تمرین هفته دوم

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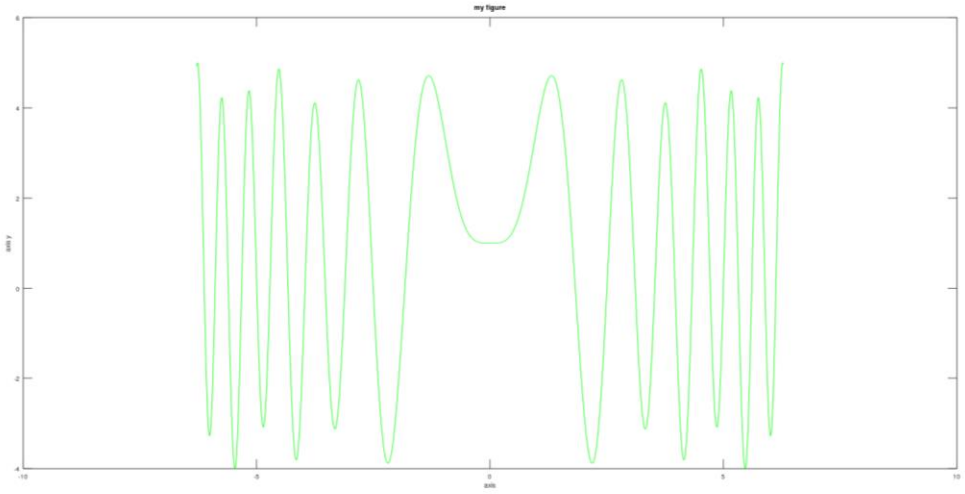
Q1:

```
clear
clc
x=-2*pi:.01:2*pi;
y=cos(2*x).*cos(2*x)+4*sin(x.^2);
plot(x,y,'g')
xlabel("axis")
ylabel("axis y")
title("my figure")
```



Q2:

```
clear
clc
x=input('Enter x here: ');
y=input('Enter y here: ');
if and(x>=0,y>=0)
  f=20*x+4*y
elseif and(x>=0,y<0)
  f=sqrt(x)+y^2
elseif and(x<0,y>=0)
```

```
 f=(x^2)+y^1.5
else
 f=(x^2)+y^2
end
```

Q3:

```
clear
clc
grade=input('Enter your grade here: ');
if grade>95
  f='Excellent'
elseif and(grade>86,grade<=95)
  f='Good'
elseif and(grade>76,grade<=86)
  f='Middle'
elseif and(grade>66,grade<=76)
  f='Bad'
elseif grade<=66
  f='Very Bad'
end
```

Q4:

```
clear
clc
x=input('Enter first number here: ');
y=input('Enter second number here: ');
z=input('Enter third number here: ');
output='The mazimum is'
if and(x>=y,x>=z)
  f=x
elseif and(y>=x,y>=z)
```

```
  f=y
elseif and(z>=x,z>=y)
  f=z
end
```

Q5:

```
clear
clc
x=input('Enter first number here: ');
y=input('Enter second number here: ');
z=input('Enter third number here: ');
if and(x>=y,x>=z)
  if y>z
    multipleOfTwoGreaterNumbers=x*y
    additionOfTwoLittleNumbers=y+z
  else
    multipleOfTwoGreaterNumbers=x*z
    additionOfTwoLittleNumbers=y+z
  endif
elseif and(y>=x,y>=z)
    if x>z
    multipleOfTwoGreaterNumbers=x*y
    additionOfTwoLittleNumbers=x+z
  else
    multipleOfTwoGreaterNumbers=y*z
    additionOfTwoLittleNumbers=x+z
  endif
elseif and(z>=x,z>=y)
    if y>x
    multipleOfTwoGreaterNumbers=z*y
    additionOfTwoLittleNumbers=y+x
```

```
  else
    multipleOfTwoGreaterNumbers=x*z
    additionOfTwoLittleNumbers=y+x
  endif
end
```

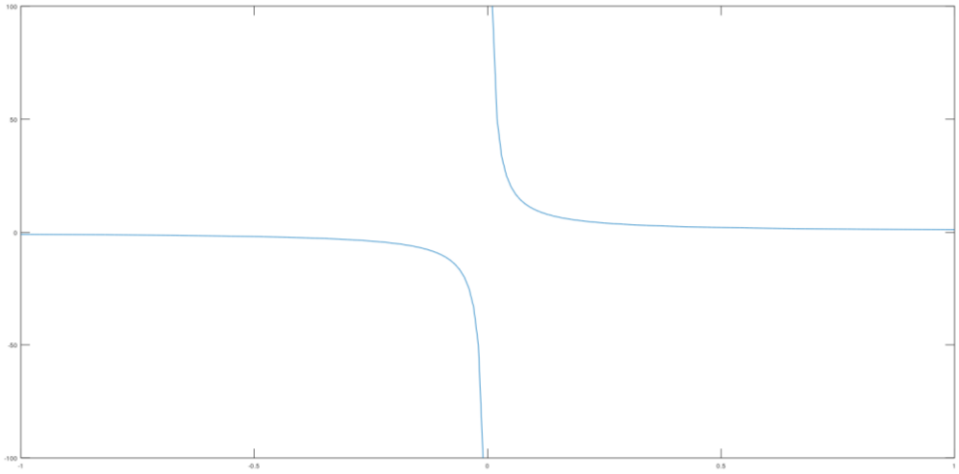
Q6:

```
clear
clc
month=input('Enter the month here: ');
day=input('Enter the day here: ');
if and(month>=1,month<=6)
  if and(day>=1,day<=31)
    answer=31-day+29+(5*30)+((6-month)*31)
  else
    answer='Day is not valid!'
  endif
elseif and(month>=7,month<=11)
  if and(day>=1,day<=30)
    answer=30-day+29+((5-month)*30)
  else
    answer='Day is not valid!'
  endif
elseif month==12
  if and(day>=1,day<=29)
    answer=29-day
  else
    answer='Day is not valid!'
  endif
else
  answer='Month is not valid!'
```

```
end
```

Q7:

```
clear
clc
x=-1:.01:1;
y=1./x;
plot(x,y)
```



Q8:

```
clear
clc
x=input('Enter the first side of triangle here: ');
y=input('Enter the second side of triangle here: ');
z=input('Enter the third side of triangle here: ');
if (x^2)==(y^2)+(z^2)
  output='the first side is the hypotenuse of this right angled triangle.'
elseif (y^2)==(x^2)+(z^2)
  output='the second side is the hypotenuse of this right angled triangle.'
elseif (z^2)==(x^2)+(y^2)
  output='the third side is the hypotenuse of this right angled triangle.'
else
```

```
  output='This is not a right angled triangle at all!'
end
```

Q9:

```
clear
clc
x1=input('Enter the x of the first dot here: ');
y1=input('Enter the y of the first dot here: ');
x2=input('Enter the x of the second dot here: ');
y2=input('Enter the y of the second dot here: ');
d=sqrt(((x1-x2)^2)+((y1-y2)^2))
if d>10
  output='high'
elseif and(d<=10,d>5)
  output='moderate'
elseif and(d>=0,d<=5)
  output='low'
elseif d<0
  output='not valid'
end
```

Q10: