

efficiency of candidates between 15 and 18 years of age, presumably the pick of their respective educational establishments, is simply childish. Any candidate who could not answer such a question without putting the paper should stand no chance of success, and the inclusion of such questions in the examination papers of candidates for such a reward as a University scholarship is simply levelling up in a degree the incapable with the capable. Illustrative of the description of problem last mentioned furnished to the candidates presumably with a view to test their knowledge and comprehension of a combination of proportions and percentages, together with their acquaintance with the meaning of the English language, take the following:—"I can examine 12 sets of papers if properly arranged in the same time as 7 sets not so arranged. I have examined 49 sets when 80 per cent. of the candidates sent up their papers properly arranged." How many could I have examined had they all been so arranged?" Now, if there is any meaning in the English language, this means that the examiner had operated upon 49 sets of papers, and 49 only. Any one with a very moderate acquaintance with arithmetic on reading through this problem will soon perceive that 20 per cent. of 49 is the key of the position—and as soon see that there is no such thing as 20 per cent. of 49—that by no possible combination of numbers can 49 sets of papers be examined in the proportion stated; that even if the use of fractional parts of sets be allowed, even then the feat cannot be achieved by operating on 49 sets of papers only, or 49 sets be examined. The nearest approach to the terms specified would be the examination of 48 sets and portions of 50 sets. To assert that the examination of 48 sets of papers and portions of two others is the same thing as the examination of 49 sets, especially when the time value of the fractional parts is unknown and unascertainable, forcibly reminds one of the yarn about the captain of the whaler who, being consulted by one of his sailors who was slightly indisposed, found on reference to his book of medical instructions that a teaspoonful of No. 15 medicine was the right thing to administer. Unfortunately the contents of No. 15 bottle had all been used, but as an equivalent this arithmetical captain administered a teaspoonful out of No. 7 and No. 8 bottles, with the result that much to his astonishment and dismay the patient died within a quarter of an hour. The conclusion arrived at by the captain of the whaler may not strike one as being so very extraordinary, but we scarcely expect such a logical inference from the captain of a whaler as from a professor of what I believe is termed one of the exact sciences. That the value of the fractional parts of the sets of papers under the conditions stated is an unknown and unascertainable quantity is easy of proof. For instance, the nearest approach to complying with the terms of the problem would be the examination of 39 $\frac{1}{5}$ th sets of papers properly arranged, and 9 $\frac{4}{5}$ th sets of papers not properly arranged. Now, as a basis of operations, suppose a "set" to consist of eight papers and each paper to contain ten questions, and each question to occupy one minute of the examiners' time if the papers are properly arranged, as only seven sets can be examined if not properly arranged in the same time as twelve sets properly arranged, the case stands thus—

Sets.	Papers.	Questions.	Total Questions.	Minutes.
12 ×	8 ×	10 =	960	960
7 ×	8 ×	10 =	560	560

				Loss of time occasioned by misarrangement of papers 400

Consequently there is a loss of 57 $\frac{1}{7}$ th minutes on each set of papers not properly arranged, or 7 $\frac{1}{7}$ th minutes loss on each paper. As 7 sets of papers not properly arranged take 960 minutes to examine, 1 set will occupy 137 $\frac{1}{7}$ th minutes, and four-fifths of that time is 109 $\frac{5}{7}$ th minutes. To examine four-fifths of one of these sets the examiner has to traverse 64 out of the 80 questions and shift 7 out of the 8 papers contained in the set, consequently losing seven-eighths of

57 1-7th minutes, equal to 50 minutes; therefore the account would stand thus:—

	Minutes.
Time occupied in examining 64 questions	64
Loss of time by improper arrangement of papers	50
	—
Total	114
Four-fifths of average time as above	109 5-7ths
	—
Difference	4 2-7ths

If this is not sufficient proof of the absurdity of the problem any of your readers may work it out for themselves with 4, 5, 6, 7, 8, 9, 11, or 13 papers in a set, and they will find the answer vary with each number. Such being the case, how is it possible to give a definite answer without the knowledge or possibility of ascertaining the number of papers in a set? Divested of its impossibility and its absurdity this question is almost as easy of solution as the first example mentioned; with it, it is only a fraud, a delusion, and a farce. It bears on the face of it the same fraud that characterised the statements of Ananias and Sapphira, but more clumsily executed, from which fact Mark Twain would probably deduce the inference that those practising the art now are less proficient than they were some eighteen or nineteen hundred years ago. It is a delusion and a farce, in that it neither compels strict attention on the part of the student to the terms of the question to enable him to understand it, for the simple reason that the more attention he pays to them the less likely he is to arrive at a satisfactory conclusion. Neither is it calculated to exercise his perceptive or any other faculty of use to him in this world or any other place, for the reason that its tendency is to induce him to ignore that which the exercise of his faculties convinces him is right and true. With ordinary care this problem might have been put in a manner that would have been a far more severe test of a candidate's capability of understanding the principle involved in it, without the absurdity or impossibility which now characterises it. It is difficult to understand what the object sought to be obtained in putting the question in this form is, unless it be the examiner's desire to trick a candidate out of his self-possession, and send him plodding and possibly blundering through the remainder of his work, haunted and dogged at every step by the unappeased ghost of 20 per cent. of 49. Possibly, however, it may be from want of time on the examiner's part to consider and weigh the import of the terms of his own problems, or work them out in harmony therewith; if such be the case it might be advisable for examiners to fall back upon some of the old, readymade, and approved problems, such as were familiar to us in our youth, but which, probably, are unknown to the rising generation of to-day; as for example—"If the poker, tongs, and fire-shovel cost 7s. 6d. what will the coals come to?" A close and careful attention to the terms of this problem would enable a candidate to arrive at a rational and satisfactory conclusion—which is more than can be said of the one before quoted.

There is one other fact connected with the recent examination for the University scholarships which must commend itself to the understanding of any reasonable person, and consequently enables one to bestow a few words of approval upon the course adopted; and it affords great pleasure when you conscientiously can do so. An intimation was given to the candidates that a *viva-voce* examination would be held in Greek and German if thought desirable. Now, everybody knows that classical Greek is the language spoken by the ordinary Greek of the present day; not so with the German—classical German having about the same relation to the language of the German of to-day as old English does to modern English. Further, it must be patent to the meanest capacity that the arts, sciences, and literature of the present day are enriched by the works and labors of modern Greek savans and literati in about the proportion of 999 to one of the contributions of modern German ditto,