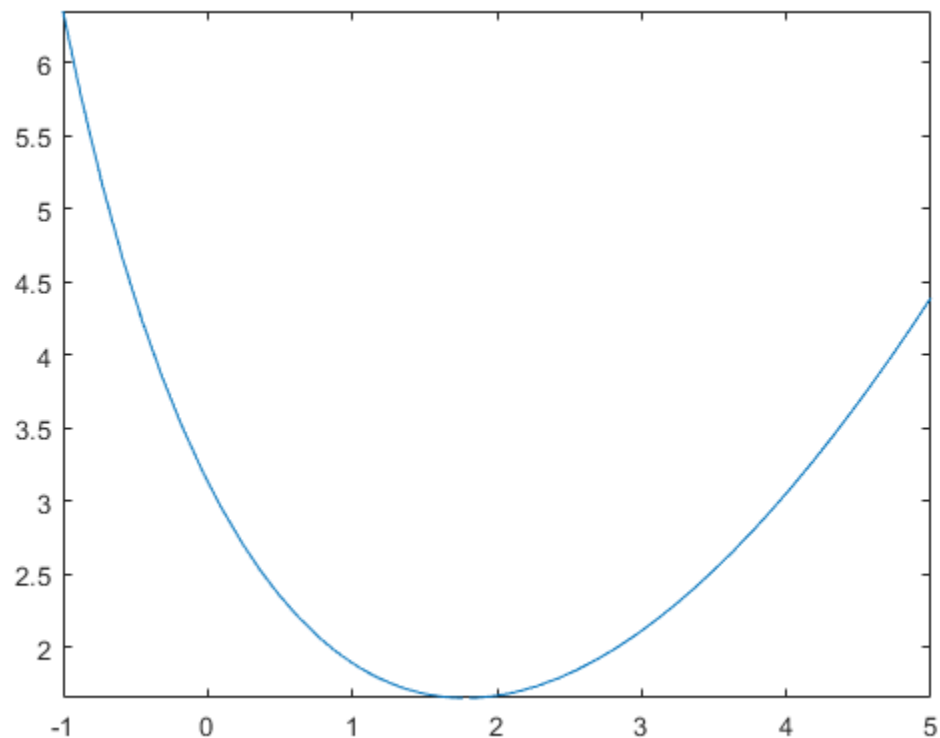
```
close all
clear all
clc

% Ben Ridenbaugh
% Homework 3
```

## Problem 1

```
figure
fplot('((x^2)-3*x+7)/sqrt(2*x+5)',[-1 5])
```

*Warning: Char input to fplot will be removed in a future release. Use `fplot(@(x)((x.^2)-3.*x+7)./sqrt(2.*x+5))` instead.*

