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British India Steam Navigation Co., Limited,
Bombay.

FOR ORDERS.

*Alfred R. ...
Calculator of Measurement
of Packages with fractions
of an inch.*

27 July 78 R 28/2/78

To

MR. MĀNEKJI KĀVĀSJI TODIVALA.

SIR,

Please put my name down as a Subscriber for copies of your
"Calculator of Measurement of Solid Packages with fractions of an inch."

Yours faithfully,

Name.

Address in full.

1877.

British India Steam Navigation Co., Limited,
Bombay.

MANEKJI KAVASJI TODIVALA,

Shroff,

British India Steam Navigation Company Limited,

(Agents, Messrs. W. NICOLL & Co.)

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PROSPECTUS.

In submitting the prospectus of a Work entitled "*Calculator of Measurement of Solid Packages, with fractions of an inch,*" which the undersigned proposes to publish, he sincerely trusts that the work will meet with the favourable consideration of the public, and particularly of the mercantile community, for whose special purpose it has been compiled.

That a special work which could give *at one glance* the solid measurement of packages and boxes of all and every description, calculated to a *quarter of an inch* to enable the merchant to know the amount of freight he may have to pay on a shipment of a certain number of packages, is a great desideratum and a long-felt want amongst the mercantile community, no one can deny; and in the introduction of such a work, which will give facility to the merchants in this respect in the increasing commerce of India, the author has every hope that his efforts in supplying such a want will be appreciated by merchants, both European and Native.

The author considers it necessary to call the attention of merchants in general to the system now authorized by the Chambers of Commerce in the measurement of packages, bales, &c., and adopted by merchants and ship-owners, that all fractions of an inch are to be taken into calculations.

But these calculations are so tedious and difficult that with the view of avoiding them, and to arrive at quick results a convenient method has been substituted, wherein all fractions are either shifted or taken as a whole number.

However convenient and easy the method may appear to a superficial calculator, it will clearly be seen from the following examples, actually worked out, that the method of shifting or taking the whole for fractions is fraught with considerable loss to the shipper of even a few packages:—

Example I.

A. B. ships 100 packages of merchandise measuring

$$\begin{array}{cccc} \text{ft.} & \text{in.} & \text{ft.} & \text{in.} \\ 3 & 4\frac{1}{2} \times 2 & 3\frac{3}{4} \times 1 & 0\frac{1}{2} = 8 & 0\cdot95 \end{array}$$

there being no book, the ship-owners shift the fractions as

$$\begin{array}{cccc} \text{ft.} & \text{in.} & \text{ft.} & \text{in.} \\ 3 & 4 \times 2 & 4 \times 1 & 1 = 8 & 5 \end{array} \quad \left. \begin{array}{l} \text{in dec.} \\ 4\cdot05 \end{array} \right\} \text{Difference}$$

or take the whole for the fractions

$$\begin{array}{cccc} \text{ft.} & \text{in.} & \text{ft.} & \text{in.} \\ 3 & 5 \times 2 & 4 \times 1 & 1 = 8 & 8 \end{array} \quad \left. \begin{array}{l} \text{in. dec.} \\ 7\cdot05 \end{array} \right\} \text{Difference}$$

hence the difference in one way is 4·05 in., and in the other 7·05 in., but taking the least (4·05 in.), the whole difference in 100 cases is 405 inches = 33 ft. 9 in., and for a ton of 40 cubic feet amounts to £2 10s. 7½d.; or taking the greatest (7·05 in.), the whole difference comes to 705 in. = 58 ft. 9 in., which at £3 10s. 10d. for a ton of 40 cubic feet amounts to £4 8s. 1½d. which A. B. is required to pay for one shipment.

Taking the least (9' 07 inches) the whole comes to 907 in. = 75 ft. 7 in., which at £3 per ton of 40 cubic feet amounts to £5 13s. 4½d.; or taking the greatest (1 ft. 5' 07 in.), the whole difference comes to 1,707 in. = 142 ft. 3 in., which at £3 per ton of 40 cubic feet amounts to £10 13s. 4½d., which A. B. is required to pay more in one shipment.

EUROPEAN FIRMS.

BOMBAY 21st February 1878.

5

place of decimals, and out of a large number of operations which I personally tested I detected one such error* to the extent of a single figure. The effect, however, of such an error on pecuniary transactions conducted in accordance with the results given in this "CALCULATOR" would be so inconsiderable as to be practically nil, even if—to take an extreme case—the same erroneous calculation were quoted with a great number of packages of the same dimensions.

