

Lab Practical

Megan Byrd

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#Megan Byrd  
##Lab Practical
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```
##Exercise 1
```

```
epi+2*(5+2)
```

```
epi + 14
```

```
##Exercise 2
```

```
###X- Intercept
```

```
g(x)=(2*x2-6*x-5)/(x-3)
```

```
solve(g == 0, x)
```

```
[x == -1/2*sqrt(19) + 3/2, x == 1/2*sqrt(19) + 3/2]
```

```
###Y- Intercept
```

```
g(0)
```

```
5/3
```

```
###Vertical Asymptotes
```

```
solve(1/g == 0, x)
```

```
[x == 3]
```

```
###Horizontal Asymptotes
```

```
limit(g, x =+infinity)
```

```
x |--> +Infinity
```

```
limit(g, x =-infinity)
```

```
x |--> -Infinity
```

```
###No horizontal asymptotes
```

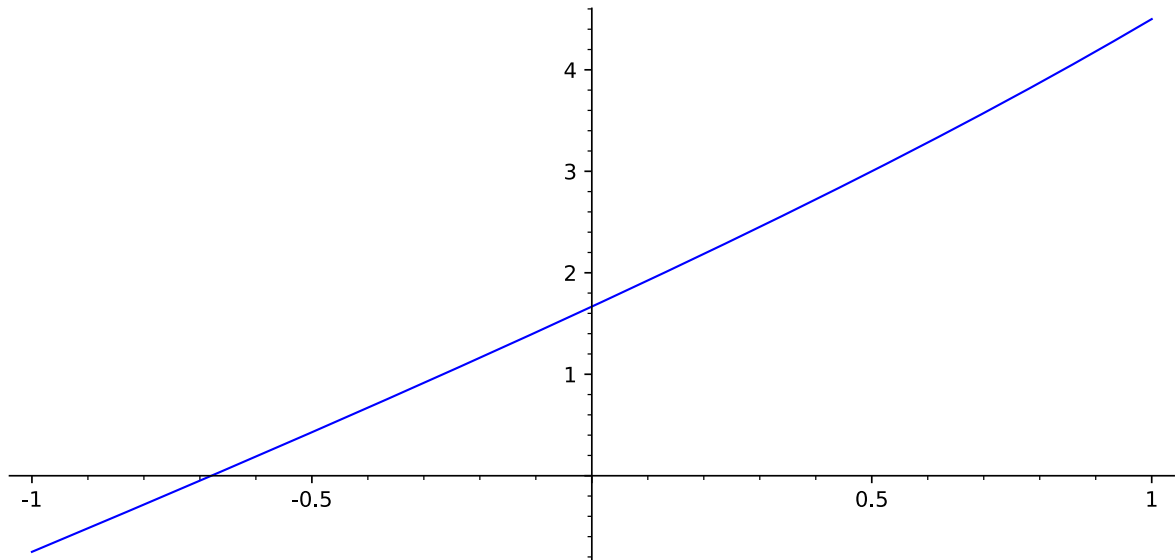
```
###Relative Extrema
```

```
solve(diff(g, x) == 0, x)
```

```
[x == -1/2*I*sqrt(10) + 3, x == 1/2*I*sqrt(10) + 3]
```

```
###There are no maximums or minimum
```

```
###graph g(x)
plot(g(x))
```



```
##Exercise 3
```

```
def f(x): return cos(x)*e^(-x^2)
a, b = 1,5
n = 100
```

```
print([i for i in range(n)])
```

```
print([i/2 +1 for i in range(n)])
```

```
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24,
25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46,
47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68,
69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90,
91, 92, 93, 94, 95, 96, 97, 98, 99]
[1, 3/2, 2, 5/2, 3, 7/2, 4, 9/2, 5, 11/2, 6, 13/2, 7, 15/2, 8, 17/2, 9, 19/2, 10, 21/2,
11, 23/2, 12, 25/2, 13, 27/2, 14, 29/2, 15, 31/2, 16, 33/2, 17, 35/2, 18, 37/2, 19, 39/2,
20, 41/2, 21, 43/2, 22, 45/2, 23, 47/2, 24, 49/2, 25, 51/2, 26, 53/2, 27, 55/2, 28, 57/2,
29, 59/2, 30, 61/2, 31, 63/2, 32, 65/2, 33, 67/2, 34, 69/2, 35, 71/2, 36, 73/2, 37, 75/2,
38, 77/2, 39, 79/2, 40, 81/2, 41, 83/2, 42, 85/2, 43, 87/2, 44, 89/2, 45, 91/2, 46, 93/2,
47, 95/2, 48, 97/2, 49, 99/2, 50, 101/2]
```