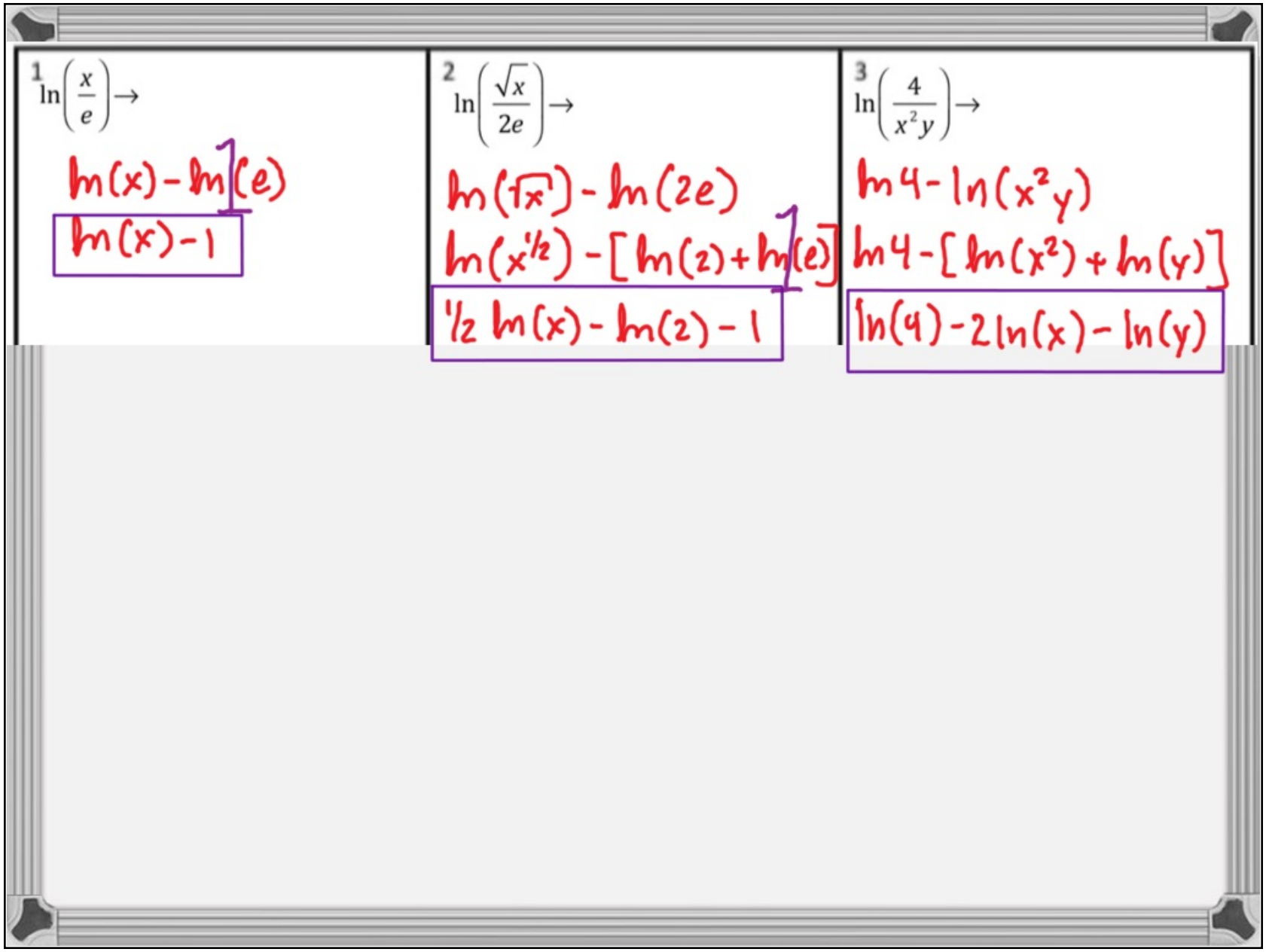
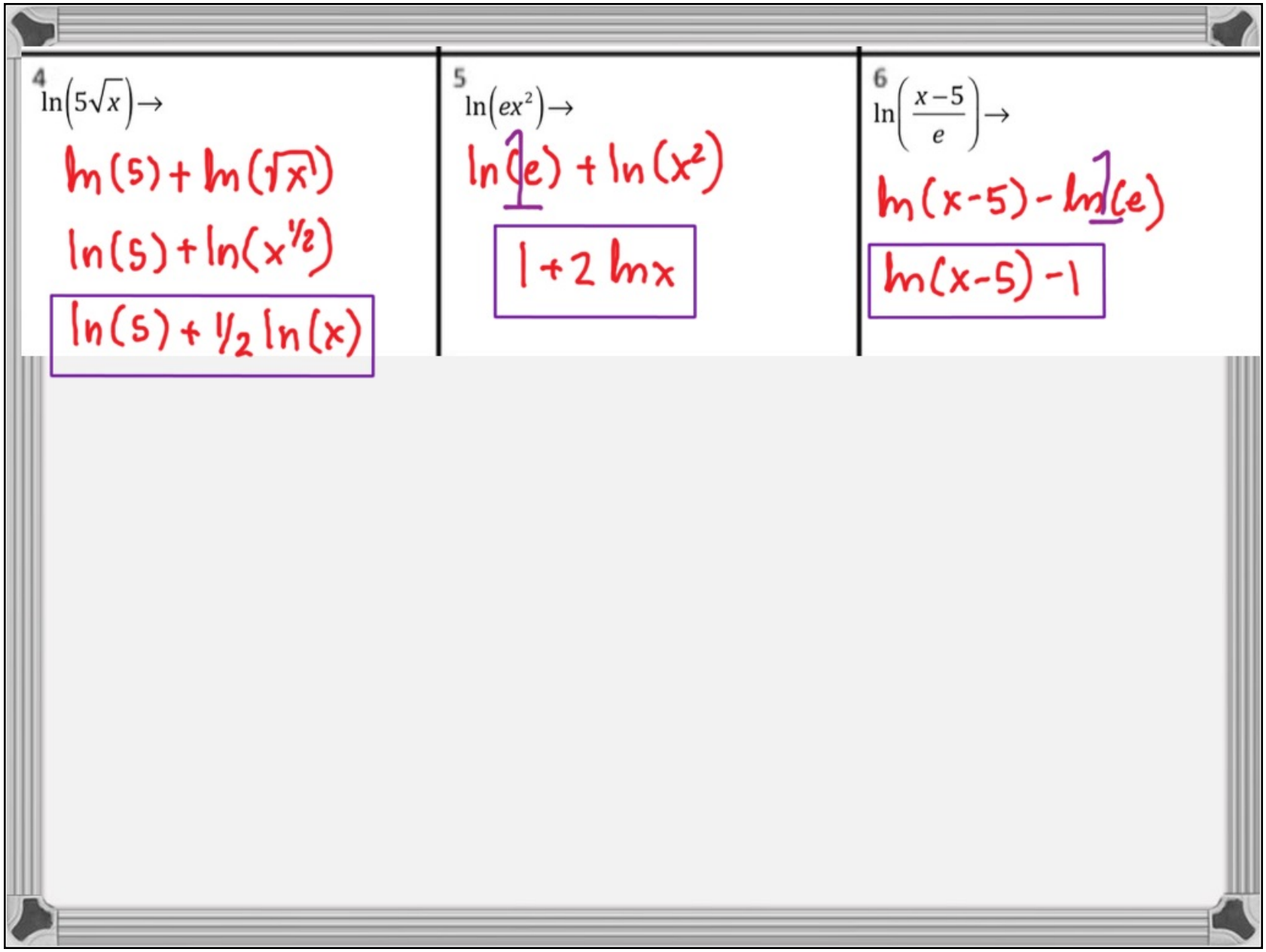
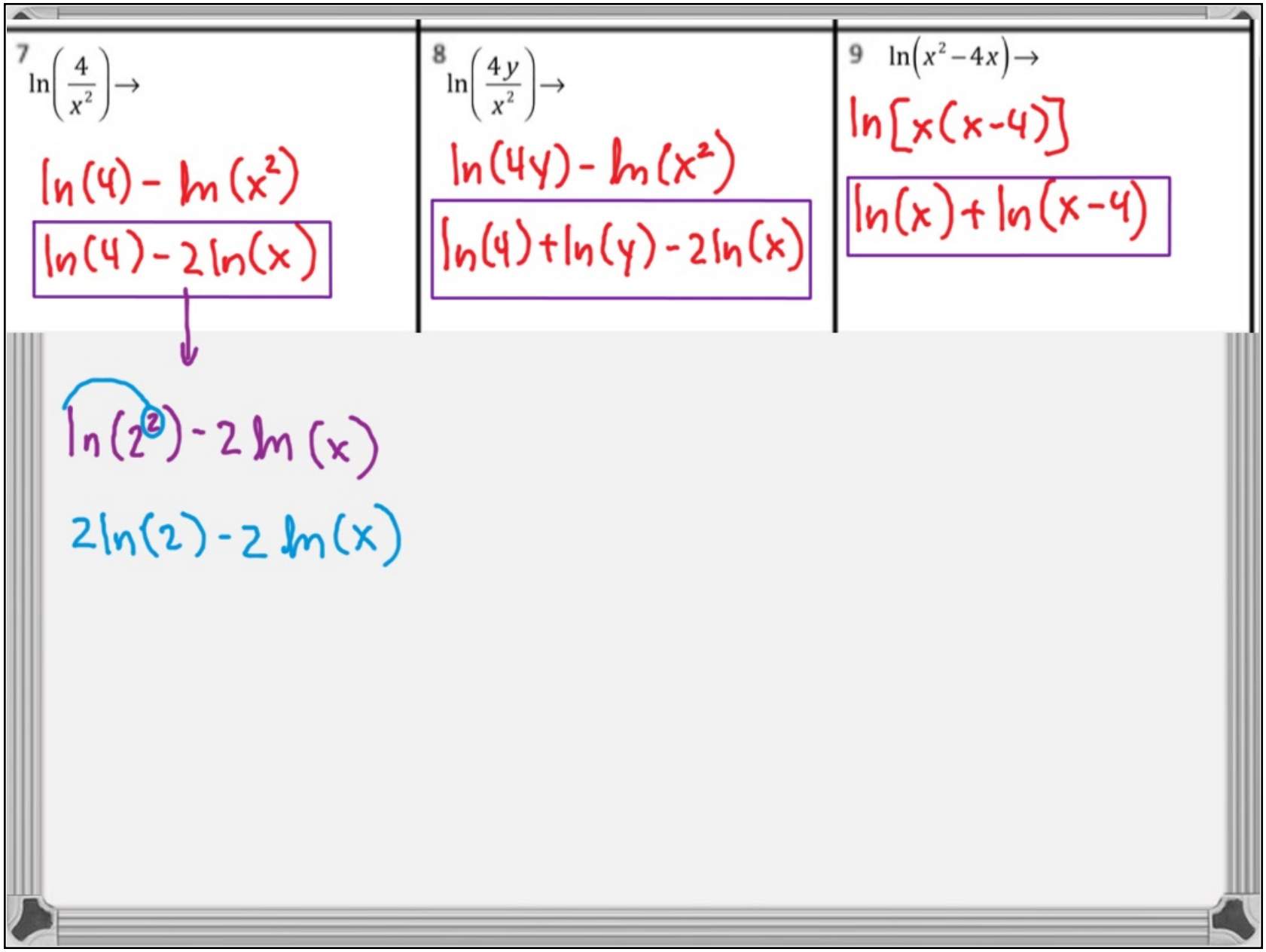
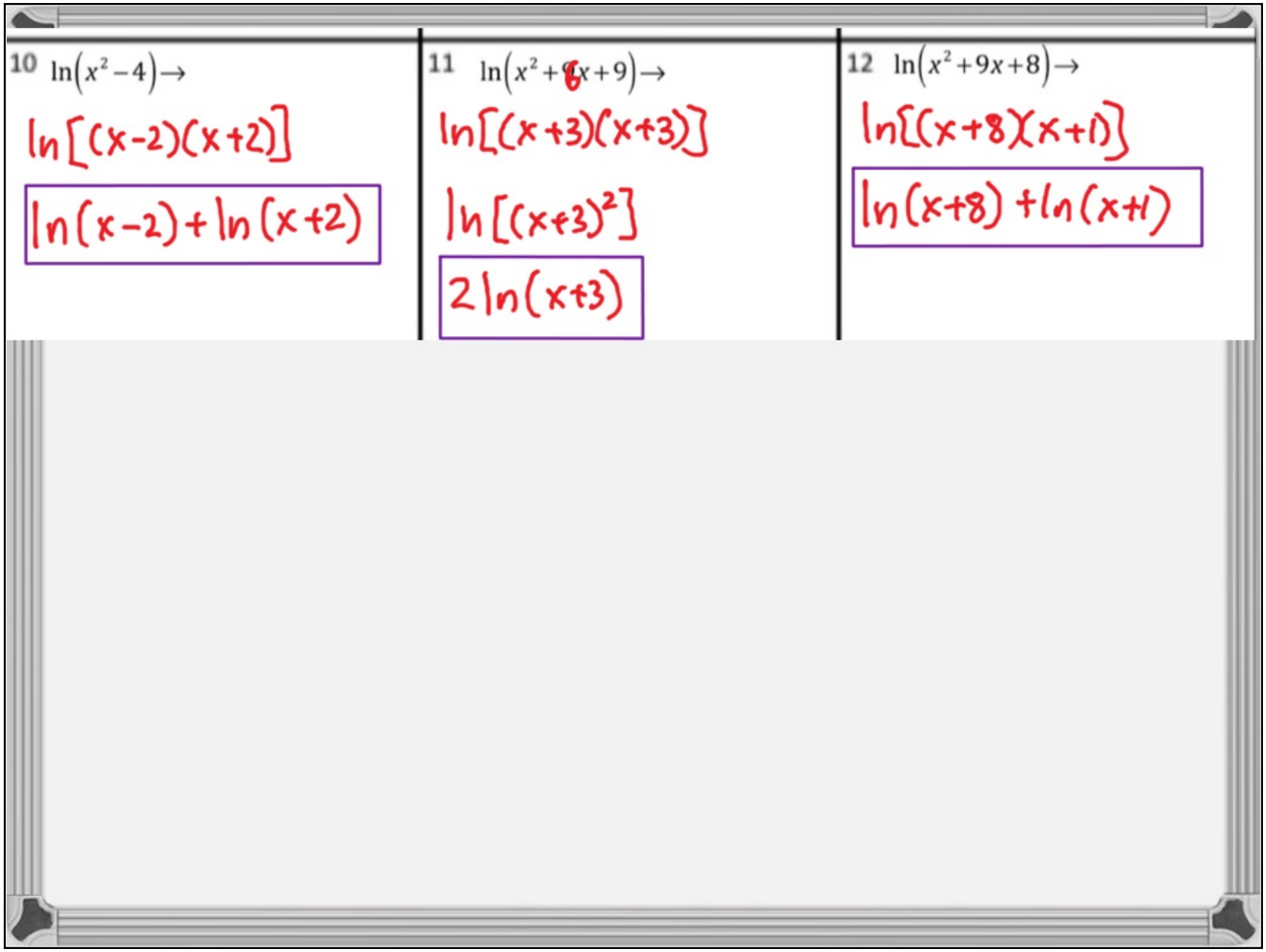
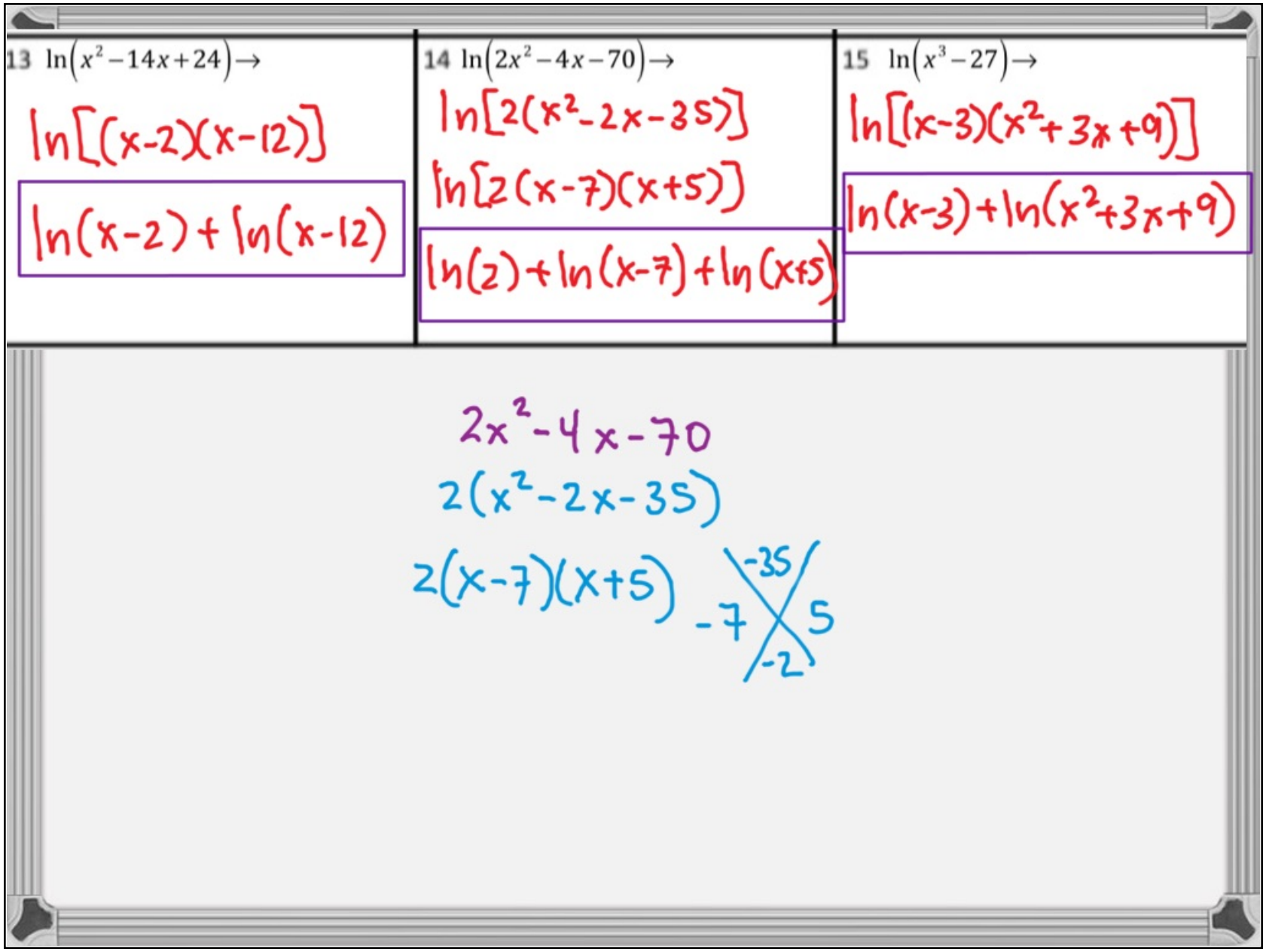

1
$\ln\left(\frac{x}{e}\right)\rightarrow$
$\ln(x)-\ln(e)$
$\ln(x)-1$
2
$\ln\left(\frac{\sqrt{x}}{2e}\right)\rightarrow$
