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LATIHAN SOAL 1.9

15. $15.000x - 3y + 30.000 = 0$, x = jarak tempuh, y = tarif

Tarif awal $\rightarrow x = 0$, $15.000 \cdot 0 - 3y + 30.000 = 0$

$3y = 30.000$

$y = 10.000$

Tarif jarak 10 KM $\rightarrow x = 10$, $15.000 \cdot 10 - 3y + 30.000 = 0$

$3y = 180.000$

$y = 60.000$

25. $3x - ky = 1$

$ky = 3x - 1$

$m_1 = \frac{3}{k}$

$m_1 \cdot m_2 = -1$

$\frac{3}{k} \cdot m_2 = -1$

$m_2 = -\frac{k}{3}$

$k^2x + 3y - 3 = 0$

$3y - 3 = -k^2x$

$y - 1 = -\frac{k^2x}{3}$, $m_3 = -\frac{k^2}{3}$

$m_2 = m_3 \rightarrow -\frac{k}{3} = \frac{-k^2}{3}$, $k = 0$ atau $k = 1$

garis L tegak lurus maka $m \neq 0$, jadi $k = 1$

garis melalui titik $(2, -1) \rightarrow y - (-1) = -\frac{1}{3}(x - 2)$

$y + 1 = -\frac{1}{3}x + \frac{2}{3} \rightarrow y = -\frac{1}{3}x - \frac{1}{3}$

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LATIHAN Soal 1.5

10. $x^2 + y^2 = 20$ dan $P(-1,2)$

a. $x^2 + y^2 = -1^2 + 2^2$
$= 5$

$5 < 20$ maka titik P di dalam lingkaran

b. Pusat $= (0,0)$
$r = \sqrt{20}$

Jarak Pusat ke $(-1,2) \rightarrow \sqrt{(0-(-1))^2 + (0,-2)^2}$
$= \sqrt{1+4}$
$= \sqrt{5}$

jarak terdekat $= \sqrt{20} - \sqrt{5}$
jarak terjauh $= \sqrt{20} + \sqrt{5}$

21. Lapangan segi empat ditutup tiga sisi pagar total 500 m,
x tegak lurus pasir y sejajar

a. $2x + y = 500$
$y = 500 - 2x$

b. Luas $= x \cdot y$
$A = x \cdot (500 - 2x)$
$A = 500x - 2x^2$

22. Pagar kuat = x harga 3.000 Pagar biasa = y harga 2000
tersedia 600.000

a. $2x \cdot 3.000 + 2y \cdot 2.000 = 600.000$
$4.000y = 600.000 - 6000x$
$y = 150 - \frac{3}{2}x$

b. $A = x \cdot y$
$= x \cdot (150 - \frac{3}{2}x)$
$= 150x - \frac{3}{2}x^2$