As I have before remarked I can hardly conceive the possibility of errors creeping in to a more serious extent than the 100th part of a prime, and—as far as the 1st place of decimals, Mr. Todiválá's calculations may be accepted as thoroughly correct and trustworthy.

If published I have no doubt this Work will prove of incalculable service to Merchants and Shippers, and I cordially commend it to their favourable notice as a Book of accurate and reliable information.

J. T. HATHORNTHWAITE, M.A.,

Professor of Mathematics, Elphinstone College, Bombay; late Scholar and Mathematical Prizeman, St. John's College, Cambridge.

Bombay, 4th September 1876.

* The errors referred to in this certificate are of the following nature, vide Professor Hathornthwaite's letter to me dated 23rd August 1876—

Instead of 4 ft. 7'8588 + in. I have taken 4 ft. 7'86 in.

M. K. T.

I have examined specimen copy of Mr. Mánekji Kávasji Todiválá's "CALCULATOR OF MEASUREMENT OF SOLID CASES," and tested the correctness of the Work.

The method is good, and the principle on which the Tables are prepared is such that it will not allow an error to pass undetected after every tenth item.

The Book will evidently supply a long-felt want in Commercial circles, and prove a considerable saving pecuniarily.

I trust Mr. Todiválá will meet with every support from merchants and others interested, so as to enable him to publish his valuable work, which is the result of many years' labour.

The Author should explain his method in the Preface of "THE CALCULATOR" so as to satisfy Mathematicians that the calculations are prepared in accordance with commercial usage.

The result of my examination is highly satisfactory, and I trust the CALCULATOR will find a place in every Mercantile Counting House.

D. McLAUCHLAN SLATER,

Actuary.

Fellow of the Institute of Actuaries of Great Britain and Ireland.

9, Elphinstone Circle,

Bombay, 9th October 1876.

Your most obedient servant,

MÁNEKJI KÁVASJI TODIVÁLÁ,

Shroff,

British India Steam Navigation Co., Limited,

Bombay.

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If the patronage offered to this work should be sufficient to secure the author from loss, he will undertake to publish the book; but should he not be successful in obtaining enough Subscribers to pay the printing expenses, he will have to abandon the undertaking, as he cannot afford to take the risk upon himself. He begs therefore to request that intending Subscribers will do him the favour to fill up the blank letter enclosed and to forward it to his address.

I am,

Yours respectfully,

MÁNEKJI KÁVASJI TODIVÁLÁ.

Shroff,

British India Steam Navigation Company, Ltd.

(Agents—Messrs. W. Nicot & Co.,)

Bombay.

CERTIFICATES OF CORRECTNESS.

I have examined a printed specimen copy of Mr. Mánekji Kávasji Todiválá's "CALCULATOR OF MEASUREMENT OF SOLID CASES," and have also looked through part of the Work in manuscript, personally testing here and there the correctness of the operations. I am glad to be able to state that the results of my examination have been highly satisfactory, and that I can confidently recommend the Work to the Commercial world as a reliable Book of Reference on the subject of which it treats. As a Mathematician I protest against the use of the word "inch" instead of "prime" for the 12th part of a cubic foot, but as I am informed that the term is universally used by merchants in this conventional sense, no inconvenience will on that account be likely to arise. Mr. Todiválá's method is correct; his book is being compiled with immense labour; as the work proceeds the operations are being carefully tested; he further assures me that this rigorous course of testing will be repeated with all the proof-sheets before the final publication, that so any trifling numerical errors which may remain may be exhaustively eliminated.

From the very nature of the successive operations I consider errors in feet and primes to the 1st place of decimals practically impossible, as they could not escape immediate detection on a comparison being made with the preceding or succeeding results; but in a work of this magnitude it cannot but happen that the strictest vigilance will fail to guard against a casual error in the 2nd

CERTIFICATES FROM THE CHAMBERS OF COMMERCE IN INDIA.

THE CHAMBER OF COMMERCE,
BOMBAY, 24TH NOVEMBER 1876.

SIR,
The Specimen Pamphlet of your "Calculator of Measurement of Solid Cases" has been submitted to the Committee of the Chamber of Commerce, together with the letters of Mr. Hathornthwaite, Professor of Mathematics, Elphinstone College, and of Mr. D. McLauchlan Slater, Actuary, certifying that they have tested the correctness of the work, and that their examination of it has been highly satisfactory.

The Committee direct me to inform you that they think most favourably of your Book; and they have much pleasure in recommending it to Merchants as a work which they will find to be of great utility.