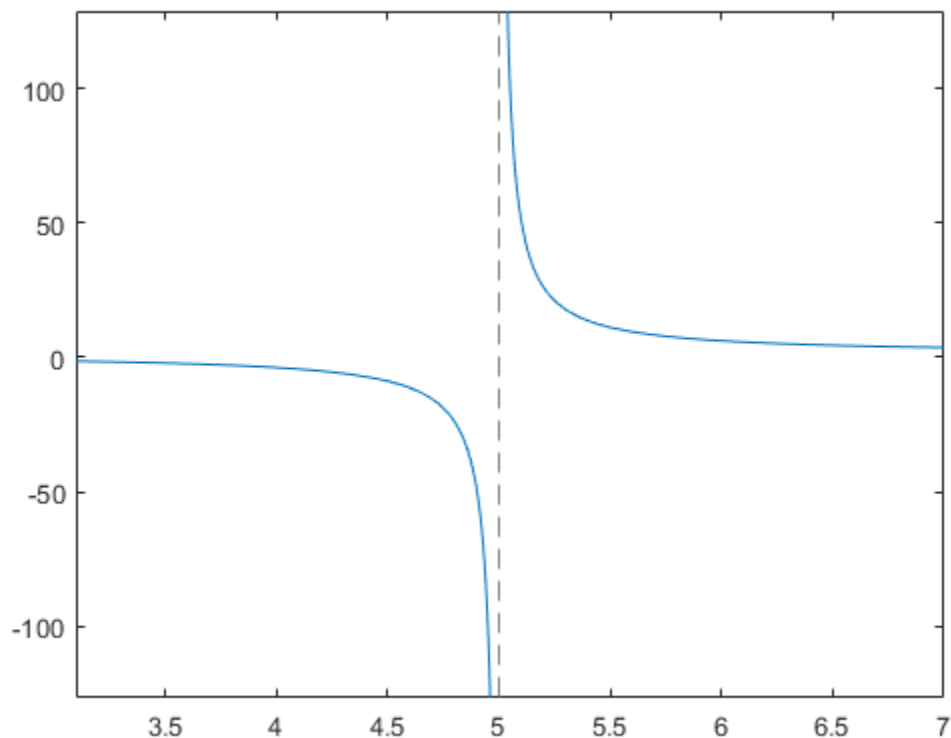


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## Problem 11

```
figure
fplot('((x^2)+3*x-5)/((x^2)-3*x-10)',[-1 2.9])
fplot('((x^2)+3*x-5)/((x^2)-3*x-10)',[3.1 7])

Warning: Char input to fplot will be removed in a future
release. Use fplot(@(x)((x.^2)+3.*x-5)./((x.^2)-3.*x-10))
instead.
Warning: Char input to fplot will be removed in a future
release. Use fplot(@(x)((x.^2)+3.*x-5)./((x.^2)-3.*x-10))
instead.
```



## Problem 24

```
figure
subplot(2,2,1)
fplot(@(t)'(-3+4*t)*exp(-.4*t)',[0 20])
subplot(2,2,2)
fplot(@(t) '(5.2-1.6*t)*exp(-.4*t)',[0 20])
subplot(2,2,3)
fplot(@(t)'(-3.68+.64*t)*exp(-.4*t)',[0 20])
```

*Warning: Function behaves unexpectedly on array inputs. To improve performance, properly vectorize your function to return an output with the same size and shape as the input arguments.*







