

Matematika Lanjut

MENENTUKAN PERSAMAAN GARIS SINGGUNG MELALUI TITIK DI LUAR IRISAN KERUCUT



ANGGOTA

- AGIL
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TABEL PSG

NO.	PERSAMAAN PARABOLA	PERSAMAAN GARIS SINGGUNG / GARIS POLAR DI TITIK (x_1, y_1)
1.	$y^2 = 4px$	$y_1y = 2p(x + x_1)$
2.	$(y - \beta)^2 = 4p(x - \alpha)$	$(y_1 - \beta)(y - \beta) = 2p(x + x_1 - 2\alpha)$
3.	$x^2 = 4py$	$x_1x = 2p(y + y_1)$
4.	$(x - \alpha)^2 = 4p(y - \beta)$	$(x_1 - \alpha)(x - \alpha) = 2p(y + y_1 - 2\beta)$



TABEL PSG

NO.	PERSAMAAN HIPERBOLA	PERSAMAAN GARIS SINGGUNG / GARIS POLAR DI TITIK (x_1, y_1)
1.	$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$	$\frac{x_1 x}{a^2} - \frac{y_1 y}{b^2} = 1$
2.	$\frac{(x - \alpha)^2}{a^2} - \frac{(y - \beta)^2}{b^2} = 1$	$\frac{(x_1 - \alpha)(x - \alpha)}{a^2} - \frac{(y_1 - \beta)(y - \beta)}{b^2} = 1$
3.	$\frac{x^2}{a^2} - \frac{y^2}{b^2} = -1$	$\frac{x_1 x}{a^2} - \frac{y_1 y}{b^2} = -1$
4.	$\frac{(x - \alpha)^2}{a^2} - \frac{(y - \beta)^2}{b^2} = -1$	$\frac{(x_1 - \alpha)(x - \alpha)}{a^2} - \frac{(y_1 - \beta)(y - \beta)}{b^2} = -1$



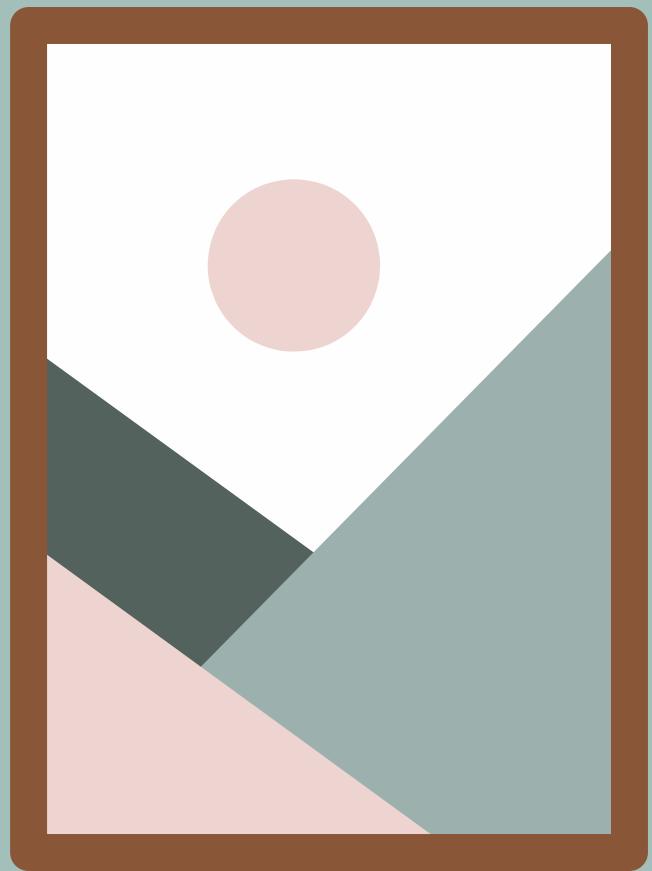
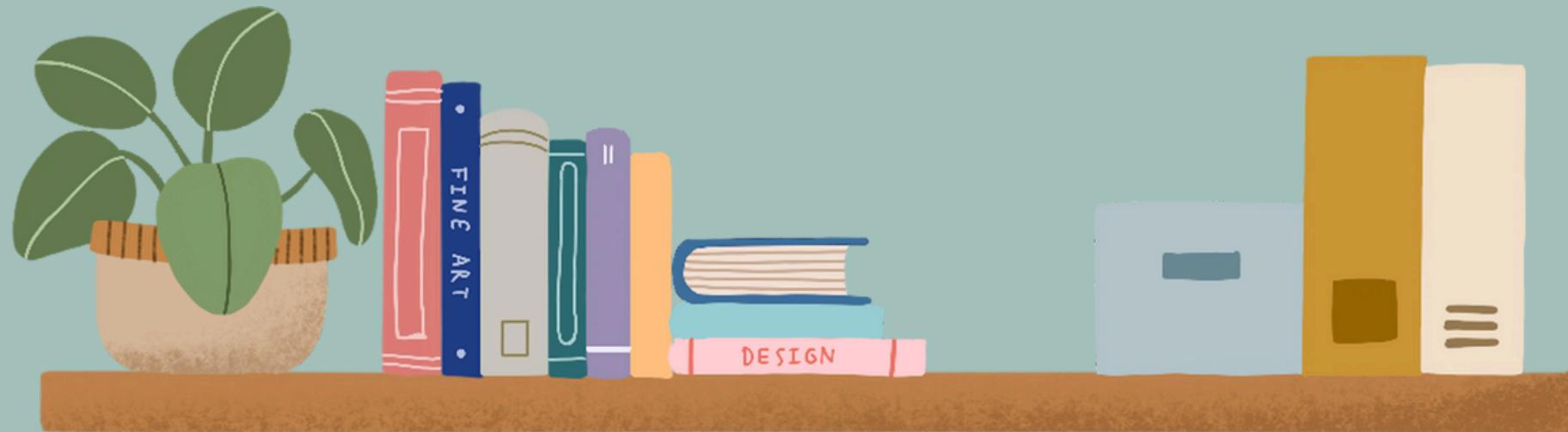
TABEL PSG

Persamaan Elips	Persamaan Garis Singgung Melalui Titik (x_1, y_1)
$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$	$\frac{x \cdot x_1}{a^2} + \frac{y \cdot y_1}{b^2} = 1$
$\frac{x^2}{b^2} + \frac{y^2}{a^2} = 1$	$\frac{x \cdot x_1}{b^2} + \frac{y \cdot y_1}{a^2} = 1$
$\frac{(x-p)^2}{a^2} + \frac{(y-q)^2}{b^2} = 1$	$\frac{(x-p)(x_1-p)}{a^2} + \frac{(y-q)(y_1-q)}{b^2} = 1$
$\frac{(x-p)^2}{b^2} + \frac{(y-q)^2}{a^2} = 1$	$\frac{(x-p)(x_1-p)}{b^2} + \frac{(y-q)(y_1-q)}{a^2} = 1$
$Ax^2 + By^2 + Cx + Dy + E = 0$	$Ax_1x + By_1y + \frac{1}{2}C(x + x_1) + \frac{1}{2}D(y + y_1) + E = 0$

Contoh soal

Tentukan persamaan garis singgung parabola yang melalui titik A(2,5) yang terletak diluar parabola $y^2 = 8x$





**SEKIAN DAN
TERIMAKASIH**

