11. $x^2 - x + 2 = 0$ mpy akar $\equiv x_1$ dan x_2

Pk baru yg akar $\equiv 2x_1 - 2$ dan $2x_2 - 2$ adl

misal $\alpha = 2x_1 - 2$

$\beta = 2x_2 - 2$

dr diket :

$x_1 \cdot x_2 = \frac{2}{1} = 2$

$x_1 + x_2 = -\frac{(-1)}{1} = 1$

shg :

$\alpha \cdot \beta = 2(x_1 - 1) \cdot 2(x_2 - 1)$

$= 4 \cdot (x_1 x_2 - (x_1 + x_2) + 1)$

$= 4 x_1 x_2 - 4(x_1 + x_2) + 4$

$= 8 - 4 + 4$

$= 8$

$\alpha + \beta = (2x_1 - 2) + (2x_2 - 2)$

$= 2(x_1 + x_2) - 4$

$= -2$

Pk baru adl

$x^2 - (\alpha + \beta)x + \alpha\beta = 0$

$x^2 + 2x + 8 = 0$

12. caranya sama spti no 11

13. caranya sama spti no 10

14. $\alpha = -2$, $\beta = 1/2$

Pk baru adl

$x^2 - (\alpha + \beta)x + \alpha\beta = 0$

$\alpha + \beta = -2 + 1/2 = -3/2$

$\alpha\beta = -1$

shg :

$x^2 + 3/2 x - 1 = 0$

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

15. A $(1,0)$ B $(3,0)$ C $(0,-6)$
x_1 x_2

gunakan :

$y = a(x - x_1)(x - x_2)$

$y = a(x - 1)(x - 2)$

memotong sb y $(0,-6)$

$\rightarrow -6 = a(0-1)(0-3)$

$-6 = 3a$

$a = -2$

shg :

$y = -2(x-1)(x-3)$

$= -2(x^2 - 4x + 3)$

$= -2x^2 + 8x - 6$

16. dari grafik, titik puncak $(1,4)$ dan melewati $(0,3)$ shg gunakan rumus

$y = a(x - x_p)^2 + y_p$

$y = a(x-1)^2 + 4$

krn melewati $(0,3)$ mk :

$3 = a(0-1)^2 + 4$

$a = -1$

shg :

$y = -1 \cdot (x-1)^2 + 4$

$= -1 \cdot (x^2 - 2x + 1) + 4$

$= -x^2 + 2x + 3$

17. dr grafik, titik puncak adl $(-1, 2)$ dan melewati $(0,4)$ shg gunakan rumus

$y = a(x - x_p)^2 + y_p$

$y = a(x+1)^2 + 2$

krn melewati $(0,4)$ mk :

$4 = a(0+1)^2 + 2$

$a = 2$

shg : $y = 2(x+1)^2 + 2$

$y = 2x^2 + 4x + 4$