I remain, Sir,

Yours faithfully,

J. GORDON.

Secretary.

THE CHAMBER OF COMMERCE,
MADRAS, 15TH DECEMBER 1876.

SIR,

I have laid before the Chamber your letter of the 4th instant and the specimen sheets of the Calculator of Measurements that you have in the Press, and I am desired to inform you that this Chamber consider the proposed Calculator should prove useful to the public, and they hope, therefore, it will meet with the success it deserves.

I remain, Sir,

Yours faithfully,

C. A. LAWSON.

Secretary.

BENGAL CHAMBER OF COMMERCE,
CALCUTTA, 21ST DECEMBER 1876.

SIR,

I am in receipt of the specimen copy of your "Calculator of Measurement of Solid Cases," which accompanied your letter of the 4th instant, and am much obliged for it.

Your proposed publication will, I think, prove of advantage to the mercantile public, by whom I hope it will be largely patronized.

If you have not already done so, I recommend your sending a specimen copy to each of the firms in Calcutta, to enable them to judge for themselves of the probable usefulness of your work, to which this Chamber will be glad to subscribe.

Yours faithfully,

H. W. I. WOOD.

Secretary.

(SPECIMEN PAGE.)

The solid contents of packages whose least dimensions are 1 Foot 4 1/2 Inches.

