

Iwan Downs 1809800
26/11/19

61% Agree ✓
RHD

Matlab Answers:

Q1.

>> x = 2.3

x =

2.3000

>> y=3.1

y =

3.1000

>> x^2-y

ans =

2.1900

>> (4*y)^x-y

ans =

324.1426

>> exp(3*x*y)

ans =

1.9479e+09

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>> log10(y^x-x) ✓

ans =

1.0490

Q2.

>> q=[2/sqrt(8) 2/sqrt(8);2/sqrt(8) -2/sqrt(8)] ✓ 4

q =

0.7071 0.7071

0.7071 -0.7071

>> x=[3 4;-1 0] 2

x =

3 4

-1 0

>> q = q-1 X

q =

-0.2929 -0.2929

-0.2929 -1.7071

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>> (q*q)^6

ans =

34.8731 175.3191

175.3191 881.3888

>> q*x^6*q

ans =

1.0e+18 *

-0.8548 -1.5613

-0.7383 -1.3486

X



$$\frac{6}{20}$$

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Q3.

`fplot('sin(x)',[-pi,pi])` *S*

`> In fplot (line 105)`

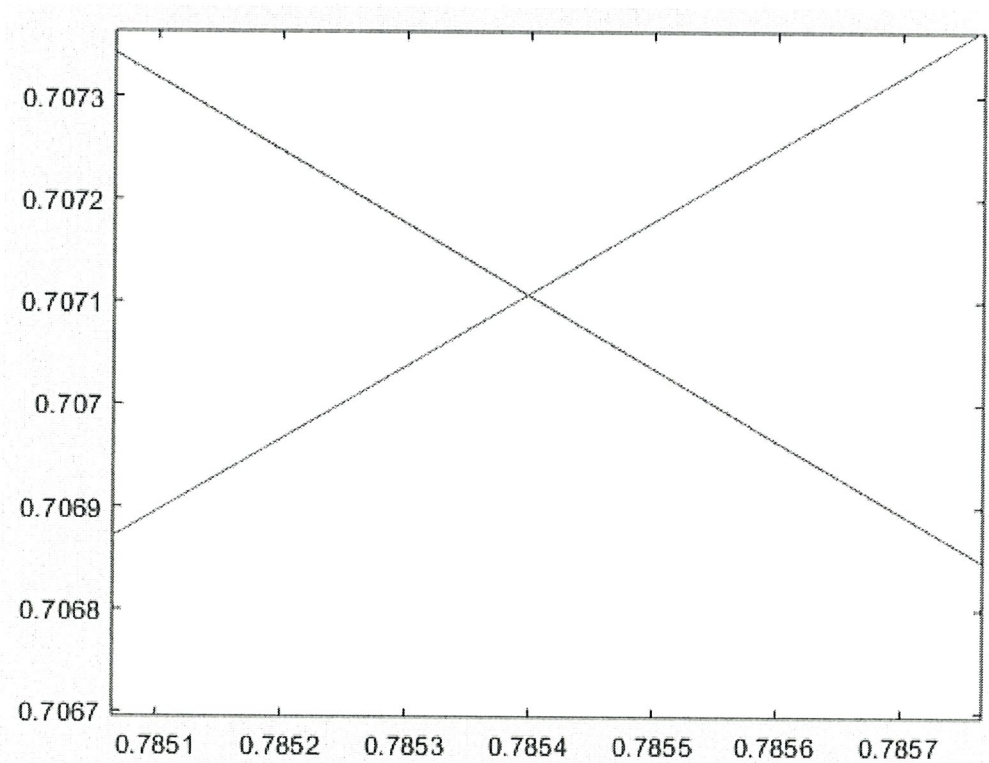
`>> hold` *2*

Current plot held

`>> fplot('cos(x)',[-pi,pi])` *S*

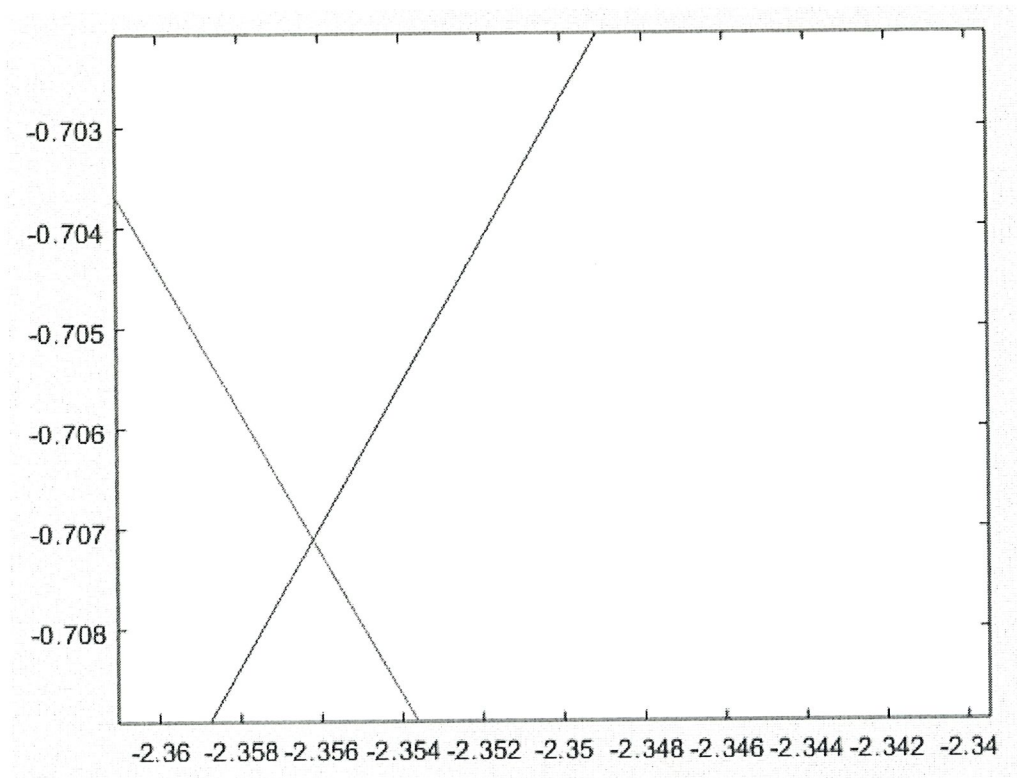
`> In fplot (line 105)`

`>>`



Intersection (0.79, 0.71) *2*

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Intersection (-2.36, -0.71)

3

$\frac{21}{25}$

2 ✓

Q4.

>> clear all

>> syms x

>> 4*x^3=2*x^2+1

4*x^3=2*x^2+1

X

>> sqrt(x)

ans =

$x^{1/2}$

$\frac{0}{20}$

✓

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Q5.

syms x y

```
>> y=3*exp(x)*sin(x),y1=diff(y),y2=diff(y,2),y4 = diff(y,4)
```

y =

$3 \cdot \exp(x) \cdot \sin(x)$

y1 =

$3 \cdot \exp(x) \cdot \cos(x) + 3 \cdot \exp(x) \cdot \sin(x)$

y2 =

$6 \cdot \exp(x) \cdot \cos(x)$

y4 =

$-12 \cdot \exp(x) \cdot \sin(x)$

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```
>> y4^2+y2^2+4*y^2
```

ans =

```
36*exp(2*x)*cos(x)^2 + 180*exp(2*x)*sin(x)^2
```

```
>> simplify ans
```

Undefined function 'simplify' for input arguments of type 'char'.

```
>> simplify(ans)
```

ans =

```
36*exp(2*x)*(4*sin(x)^2 + 1)
```



