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LAMPIRAN

✚ Sintax matlab untuk gambar 2.1 (a).

```
clear all
clc
x = 0:0.001:5;
g = -5:0.001:0;
h = 0*g;
y = exp(-x);
fig=figure;
set(gcf, 'Position', [0 0 450 250])
plot(x,y,g,h, 'color', 'b')
set(gca, 'Xtick', [-5:5]);
set(gca, 'Ytick', [0:0.1:1]);
xlabel('$\{\bf\it\}x$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
ylabel('$\{\bf\it\}f(x)$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(-4.9,0.2, '$\{\bf\it\}{f(x)=}$ $\left\{\begin{tabular}{c}
\{\bf\it\}e^{-x},\} \{\bf\it\} \text{jika } \{\bf\it\}0\leq x<\infty\} \\
\{\bf\it\} 0, \text{selainnya}
\end{tabular}\right.$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b')
grid on
```

✚ Sintax matlab untuk gambar 2.1 (b).

```
clear all
clc
x = -10:0.001:10;
y = 1./(1+i*x);
fig=figure;
set(gcf, 'Position', [0 0 450 250])
plot(x,y, 'color', 'b')
set(gca, 'Xtick', [-10:2:10]);
set(gca, 'Ytick', [0:0.1:1]);
xlabel('$\{\bf\it\}\{\omega\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
ylabel('$\{\bf\it\}\mathcal{F}\{\f\}(\omega)$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(2,0.9, '$\{\bf\it\}\mathcal{F}\{\f\}(\omega) = \frac{1}{1+i\omega}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b')
grid on
```

✚ Sintax matlab untuk gambar 2.2 (a).

```
clear all
clc
a = 1;
x = -5:0.001:5;
y = exp(-a.*x.^2);
fig=figure;
set(gcf, 'Position', [0 0 450 250])
plot(x,y, 'color', 'b')
set(gca, 'Xtick', [-5:1:5]);
set(gca, 'Ytick', [0:0.1:1]);
xlabel('$\{\bf\it\}x$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
```

```

ylabel('$\{\bf\it\}f(x)$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(1.25, 0.9, '$\{\bf\it\}{f(x)=e^{-\alpha x^2}}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(1.5, 0.75, '\bf\it dimana $\{\bf\it\}\{\alpha = 1\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b')
grid on

```

✚ Sintax matlab untuk gambar 2.2 (b).

```

clear all
clc
a = 10;
x = -5:0.001:5;
y = exp(-a.*x.^2);
fig=figure;
set(gcf, 'Position', [0 0 450 250])
plot(x,y, 'color', 'b')
set(gca, 'Xtick', [-5:1:5]);
set(gca, 'Ytick', [0:0.1:1]);
xlabel('$\{\bf\it\}x$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
ylabel('$\{\bf\it\}f(x)$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(1, 0.9, '$\{\bf\it\}{f(x)=e^{-\alpha x^2}}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(1, 0.75, '\bf\it dimana $\{\bf\it\}\{\alpha = 10\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b')
grid on

```

✚ Sintax matlab untuk gambar 2.2 (c).

```

clear all
clc
a = 1;
x = -20:0.001:20;
y = exp(-(x.^2/(4.*a))).*sqrt(pi./a);
fig=figure;
set(gcf, 'Position', [0 0 450 250])
plot(x,y, 'color', 'b')
ylim([0 2.2]);
set(gca, 'Xtick', [-20:5:20]);
set(gca, 'Ytick', [0:0.2:20]);
xlabel('$\{\bf\it\}\{\omega\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
ylabel('$\{\bf\it\}\mathcal{F}\{\f\}\{\omega\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(0, 1.97, '$\{\bf\it\}\mathcal{F}\{\f\}\{\omega\} = e^{\frac{-}{\omega^2}\{4\alpha\}}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(15.2, 1.97, '$\{\bf\it\}\{\sqrt{\frac{\pi}{\alpha}}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(5, 1.5, '\bf\it dimana $\{\bf\it\}\{\alpha = 1\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b')
grid on