Ft. In.	Ft. In.	Ft. In.	Ft. In.	Length.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
1 4 1/2	1 4 1/2	1 5	1 5 1/2		1 5 1/2	1 5 1/2	1 6	1 6 1/2	1 6 1/2
Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.
2 7 19	2 8 14	2 9 11	2 10 09	1 4 1/2	2 11 09	3 0 10	3 1 12	3 2 16	3 3 21
2 7 66	2 8 62	2 9 60	2 10 58	1 4 1/2	2 11 59	3 0 60	3 1 64	3 2 68	3 3 74
2 8 14	2 9 10	2 10 08	2 11 06	1 5	3 0 09	3 1 11	3 2 15	3 3 20	3 4 27
2 8 61	2 9 58	2 10 56	2 11 54	1 5 1/2	3 1 09	3 2 13	3 3 17	3 4 22	3 5 29
2 9 08	2 10 06	2 11 04	2 12 02	1 6	3 1 59	3 3 03	3 4 07	3 5 12	3 6 19
2 9 55	2 10 54	2 11 52	2 12 50	1 6 1/2	3 2 09	3 3 13	3 4 17	3 5 22	3 6 29
2 10 03	2 11 02	2 12 00	2 12 58	1 7	3 2 60	3 3 64	3 4 68	3 5 73	3 6 80
2 10 50	2 11 48	2 12 46	2 13 44	1 7 1/2	3 3 10	3 4 14	3 5 18	3 6 23	3 7 30
2 10 97	2 11 95	2 12 93	2 13 91	1 8	3 3 60	3 4 64	3 5 68	3 6 73	3 7 80
2 11 44	2 12 42	2 13 40	2 14 38	1 8 1/2	3 4 10	3 5 14	3 6 18	3 7 23	3 8 30
2 11 92	2 12 90	2 13 88	2 14 86	1 9	3 4 60	3 5 64	3 6 68	3 7 73	3 8 80
3 0 39	3 1 37	3 2 35	3 3 33	1 9 1/2	3 5 10	3 6 14	3 7 18	3 8 23	3 9 30
3 0 86	3 1 84	3 2 82	3 3 80	1 10	3 5 60	3 6 64	3 7 68	3 8 73	3 9 80
3 1 33	3 2 31	3 3 29	3 4 27	1 10 1/2	3 6 10	3 7 14	3 8 18	3 9 23	4 0 30
3 1 81	3 2 79	3 3 77	3 4 75	1 11	3 6 60	3 7 64	3 8 68	3 9 73	4 0 80
3 2 28	3 3 26	3 4 24	3 5 22	1 11 1/2	3 7 11	3 8 15	3 9 19	4 0 24	4 1 30
3 2 75	3 3 73	3 4 71	3 5 69	1 12	3 7 61	3 8 65	3 9 69	4 0 74	4 1 80
3 3 23	3 4 21	3 5 19	3 6 17	1 12 1/2	3 8 11	3 9 15	4 0 19	4 1 24	4 2 30
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3 6 06	3 7 04	3 8 02	3 9 00	2 2 1/2	4 1 11	4 2 15	4 3 19	4 4 24	4 5 30
3 6 53	3 7 51	3 8 49	3 9 47	2 3	4 1 61	4 2 65	4 3 69	4 4 74	4 5 80
3 7 01	3 7 99	3 8 97	3 9 95	2 3 1/2	4 2 11	4 3 15	4 4 19	4 5 24	4 6 30
3 7 48	3 8 46	3 9 44	4 0 42	2 4	4 2 61	4 3 65	4 4 69	4 5 74	4 6 80
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4 0 21	4 3 19	4 4 17	4 5 15	2 9	4 7 61	4 8 65	4 9 69	5 0 74	5 1 80
4 0 68	4 3 66	4 4 64	4 5 62	2 9 1/2	4 8 11	4 9 15	5 0 19	5 1 24	5 2 30
4 1 15	4 4 13	4 5 11	4 6 09	3 0	4 8 61	4 9 65	5 0 69	5 1 74	5 2 80
4 1 62	4 4 60	4 5 58	4 6 56	3 0 1/2	4 9 11	5 0 15	5 1 19	5 2 24	5 3 30
4 2 10	4 5 08	4 6 06	4 7 04	3 1	4 9 61	5 0 65	5 1 69	5 2 74	5 3 80
4 2 57	4 5 55	4 6 53	4 7 51	3 1 1/2	5 0 11	5 1 15	5 2 19	5 3 24	5 4 30
4 3 04	4 6 02	4 7 00	4 7 98	3 2	5 0 61	5 1 65	5 2 69	5 3 74	5 4 80
4 3 51	4 6 49	4 7 47	4 8 45	3 2 1/2	5 1 11	5 2 15	5 3 19	5 4 24	5 5 30
4 3 98	4 6 96	4 7 94	4 8 92	3 3	5 1 61	5 2 65	5 3 69	5 4 74	5 5 80
4 4 46	4 7 44	4 8 42	4 9 40	3 3 1/2	5 2 11	5 3 15	5 4 19	5 5 24	5 6 30
4 4 93	4 7 91	4 8 89	4 9 87	3 4	5 2 61	5 3 65	5 4 69	5 5 74	5 6 80
4 5 41	4 8 39	4 9 37	5 0 35	3 4 1/2	5 3 11	5 4 15	5 5 19	5 6 24	5 7 30
4 5 88	4 8 86	4 9 84	5 0 82	3 5	5 3 61	5 4 65	5 5 69	5 6 74	5 7 80
4 6 35	4 9 33	5 0 31	5 1 29	3 5 1/2	5 4 11	5 5 15	5 6 19	5 7 24	5 8 30
4 6 82	4 9 80	5 0 78	5 1 76	3 6	5 4 61	5 5 65	5 6 69	5 7 74	5 8 80
4 7 30	5 0 28	5 1 26	5 2 24	3 6 1/2	5 5 11	5 6 15	5 7 19	5 8 24	5 9 30
4 7 77	5 0 75	5 1 73	5 2 71	3 7	5 5 61	5 6 65	5 7 69	5 8 74	5 9 80
4 8 24	5 1 22	5 2 20	5 3 18	3 7 1/2	5 6 11	5 7 15	5 8 19	5 9 24	6 0 30
4 8 71	5 1 69	5 2 67	5 3 65	3 8	5 6 61	5 7 65	5 8 69	5 9 74	6 0 80
4 9 19	5 2 17	5 3 15	5 4 13	3 8 1/2	5 7 11	5 8 15	5 9 19	6 0 24	6 1 30
4 9 66	5 2 64	5 3 62	5 4 60	3 9	5 7 61	5 8 65	5 9 69	6 0 74	6 1 80
4 10 13	5 3 11	5 4 09	5 5 07	3 9 1/2	5 8 11	5 9 15	6 0 19	6 1 24	6 2 30
4 10 60	5 3 58	5 4 56	5 5 54	4 0	5 8 61	5 9 65	6 0 69	6 1 74	6 2 80
4 11 08	5 4 06	5 5 04	5 6 02	4 0 1/2	5 9 11	6 0 15	6 1 19	6 2 24	6 3 30
4 11 55	5 4 53	5 5 51	5 6 49	4 1	5 9 61	6 0 65	6 1 69	6 2 74	6 3 80
5 0 02	5 5 00	5 6 00	5 7 00	4 1 1/2	6 0 11	6 1 15	6 2 19	6 3 24	6 4 30
5 0 50	5 5 48	5 6 48	5 7 48	4 2	6 0 61	6 1 65	6 2 69	6 3 74	6 4 80
5 0 97	5 5 95	5 6 95	5 7 95	4 2 1/2	6 1 11	6 2 15	6 3 19	6 4 24	6 5 30
5 1 44	5 6 42	5 7 42	5 8 42	4 3	6 1 61	6 2 65	6 3 69	6 4 74	6 5 80

(The breadth or the second dimension will be increased by a quarter of an inch to 2 Feet 10 1/2 Inches)

BOMBAY 21st February 1878.

