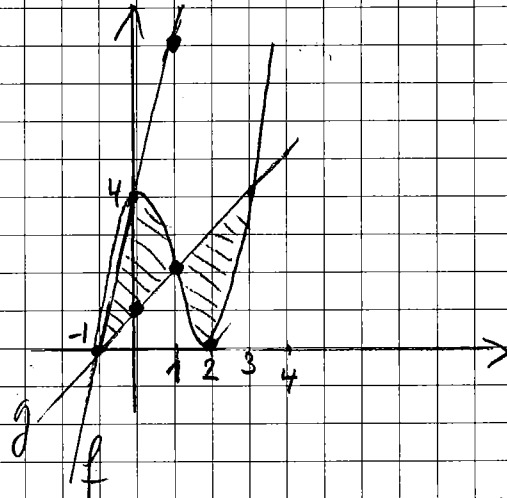


ex 65 $f \cap g: 4x+4 = x+1$
 $\Leftrightarrow 3x = -3$
 $\Leftrightarrow x = -1$

$f \cap h: 4x+4 = x^3 - 3x^2 + 4$
 $\Leftrightarrow x^3 - 3x^2 - 4x = 0$
 $\Leftrightarrow x(x^2 - 3x - 4) = 0$
 $\Leftrightarrow x(x-4)(x+1) = 0$
 $x = 0 \vee x = -1 \vee x = 4$

$g \cap h: x+1 = x^3 - 3x^2 + 4$
 $\Leftrightarrow x^3 - 3x^2 - x + 3 = 0$
 $\Leftrightarrow x^2(x-3) - (x-3) = 0$
 $\Leftrightarrow (x-3)(x^2-1) = 0$
 $\Leftrightarrow x = 3 \vee x = \pm 1$

$z \cap h: x^3 - 3x^2 + 4$
 $= (x+1)(x^2 + ax + 4)$
 $(= x^3 + x^2 + ax^2 + ax + 4x + 4)$
 $\begin{matrix} 1+1=3 & a+4=0 \\ a=-4 & a=4 \end{matrix}$



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

On veut $\int_m^0 (f(x) - g(x)) dx + \int_0^1 (h(x) - g(x)) dx + \int_1^3 (g(x) - h(x)) dx = \frac{55}{8}$

calc $\Leftrightarrow \int_m^0 3x+3 dx + 1,75 + 4 = \frac{55}{8}$

$\Leftrightarrow \left. \frac{3x^2}{2} + 3x \right|_m^0 + \frac{46}{8} = \frac{55}{8} \Leftrightarrow \left(0 - \left[\frac{3m^2}{2} + 3m \right] \right) = \frac{9}{8}$

$\Leftrightarrow -\frac{3m^2}{2} - 3m - \frac{9}{8} = 0 \Leftrightarrow 12m^2 + 24m + 9 = 0$

$\Leftrightarrow 4m^2 + 8m + 3 = 0$

$\Delta = 64 + 48 = 116$

$m_{1,2} = \frac{-8 \pm 4}{8} \rightarrow m_1 = -12/8 = -3/2$
 $\rightarrow m_2 = -4/8 = 1/2$

m vaut $1/2$