$\ln(\sqrt{x})-\ln(2e)$
$\ln(x^{1/2})-[\ln(2)+\ln(e)]$
$\frac{1}{2}\ln(x)-\ln(2)-1$
3
$\ln\left(\frac{4}{x^2y}\right)\rightarrow$
$\ln 4-\ln(x^2y)$
$\ln 4-[\ln(x^2)+\ln(y)]$
$\ln(4)-2\ln(x)-\ln(y)$


4
$\ln\left(5\sqrt{x}\right)\rightarrow$
$\ln(5)+\ln(\sqrt{x^1})$
$\ln(5)+\ln(x^{1/2})$
$\ln(5)+1/2\ln(x)$
5
$\ln\left(ex^2\right)\rightarrow$
$\ln(e)+\ln(x^2)$
$1+2\ln x$
6
$\ln\left(\frac{x-5}{e}\right)\rightarrow$
$\ln(x-5)-\ln(e)$
$\ln(x-5)-1$


7 $\ln\left(\frac{4}{x^2}\right)\rightarrow$
$\ln(4)-\ln(x^2)$
$\ln(4)-2\ln(x)$
$\ln(2^2)-2\ln(x)$
$2\ln(2)-2\ln(x)$
8 $\ln\left(\frac{4y}{x^2}\right)\rightarrow$