To

The Secretary
Revenue, Financial & General Dept.
Madras.

SIR,

I have the honor to submit herewith a copy of the prospectus of a work, entitled "CALCULATOR OF MEASUREMENT OF PACKAGES, WITH FRACTIONS OF AN INCH," which I propose to publish should sufficient support be forthcoming.

The work has been compiled specially with the view of affording a convenient and at the same time an equitable method of calculating the cubic contents of packages to within a quarter of an inch. The present system of assuming a whole inch instead of fractions, when they arise in calculations for ascertaining the amount of freight, is not only lax but very detrimental to shippers, and I therefore hope that the proposed undertaking will meet a want long felt by the mercantile community, as well as by such of the Government departments as have to do with freights on stores to and from Europe and other Indian Ports.

The instances adduced in the prospectus satisfactorily establish the increase in the amount of freight which shippers have to pay under the existing practice, and I have the utmost confidence in stating that, were this system adopted, it would effect a large annual saving to Government. I venture to submit a few copies of the prospectus of the work for inspection, in the hope that you will concur with others who have pronounced it to be of undoubted practical utility.

The expense of printing and publishing the work are extremely heavy, and more than I can afford out of my limited means. I have therefore resolved to defer putting the work in type, until I have secured a sufficient number of subscribers to ensure me from loss: and with that view I have circulated my proposal amongst the mercantile community of Bombay, Calcutta and Madras, and I am thankful to say that I have already procured promises of liberal support from the P. & O. Company, the B. I. S. N. Company and almost every firm of any standing in these places. Notwithstanding this, the proceeds of these copies would not cover more than half my outlay and I therefore beg the favor of your patronage. I shall esteem it a great favor if you will be good enough to inform me, at your convenience, the extent of the support which you are willing to accord me.

Begging your special reference to the certificate embodied in the prospectus, as to the correctness and utility of the work, from such influential bodies as the Calcutta, Bombay and Madras Chambers of Commerce, and also the list of subscribers promised up to 31st January, 1878,

I have the honor to be,

Sir,

Your most obedient servant,

MANEKJI KAVASJI TODIVALA,
Shroff,

British India Steam Navigation Co., Limited,
Bombay.

The solid contents of packages whose least dimensions are 1 Foot 4 Inches.