```

✚ Sintax matlab untuk gambar 2.2 (d).

```
clear all
```

```

clc
a = 10;
x = -20:0.001:20;
y = exp(-(x.^2/(4.*a))).*sqrt(pi./a);
fig=figure;
set(gcf, 'Position', [0 0 450 250])
plot(x,y, 'color', 'b')
ylim([0 0.8]);
set(gca, 'Xtick', [-20:5:20]);
set(gca, 'Ytick', [0:0.1:20]);
xlabel('$\{\bf\it\}\omega$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
ylabel('$\{\bf\it\}\mathcal{F}\{\f\}\(\omega)$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(0,0.65, '$\{\bf\it\}\mathcal{F}\{\f\}\(\omega) = e$', 'Interpreter', 'Latex', 'fontsize', 16, 'Color', 'b')
text(12,0.7, '$\{\bf\it\}\{\frac{-}{\omega^2}\}\{4\alpha\}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(14.7,0.65, '$\{\bf\it\}\{\sqrt{\frac{\pi}{\alpha}}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(5,0.45, '\bf\it dimana $\{\bf\it\}\alpha = 10$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
grid on

```

✚ Sintax matlab untuk gambar 2.3 (a).

```

clear all
clc
a = 1;
x = -20:0.001:20;
t = pi./6;
y = sqrt((1-i.*cot(t))/(2.*a-i.*cot(t))).*exp((i./2).*(x.^2).*cot(t)-((x.*csc(t)).^2)/(2.*(2.*a-i.*cot(t))));
fig=figure;
set(gcf, 'Position', [0 0 390 205]);
plot(x,y, 'color', 'b')
ylim([-0.1 1.3]);
set(gca, 'Xtick', [-20:5:20]);
set(gca, 'Ytick', [-0.1:0.1:1.3]);
xlabel('$\{\bf\it\}\omega$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
ylabel('$\{\bf\it\}\mathcal{F}^{\{\theta\}}\{\f\}\(\omega)$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b');
text(-19.75,1.1, '$\{\bf\it\}\mathcal{F}^{\{\theta\}}\{\f\}\(\omega) = \{\sqrt{\frac{1-i\cot\{\theta\}}{2\alpha-i\cot\{\theta\}}}\}e^{\frac{i}{2}\omega^2\cot\{\theta\}} - \{\frac{(\omega\csc\theta)^2}{2(2\alpha-i\cot\theta)}\}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color', 'b')
text(3,0.9, '\bf\it dimana $\{\bf\it\}\alpha = 1; \{\theta\} = \{\frac{\pi}{6}\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b')
grid on

```

✚ Sintax matlab untuk gambar 2.3 (b).

```

clear all
clc
a = 1;
x = -20:0.001:20;
t = pi;
y = sqrt((1-i.*cot(t))/(2.*a-
i.*cot(t))).*exp((i./2).*(x.^2).*cot(t)-
((x.*csc(t)).^2)/(2.*(2.*a-i.*cot(t)))));
fig=figure;
set(gcf, 'Position', [0 0 420 320]);
plot(x,y, 'color', 'b')
ylim([-0.2 1.5]);
set(gca, 'Xtick', [-20:5:20]);
set(gca, 'Ytick', [-0.2:0.1:1.5]);
xlabel('$\bf\it\{\omega}$', 'Interpreter', 'Latex', 'fontsize', 11, 'C
olor', 'b');
ylabel('$\bf\it\mathcal{F}^{\theta}\{f\}(\omega)$', 'Interpreter'
, 'Latex', 'fontsize', 11, 'Color', 'b');
text(-
19.75,1.24, '$\bf\it\mathcal{F}^{\theta}\{f\}(\omega) = \sqrt{\frac{1-i\cot{\theta}}{2\alpha-
i\cot{\theta}}}\}e^{\frac{i}{2}\omega^2\cot{\theta}}-
\frac{((\omega\csc{\theta})^2}{2(2\alpha-
i\cot{\theta})}}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color',
'b')
text(3,1, '\bf\it dimana $\bf\it\{\alpha =\}
1;\theta = \pi}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', 'b
')
grid on

