	Questions	Answers a	Answers b	Answers c
1	$\lim_{x\to 0^-} x e^{\frac{1}{x}} =$	0	$+\infty$	$-\infty$
2	Let $F(x) = \int_e^x \frac{dt}{\ln t}$ where $x \in]1,+\infty[$. F is :	Strictly increasing	Decreasing	not strictly monotonic
3	The inequality $\ln(e^{2x}-2) < x$ is satisfied if $x \in$:	$]-\infty,\ln 2]$	$]\ln\sqrt{2}, \ln 2[$	$]\ln\sqrt{2}, +\infty$
4	An argument of the complex number $Z = \dfrac{Sin\Phi - iCos\Phi}{\left(Cos\frac{\pi}{8} - iSin\frac{\pi}{8}\right)^2}$ is :	$\Phi - \frac{\pi}{4}$	$\Phi - \frac{3\pi}{4}$	$\frac{3\pi}{4} - \Phi$
5	Consider in the complex plane the point M of affix $Z = e^{i\frac{\pi}{3}} + e^{i\frac{\pi}{6}}$. Which of the following is true ?	$Z = e^{i\frac{\pi}{2}}$	$\lvert Z\rvert = 2$	M belongs to the straight line of equation y=x

N	Questions	Answers a	Answers b	Answers c
1	In a plane, there are 10 straight lines, intersecting two by two, in distinct points. The number of these points of intersection is:	60	45	20
2	If Z is a variable complex number such that $\overline{Z} - \frac{1}{Z} = 0$ Then the point M(Z) moves on	The circle with center the origin and radius 1	The line of equation y = x	The abscissas axis
3	f is a function defined over $I =]1,+\infty[$ by $f(x) = x + 1 - \frac{3e^x}{e^x - e}$ and g is its inverse function the equation f(x) = g(x) has (no need to find g(x))	No roots	One unique root	Two roots
4	Given the 2 functions f(x) = 3 sin 2x and h(x) = 3 cos 2x. Whose representative curves are (c) and (c') respectively. The vector that translates (c) to (c') is	Doesn't exist	$\overrightarrow{V} = \frac{-\pi}{4}\vec{i}$	$\overrightarrow{V} = \frac{\pi}{4}\vec{i}$

In the table below , only one of the proposed answers to each question is correct . write the number of each question and the corresponding answer ,and justify.

№	Questions	Answers a	Answers b	Answers c
1	$\int_{\ln 2}^{\ln 3} \frac{1}{1+e^x}\,dx =$	$\ln\left(\frac{-9}{8}\right)$	$\ln\left(\frac{8}{9}\right)$	Ln2
2	$\lim_{x\to-\infty} \ln\left(\frac{e^x+1}{e^x}\right) =$	$+\infty$	$-\infty$	0
3	Let $f(x) = \ln(e^{2x}+2e^{-x})$. The representative curve(C) of f admits at $+\infty$ the asymptote whose equation is :	$y = -x + \ln 2$	$y = 2x$	$y = -2x + \ln 2$
4	$\lim_{x\to+\infty} e^{-x} \ln(1+e^x) =$	0	$+\infty$	1
5	The value of : $e^{\frac{1}{2}\ln 4} + e^{-\ln\frac{1}{4}} - 2\ln\sqrt{e} + 5\ln(\ln e)$ is :	10	5	6
6	$(1-i\sqrt{3})^6 =$	2^6	-2^6	2