Ft. In.	Ft. In.	Ft. In.	Ft. In.	Length.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
1 4	1 4	1 5	1 5		1 5	1 5	1 6	1 6	1 6
Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. In.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.	Ft. in. dec.
5 1 91	5 2 85	5 3 79	5 4 73	2 81	5 5 67	5 6 60	5 7 54	5 8 48	5 9 42
5 2 39	5 3 33	5 4 28	5 5 22	3 09	5 6 17	5 7 11	5 8 06	5 9 00	5 9 95
5 2 86	5 3 81	5 4 76	5 5 72	3 36	5 6 67	5 7 62	5 8 57	5 9 53	5 10 48
5 3 33	5 4 29	5 5 25	5 6 21	3 64	5 7 17	5 8 13	5 9 09	5 10 05	5 11 01
5 3 80	5 4 77	5 5 74	5 6 70	3 91	5 7 67	5 8 64	5 9 60	5 10 57	5 11 54
5 4 28	5 5 25	5 6 22	5 7 20	4 19	5 8 17	5 9 15	5 10 12	5 11 09	6 0 07
5 4 75	5 5 73	5 6 71	5 7 69	4 47	5 8 67	5 9 65	5 10 64	5 11 62	6 0 60
5 5 22	5 6 21	5 7 20	5 8 19	4 75	5 9 17	5 10 16	5 11 15	6 0 14	6 1 13
5 5 69	5 6 69	5 7 69	5 8 68	5 03	5 9 68	5 10 67	5 11 67	6 0 66	6 1 66
5 6 17	5 7 17	5 8 17	5 9 17	5 31	5 10 18	5 11 18	6 0 18	6 1 19	6 2 19
5 6 64	5 7 65	5 8 66	5 9 67	5 59	5 10 68	5 11 69	6 0 70	6 1 71	6 2 72
5 7 11	5 8 13	5 9 15	5 10 16	5 87	5 11 18	6 0 20	6 1 21	6 2 23	6 3 25
5 7 58	5 8 61	5 9 63	5 10 66	6 15	5 11 68	6 0 71	6 1 73	6 2 75	6 3 78
5 8 06	5 9 09	5 10 12	5 11 15	6 43	6 0 18	6 1 21	6 2 25	6 3 28	6 4 31
5 8 53	5 9 57	5 10 61	5 11 65	6 71	6 0 68	6 1 72	6 2 76	6 3 80	6 4 84
5 9 00	5 10 05	5 11 09	6 0 14	6 99	6 1 19	6 2 23	6 3 28	6 4 32	6 5 37
5 9 48	5 10 53	5 11 58	6 0 63	7 27	6 1 69	6 2 74	6 3 79	6 4 84	6 5 90
5 9 95	5 11 01	6 0 07	6 1 13	7 55	6 2 19	6 3 25	6 4 31	6 5 37	6 6 43
5 10 42	5 11 49	6 0 55	6 1 62	7 83	6 2 69	6 3 76	6 4 82	6 5 89	6 6 96
5 10 89	5 11 97	6 1 04	6 2 12	8 11	6 3 19	6 4 26	6 5 34	6 6 41	6 7 49
5 11 37	6 0 45	6 1 53	6 2 61	8 39	6 3 69	6 4 77	6 5 85	6 6 94	6 8 02
5 11 84	6 0 93	6 2 02	6 3 10	8 67	6 4 19	6 5 28	6 6 37	6 7 46	6 8 55
6 0 31	6 1 41	6 2 50	6 3 60	8 95	6 4 69	6 5 79	6 6 89	6 7 98	6 9 08
6 0 78	6 1 89	6 2 99	6 4 09	9 23	6 5 20	6 6 30	6 7 40	6 8 50	6 9 61
6 1 26	6 2 37	6 3 48	6 4 59	9 51	6 5 70	6 6 81	6 7 92	6 9 03	7 0 14
6 1 73	6 2 85	6 3 96	6 5 08	9 79	6 6 20	6 7 32	6 8 43	6 9 55	7 1 07
6 2 20	6 3 33	6 4 45	6 5 58	10 07	6 6 70	6 7 82	6 8 95	7 0 07	7 1 20
6 2 67	6 3 81	6 4 94	6 6 07	10 35	6 7 20	6 8 33	6 9 46	7 0 60	7 1 73
6 3 15	6 4 29	6 5 42	6 6 56	10 63	6 7 70	6 8 84	6 9 98	7 1 12	7 2 26
6 3 62	6 4 77	6 5 91	6 7 06	10 91	6 8 20	6 9 35	7 0 49	7 1 64	7 2 79
6 4 09	6 5 25	6 6 40	6 7 55	11 19	6 8 70	6 9 86	7 1 01	7 2 16	7 3 32
6 4 57	6 5 73	6 6 89	6 8 05	11 47	6 9 21	7 0 37	7 1 53	7 3 09	7 4 25
6 5 04	6 6 21	6 7 37	6 8 54	11 75	6 9 71	7 0 87	7 2 04	7 3 21	7 4 38
