vid#jas un efekt#vas v#rt#bas apr##ins

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vid#jas v#rtibas apr##ins

```
t = 0:0.1:8;
N= length(t);
```

- ar formulu 3a

```
xvid3a = 1/(N-1)*sum(sig(t(1:end-1)))
```

```
xvid3a =

    0.6910
```

- ar formulu 3b

```
xvid3b = 1/(N-1)*sum(sig(t((1:end-1)+1)))
```

```
xvid3b =

    0.6597
```

ar formulu 3c

```
h = (t(end)-t(1))/(N-1)
xvid3c = 1/(N-1)*sum(sig(t(1:end-1)+h/2))
% * ar formulu 4
xvid4 = 1/(N-1)*(sig(t(1))/2+sig(t(end))/2 + sum(sig(t(2:end-1))))
```

```
h =

    0.1000


xvid3c =

    0.6717
```

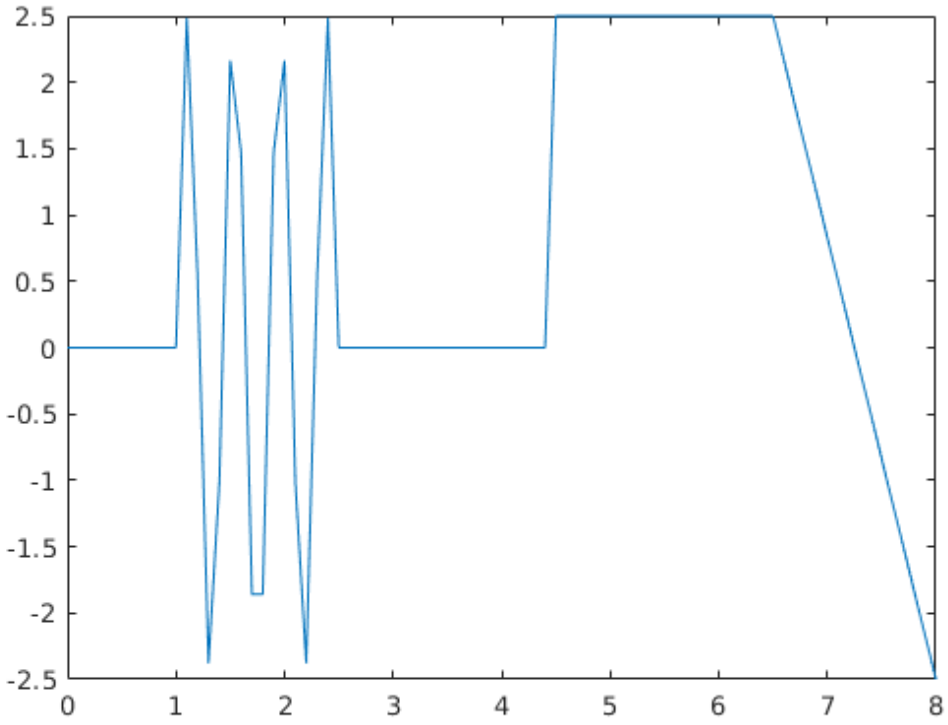
```
xvid4 =

    0.6753
```

#st#s vid#jas vert#bas apr##ins

- sinuso#da

```
syms t_sin
A0=0; A=2.5; T=(2.5-1)/3.5; f=1/T; delay = 1;
y_sin = A0+A*sin(2*pi*f*(t_sin-delay));
int_sin = int(y_sin,t_sin,1,2.5)
syms t_saw
k = (2.5-(-2.5))/(6.5-8);
delay = 7.25; %t_sin = 1:0.01:2.5;
y_saw = k*(t_saw-delay);
int_saw = int(y_saw,t_saw,6.5,8)
y = sig(t)
plot(t,y)


int_sin =

15/(14*pi)


int_saw =

0


y =

  Columns 1 through 7

         0         0         0         0         0         0         0

  Columns 8 through 14

         0         0         0         0    2.4863    0.5198   -2.3776

  Columns 15 through 21

   -1.0168    2.1651    1.4695   -1.8579   -1.8579    1.4695    2.1651

  Columns 22 through 28

   -1.0168   -2.3776    0.5198    2.4863         0         0         0

  Columns 29 through 35

         0         0         0         0         0         0         0
```

```
Columns 36 through 42

       0         0         0         0         0         0         0

Columns 43 through 49

       0         0         0    2.5000    2.5000    2.5000    2.5000

Columns 50 through 56

  2.5000    2.5000    2.5000    2.5000    2.5000    2.5000    2.5000

Columns 57 through 63

  2.5000    2.5000    2.5000    2.5000    2.5000    2.5000    2.5000

Columns 64 through 70

  2.5000    2.5000    2.5000    2.1667    1.8333    1.5000    1.1667

Columns 71 through 77

  0.8333    0.5000    0.1667   -0.1667   -0.5000   -0.8333   -1.1667

Columns 78 through 81

 -1.5000   -1.8333   -2.1667   -2.5000
```



*

```
syms t_const
y_const = 2.5;
int_const = int(2.5,t_const,4.5,6.5)
```