$\ln(4y)-\ln(x^2)$
$\ln(4)+\ln(y)-2\ln(x)$
9 $\ln(x^2-4x)\rightarrow$
$\ln[x(x-4)]$
$\ln(x)+\ln(x-4)$


10 $\ln(x^2-4)\rightarrow$
$\ln[(x-2)(x+2)]$
$\ln(x-2)+\ln(x+2)$
11 $\ln(x^2+6x+9)\rightarrow$
$\ln[(x+3)(x+3)]$
$\ln[(x+3)^2]$
$2\ln(x+3)$
12 $\ln(x^2+9x+8)\rightarrow$
$\ln[(x+8)(x+1)]$
$\ln(x+8)+\ln(x+1)$


13 $\ln(x^2-14x+24)\rightarrow$
$\ln[(x-2)(x-12)]$
$\ln(x-2)+\ln(x-12)$
14 $\ln(2x^2-4x-70)\rightarrow$
$\ln[2(x^2-2x-35)]$
$\ln[2(x-7)(x+5)]$
$\ln(2)+\ln(x-7)+\ln(x+5)$
15 $\ln(x^3-27)\rightarrow$
$\ln[(x-3)(x^2+3x+9)]$
$\ln(x-3)+\ln(x^2+3x+9)$
$2x^2-4x-70$
$2(x^2-2x-35)$
$2(x-7)(x+5)$
-35
-7
5
-2