6 5 51	6 6 69	6 7 86	6 9 03	12 03	7 0 21	7 1 38	7 2 56	7 4 13	7 5 31
6 5 98	6 7 16	6 8 35	6 9 53	12 31	7 0 71	7 1 89	7 3 07	7 4 25	7 5 44
6 6 46	6 7 64	6 8 83	7 0 02	12 59	7 1 21	7 2 40	7 3 59	7 5 18	7 6 38
6 6 93	6 8 12	6 9 32	7 0 52	13 27	7 1 71	7 2 91	7 4 10	7 5 30	7 6 51
6 7 40	6 8 60	6 9 81	7 1 01	13 55	7 2 21	7 3 42	7 4 62	7 5 83	7 7 04
6 7 87	6 9 08	7 0 29	7 1 50	14 23	7 2 72	7 3 93	7 5 13	7 6 34	7 7 55
6 8 35	6 9 56	7 0 78	7 2 00	14 51	7 3 22	7 4 43	7 5 64	7 6 85	7 8 06
6 8 82	7 0 04	7 1 27	7 2 49	15 19	7 3 72	7 4 94	7 6 15	7 7 36	7 8 58
6 9 29	7 0 52	7 1 76	7 2 99	15 47	7 4 22	7 5 45	7 6 68	7 7 91	7 9 14
6 9 76	7 1 00	7 2 24	7 3 48	16 15	7 4 73	7 5 97	7 7 20	7 8 43	7 9 67
7 0 24	7 1 48	7 2 73	7 3 98	16 43	7 5 23	7 6 50	7 7 78	7 9 05	8 0 33
7 0 71	7 1 96	7 3 22	7 4 47	17 11	7 5 73	7 7 01	7 8 29	7 9 57	8 1 26
7 1 18	7 2 44	7 3 70	7 4 96	17 39	7 6 23	7 7 52	7 8 81	8 0 10	8 1 39
7 1 66	7 2 92	7 4 19	7 5 45	18 07	7 6 73	7 8 03	7 9 32	8 0 62	8 1 92
7 2 13	7 3 40	7 4 68	7 5 95	18 35	7 7 23	7 8 54	8 0 24	8 1 54	8 3 25
7 2 60	7 3 88	7 5 16	7 6 43	19 03	7 7 73	7 9 04	8 0 35	8 1 66	8 2 98
7 3 07	7 4 36	7 5 65	7 6 94	19 31	7 8 23	7 9 55	8 1 27	8 2 58	8 3 90
7 3 55	7 5 24	7 6 54	7 7 84	20 00	7 8 73	8 0 06	8 1 39	8 2 71	8 4 04
7 4 02	7 6 12	7 7 43	7 8 74	20 28	7 9 24	8 0 57	8 1 90	8 3 23	8 4 57
7 4 49	7 7 00	7 8 31	7 9 62	20 56	7 9 74	8 1 08	8 2 42	8 3 76	8 5 10
7 4 96	7 7 48	7 8 79	8 0 10	21 24	8 0 24	8 1 59	8 3 03	8 4 38	8 5 73
7 5 43	7 8 36	7 9 67	8 0 98	21 52	8 0 74	8 2 09	8 3 45	8 4 80	8 6 16
7 5 90	7 9 24	8 0 55	8 1 86	22 20	8 1 24	8 2 60	8 4 06	8 5 42	8 6 81
7 6 37	8 0 12	8 1 43	8 2 74	22 48	8 1 74	8 3 11	8 4 48	8 5 85	8 7 24
7 6 84	8 1 00	8 2 31	8 3 62	23 16	8 2 24	8 3 62	8 5 00	8 6 38	8 7 78
7 7 31	8 1 88	8 3 19	8 4 50	23 44	8 2 74	8 4 12	8 5 50	8 6 88	8 8 29
7 7 78	8 2 76	8 4 07	8 5 38	24 12	8 3 24	8 4 62	8 6 00	8 7 40	8 9 16
7 8 25	8 3 64	8 4 95	8 6 26	24 40	8 3 74	8 5 12	8 6 50	8 7 90	8 9 66
7 8 72	8 4 52	8 5 83	8 7 14	25 08	8 4 24	8 5 62	8 7 00	8 8 40	9 0 16
7 9 19	8 5 40	8 6 71	8 8 05	25 36	8 4 74	8 6 12	8 7 50	8 8 90	9 0 66
7 9 66	8 6 28	8 7 59	8 8 98	26 04	8 5 24	8 6 62	8 8 00	8 9 40	9 1 16
8 0 13	8 7 16	8 8 47	8 9 91	26 32	8 5 74	8 7 12	8 8 50	9 0 30	9 1 66
8 0 60	8 8 04	8 9 35	9 0 89	27 00	8 6 24	8 7 62	8 9 00	9 0 80	9 2 16
8 1 07	8 8 92	9 0 23	9 1 83	27 28	8 6 74	8 8 12	8 9 50	9 1 30	9 2 66
8 1 55	8 9 80	9 1 11	9 2 71	27 56	8 7 24	8 8 62	9 0 00	9 1 80	9 3 16
8 2 02	9 0 68	9 1 99	9 3 59	28 24	8 7 74	8 9 12	9 0 50	9 2 30	9 3 66
8 2 49	9 1 56	9 2 87	9 4 49	28 52	8 8 24	8 9 62	9 1 00	9 2 80	9 4 16