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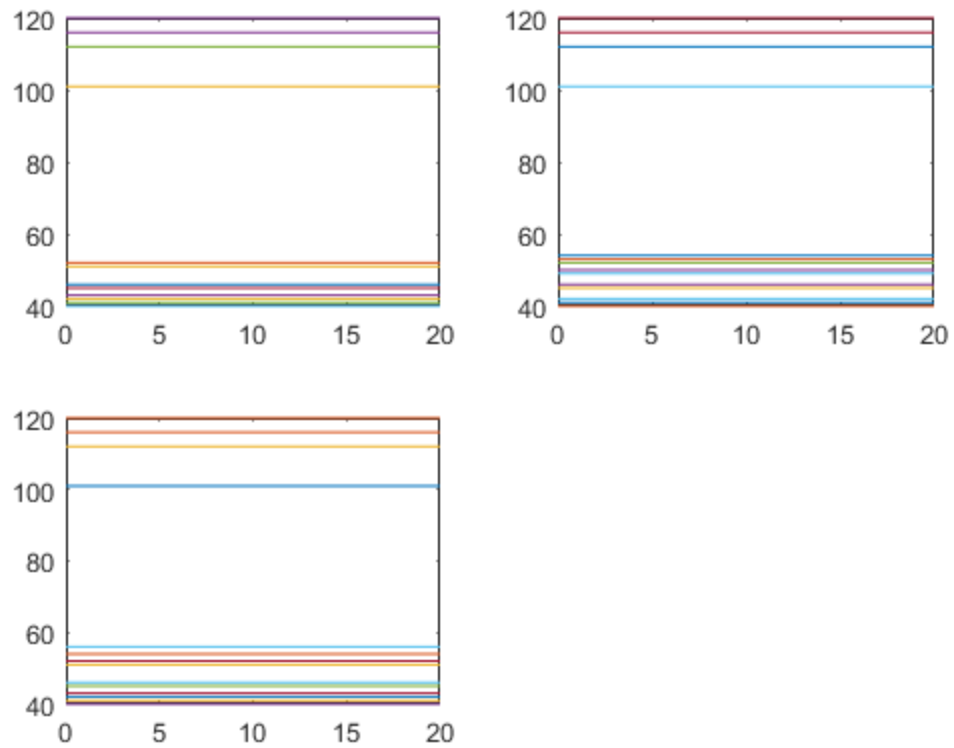
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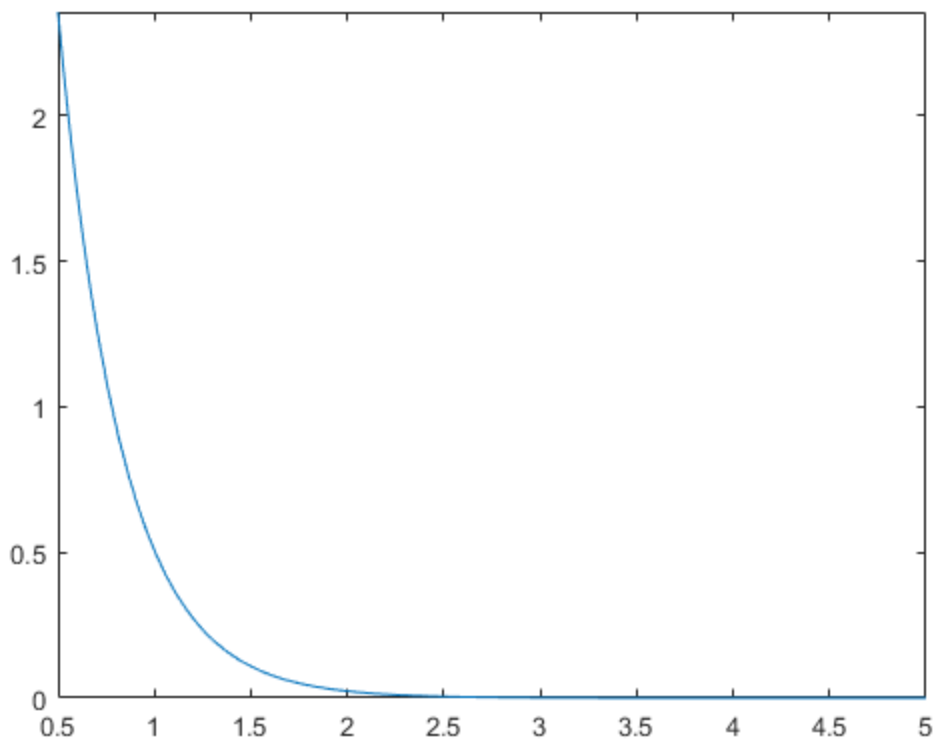


## Problem 27

```

r=4;
l=1.3;
v=12;
figure
fplot(@(t)(v/r)*(1-exp((-r*t)/l)),[0 0.5])
fplot(@(t)exp((-r*t)/l)*(v/r)*(exp((.5*r)/l)-1),[0.5 5])

```



## Problem 36

```
l=16;
a=6;
b=a;
w1=400;
w2=200;
ra=(w1*a*(2*l-a)+w2*c^2)/2*l;
rb=(w2*c*(2*l-c)+w1*a^2)/2*l;
figure
fplot([0 6],ra*x-((w1*x^2)/2))
fplot([6 12],ra*x-((w1*a)/2)*(2*x-a))
fplot([6 26],ra*((1-x)-(w2(1-x)^2)/2))
```

*Undefined function or variable 'c'.*

*Error in HW3 (line 39)*

```
ra=(w1*a*(2*l-a)+w2*c^2)/2*l;
```

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