

27.16

$$f(x) = \frac{x-2}{x^2(x-3)} = \frac{\alpha}{x^2} + \frac{\beta}{x} + \frac{\gamma}{x-3}$$

$$= \frac{\alpha(x-3) + \beta(x^2-3x) + \gamma x^2}{x^2(x-3)}$$

$$= \frac{x^2(\beta + \gamma) + x(-3\beta + \alpha) - 3\alpha}{x^2(x-3)}$$

$$\Downarrow \alpha = \frac{2}{3}$$

$$\beta = -\frac{1}{9}$$

$$\gamma = \frac{1}{9}$$

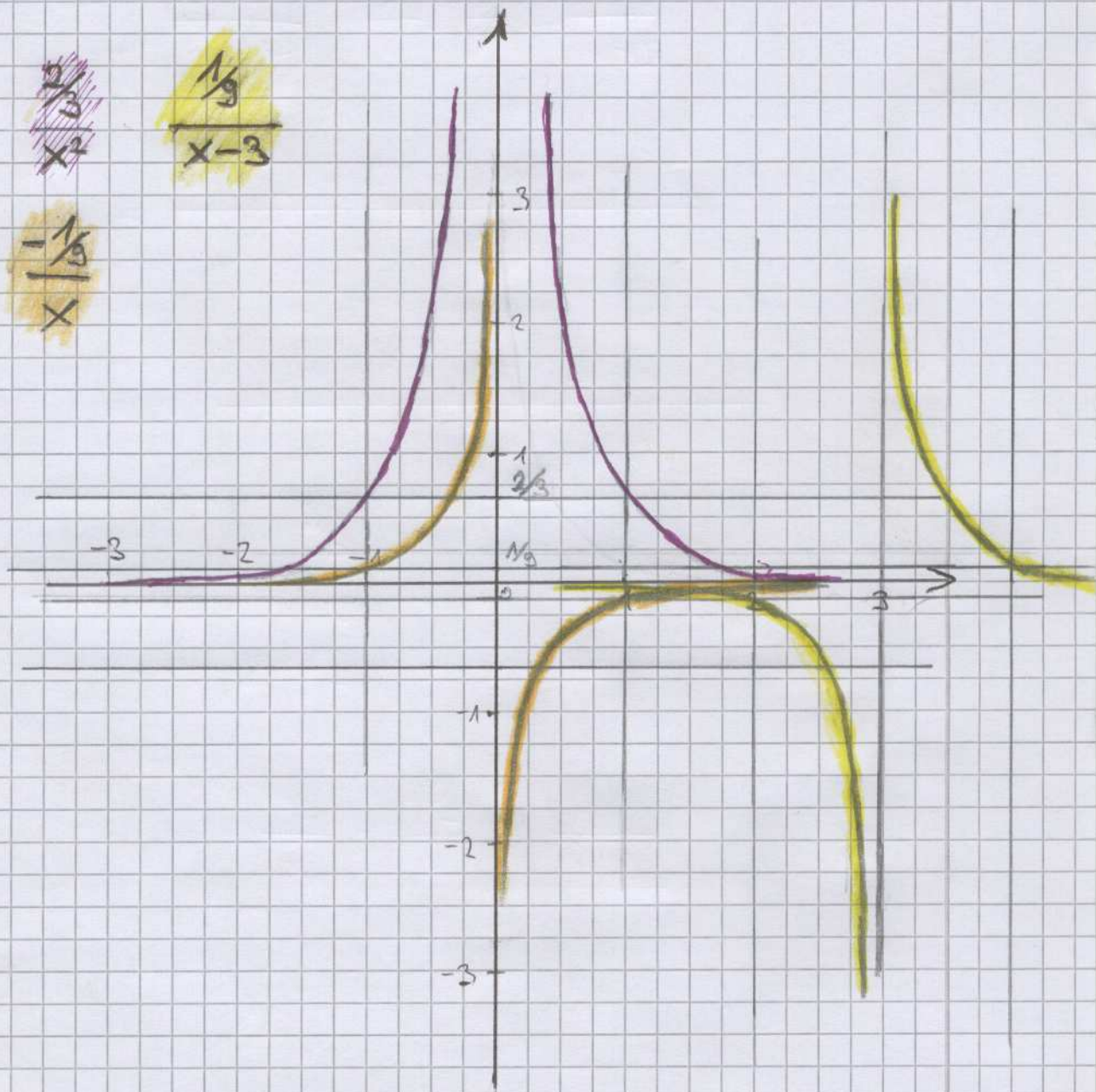
$$\Rightarrow f(x) = \frac{2/3}{x^2} + \frac{-1/9}{x} + \frac{1/9}{x-3}$$

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~~$\frac{2}{3}$~~
 ~~x^2~~

$\frac{1}{3}$
 $x-3$

$-\frac{1}{3}$
 x



27.12

$$g \rightarrow f(x) = \frac{1}{[x]} - \frac{1}{x}$$