8 2 96	9 2 44	9 3 75	9 5 41	29 20	8 8 74	9 0 12	9 1 50	9 3 30	9 4 66
8 3 44	9 3 32	9 4 63	9 6 29	29 48	8 9 24	9 0 62	9 2 00	9 3 80	9 5 16
8 3 91	9 4 20	9 5 51	9 7 17	30 16	8 9 74	9 1 12	9 2 50	9 4 30	9 5 66
8 4 38	9 5 08	9 6 39	9 8 05	30 44	9 0 24	9 1 62	9 3 00	9 4 80	9 6 16
8 4 85	9 5 96	9 7 27	9 8 93	31 12	9 0 74	9 2 12	9 3 50	9 5 30	9 6 66
8 5 33	9 6 84	9 8 15	9 9 81	31 40	9 1 24	9 2 62	9 4 00	9 5 80	9 7 16
8 5 80	9 7 72	9 9 03	10 0 69	32 08	9 1 74	9 3 12	9 4 50	9 6 30	9 7 66
8 6 27	9 8 60	9 9 91	10 1 57	32 36	9 2 24	9 3 62	9 5 00	9 6 80	9 8 16
8 6 75	9 9 48	10 0 83	10 2 45	33 04	9 2 74	9 4 12	9 5 50	9 7 30	9 8 66
8 7 22	10 0 36	10 1 71	10 3 33	33 32	9 3 24	9 4 62	9 6 00	9 7 80	9 9 16
8 7 70	10 1 24	10 2 59	10 4 21	34 00	9 3 74	9 5 12	9 6 50	9 8 30	9 9 66
8 8 16	10 2 12	10 3 47	10 5 09	34 28	9 4 24	9 5 62	9 7 00	9 8 80	10 0 16
8 8 64	10 3 00	10 4 35	10 6 01	34 56	9 4 74	9 6 12	9 7 50	9 9 30	10 0 66
8 9 11	10 3 88	10 5 23	10 6 85	35 24	9 5 24	9 6 62	9 8 00	9 9 80	10 1 16
8 9 59	10 4 76	10 6 11	10 7 73	35 52	9 5 74	9 7 12	9 8 50	10 0 30	10 1 66
9 0 06	10 5 64	10 7 00	10 8 61	36 20	9 6 24	9 7 62	9 9 00	10 0 80	10 2 16
9 0 54	10 6 52	10 8 37	10 9 99	36 48	9 6 74	9 8 12	9 9 50	10 1 30	10 2 66
9 1 01	10 7 40	10 9 25	11 0 87	37 16	9 7 24	9 8 62	10 0 00	10 1 80	10 3 16
9 1 49	10 8 28	10 10 13	11 1 75	37 44	9 7 74	9 9 12	10 0 50	10 2 30	10 3 66
9 1 96	10 9 16	11 0 51	11 2 13	38 12	9 8 24	9 9 62	10 1 00	10 2 80	10 4 16
9 2 44	11 0 04	11 1 39	11 3 01	38 40	9 8 74	10 0 12	10 1 50	10 3 30	10 4 66
9 2 91	11 0 92	11 2 27	11 3 89	39 08	9 9 24	10 0 62	10 2 00	10 3 80	10 5 16
9 3 39	11 1 80	11 3 15	11 4 77	39 36	9 9 74	10 1 12	10 2 50	10 4 30	10 5 66
9 3 86	11 2 68	11 4 03	11 5 65	40 04	10 0 24	10 1 62	10 3 00	10 4 80	10 6 16
9 4 34	11 3 56	11 5 23	11 6 85	40 32	10 0 74	10 2 12	10 3 50	10 5 30	10 6 66
9 4 81	11 4 44	11 6 11	11 7 73	41 00	10 1 24	10 2 62	10 4 00	10 5 80	10 7 16
9 5 29	11 5 32	11 7 03	11 8 65	41 28	10 1 74	10 3 12	10 4 50	10 6 30	10 7 66
9 5 76	11 6 20	11 7 51	11 9 13	41 56	10 2 24	10 3 62	10 5 00	10 6 80	10 8 16
9 6 24	11 7 08	11 8 39	12 0 01	42 24	10 2 74	10 4 12	10 5 50	10 7 30	10 8 66
9 6 71	11 7 96	11 9 27	12 0 89	42 52	10 3 24	10 4 62	10 6 00	10 7 80	10 9 16
9 7 19	11 8 84	12 0 15	12 1 77	43 20	10 3 74	10 5 12	10 6 50	10 8 30	10 9 66
9 7 66	11 9 72	12 1 03	12 2 65	43 48	10 4 24	10 5 62	10 7 00	10 8 80	11 0 16
9 8 14	12 0 60	12 1 31	12 3 53	44 16	10 4 74	10 6 12	10 7 50	10 9 30	11 0 66

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1. To Grandfather Bavaage des, Maron 1. March 18