```

✚ Sintax matlab untuk gambar 2.3 (c).

```

clear all
clc
a = 10;
x = -20:0.001:20;
t = pi./6;
y = sqrt((1-i.*cot(t))/(2.*a-
i.*cot(t))).*exp((i./2).*(x.^2).*cot(t)-
((x.*csc(t)).^2)/(2.*(2.*a-i.*cot(t)))));
fig=figure;
set(gcf, 'Position', [0 0 420 320]);
plot(x,y, 'color', 'b')
ylim([-0.3 0.6]);
set(gca, 'Xtick', [-20:5:20]);
set(gca, 'Ytick', [-0.3:0.1:0.6]);
xlabel('$\bf\it\{\omega}$', 'Interpreter', 'Latex', 'fontsize', 11, 'C
olor', 'b');
ylabel('$\bf\it\mathcal{F}^{\theta}\{f\}(\omega)$', 'Interpreter'
, 'Latex', 'fontsize', 11, 'Color', 'b');
text(-
19.75,0.45, '$\bf\it\mathcal{F}^{\theta}\{f\}(\omega) = \sqrt{\frac{1-i\cot{\theta}}{2\alpha-
i\cot{\theta}}}\}e^{\frac{i}{2}\omega^2\cot{\theta}}-
\frac{((\omega\csc{\theta})^2}{2(2\alpha-
i\cot{\theta})}}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color',
'b')

```

```

text(3,0.25, '\bf\it dimana $\{\bf\it}\{\alpha} {=}
10;\theta{=}\{\frac{\pi}{6}\}$', 'Interpreter', 'Latex', 'fontsize', 11
, 'Color', 'b')
grid on

```

✚ Sintax matlab untuk gambar 2.3 (d).

```

clear all
clc
a = 10;
x = -20:0.001:20;
t = pi;
y = sqrt((1-i.*cot(t))/(2.*a-
i.*cot(t))).*exp((i./2).*(x.^2).*cot(t)-
((x.*csc(t)).^2)/(2.*(2.*a-i.*cot(t))));
fig=figure;
set(gcf, 'Position', [0 0 420 320]);
plot(x,y, 'color', 'b')
ylim([-0.1 1.4]);
set(gca, 'Xtick', [-20:5:20]);
set(gca, 'Ytick', [-0.1:0.1:1.4]);
xlabel('$\{\bf\it}\{\omega}$', 'Interpreter', 'Latex', 'fontsize', 11, 'C
olor', 'b');
ylabel('$\{\bf\it}\mathcal{F}^{\{\theta\}}\{f\}(\omega)$', 'Interpreter'
, 'Latex', 'fontsize', 11, 'Color', 'b');
text(-
19.75,1.2, '$\{\bf\it}\{\mathcal{F}^{\{\theta\}}\{f\}(\omega} {=}\{\sqrt{\{f
rac{1-i\cot\{\theta\}}\}^{2\alpha-
i\cot\{\theta\}}}\}e^{\frac{i}{2}\{\omega\}^2\cot\{\theta\}}-
\frac{\{\omega\csc\theta\}^2}{2}\{2\alpha-
i\cot\theta\}}\}$', 'Interpreter', 'Latex', 'fontsize', 14, 'Color',
'b')
text(3,0.95, '\bf\it dimana $\{\bf\it}\{\alpha} {=}
10;\theta{=}\{\pi\}$', 'Interpreter', 'Latex', 'fontsize', 11, 'Color', '
b')
grid on

```