int_const =

5

Liekam visu kop#

```
ista_vv = 1/8 *(int_const+int_saw+int_sin)
```

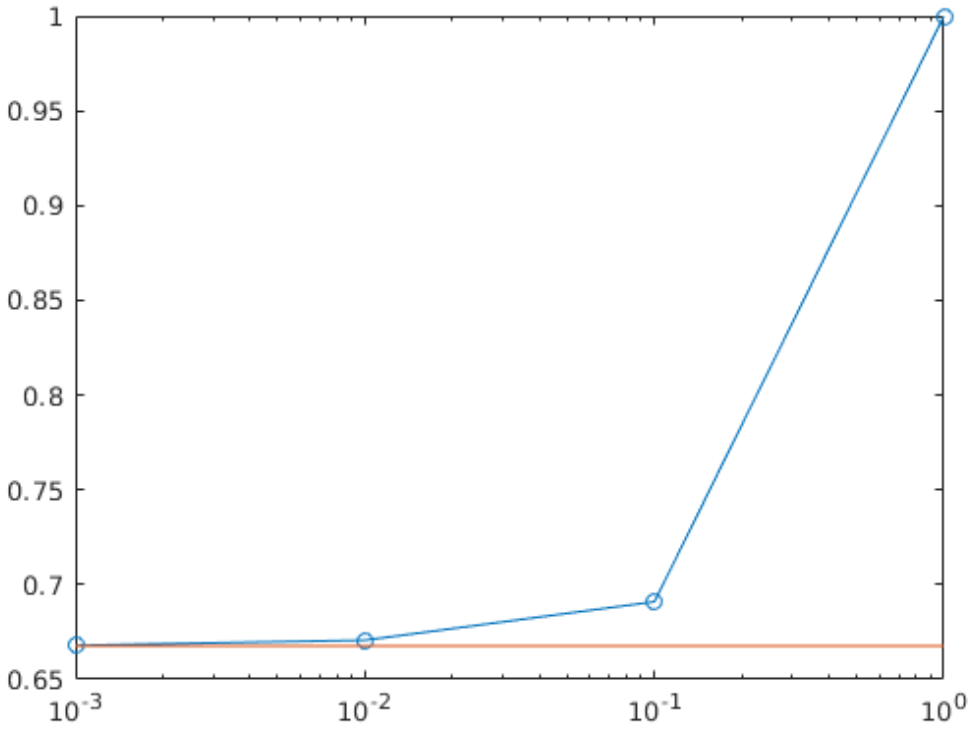
ista_vv =

*15/(112*pi) + 5/8*

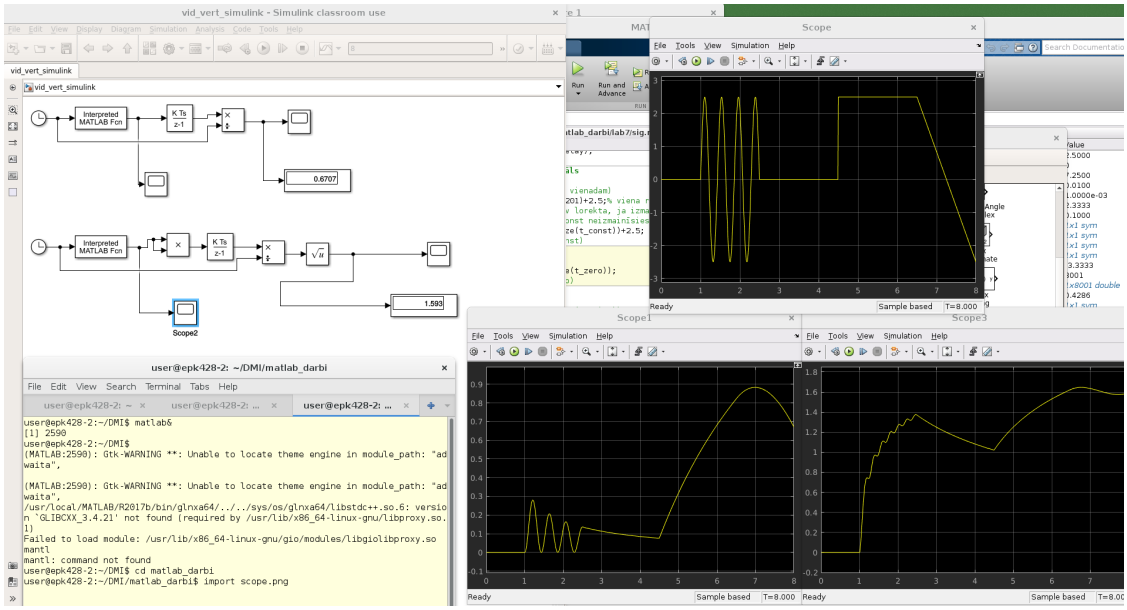
Salidzin#sim 3a formulu ar #sto vid#jo v#rt#bu

```
dt =  [1 0.1 0.01 0.001];
xvid3am = [];
for dtc = dt
```

```
    t = 0:dtc:8;
    N= length(t);
    xvid3a = 1/(N-1)*sum(sig(t(1:end-1)));
    xvid3am = [xvid3am,xvid3a];
end
semilogx(dt,xvid3am,'-o',dt,dt*0+ista_vv)
```



Simulink



Piez#me

lai simulink palaistos vajadz#tu defin#t dt =0.01

Secin#jumi:

M#s ar MATLAB pal#dz#bu izp#t#jam k# var atr#st funkcijas v#rt#bu un funkcijas vid#jo un efekt#vu v#rt#bu, k# ar# izmantojot Simulink ir iesp#jams konstru#t un modul#t dotas funkcijas. Ar cikla pal#dz#bu m#s sal#dzin#jam 3a formulu ar #sto videjo v#rt#bu.

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