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## **National Cipher Challenge Introduction to part A**

June 6th 1833

My dear Professor Babbage,  
it was delightful to meet you at Miss Somerville's soirée last night, and your thoughts on the power of computation to reduce the element of risk in gambling have set my mind racing. The devices you described, your Difference Engine and its younger sibling the Analytic Engine are most remarkable, and I am amazed at the scope of your ambition.

Your comments on my mathematical skills are too kind, but I am certainly unable to resist your proposal that we might work together on these projects.

I must however confess an ulterior motive. You will be aware, possibly more aware than I, of the legacy of my father, Lord Byron. It appears his writings are known to many, if not all, in Society, though my Mother took much care to conceal them from me.

You can imagine my delight upon the discovery of a cypher apparently composed by my father when close to his death, which has come to me by way of his publisher Mr. Moore, who felt unable to include it in the volumes of my father's complete works (to be shortly published) without a note of the cypher's contents. Being a novice in this field of endeavour, he asked if I might feel able to embark on its decipherment. Having read of your interest in this discipline I must confess that I rather encouraged Miss Somerville to affect our introduction, and I most ardently hope that you will agree to assist me in the decipherment of the Byron Enigma, as I have come to know it.

I look forward most earnestly to your reply, in the hope that it will be favourable, and I remain your devoted servant,

Ada Lovelace

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PS. Perhaps it is indiscreet of me to mention it, but the interest shown in your devices by the cabinet minister Lord Pennylaine seemed to be not entirely disinterested. He certainly showed a very great interest in the possibility of using the devices in games of chance, and in that he shares my own curiosity, however I know that he is not entirely welcome in the smarter gaming rooms (rather too many hold a promise of payment from him) and there was something rather too eager in his manner last night.

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## **National Cipher Challenge Introduction to part B**

1833 Diary of Pennylaine - 6th June

To Mary Somerville's last night - met her rather precocious protégé the young Miss Lovelace. One of the brighter stars in the constellation, but with a rather high regard for her own talents. Still she is increasingly to be seen in the smarter gaming houses and makes a welcome change from some of the more tedious players, with their never ending reminders of my credit notes.

Of surprisingly more interest - Babbage was in attendance - Lucasian Professor at Cambridge - typical academic; head in the clouds, always talking to the world but never saying anything of real importance - apart from one ingenious idea. Had previously heard of these infernal plans of his for calculating machines to replace the rooms of computers upon whom we currently rely, but hadn't realised the possible uses of such a device in the gaming parlours. After last night's diversions I begin to see a new way to steer a course out of troubles and, with time and thought, a plan may crystallise around the possibilities outlined by young Miss Lovelace and her admiring retinue.

To Cabinet in the morning - will raise the possibility of support for Babbage and his invention - why not ask the Exchequer to invest in my future fortune? After all I have given the Nation it does not seem too much to expect.