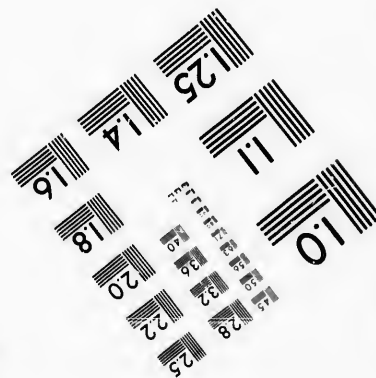
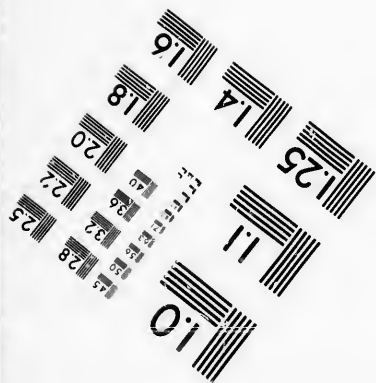
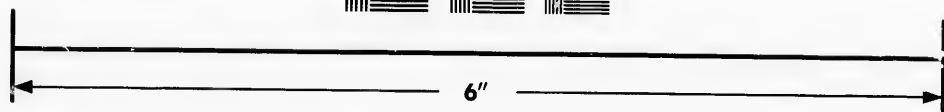
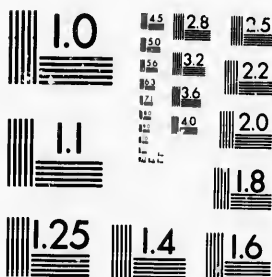


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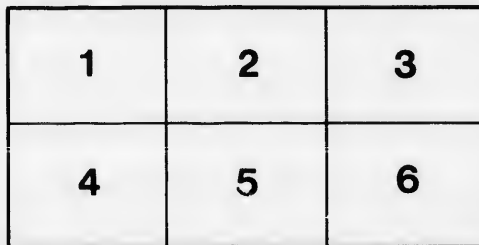
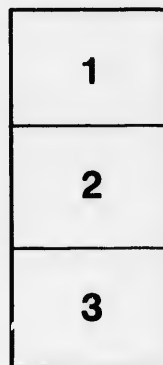
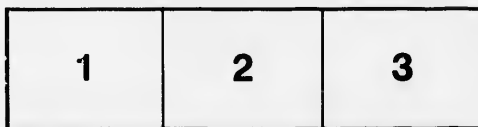
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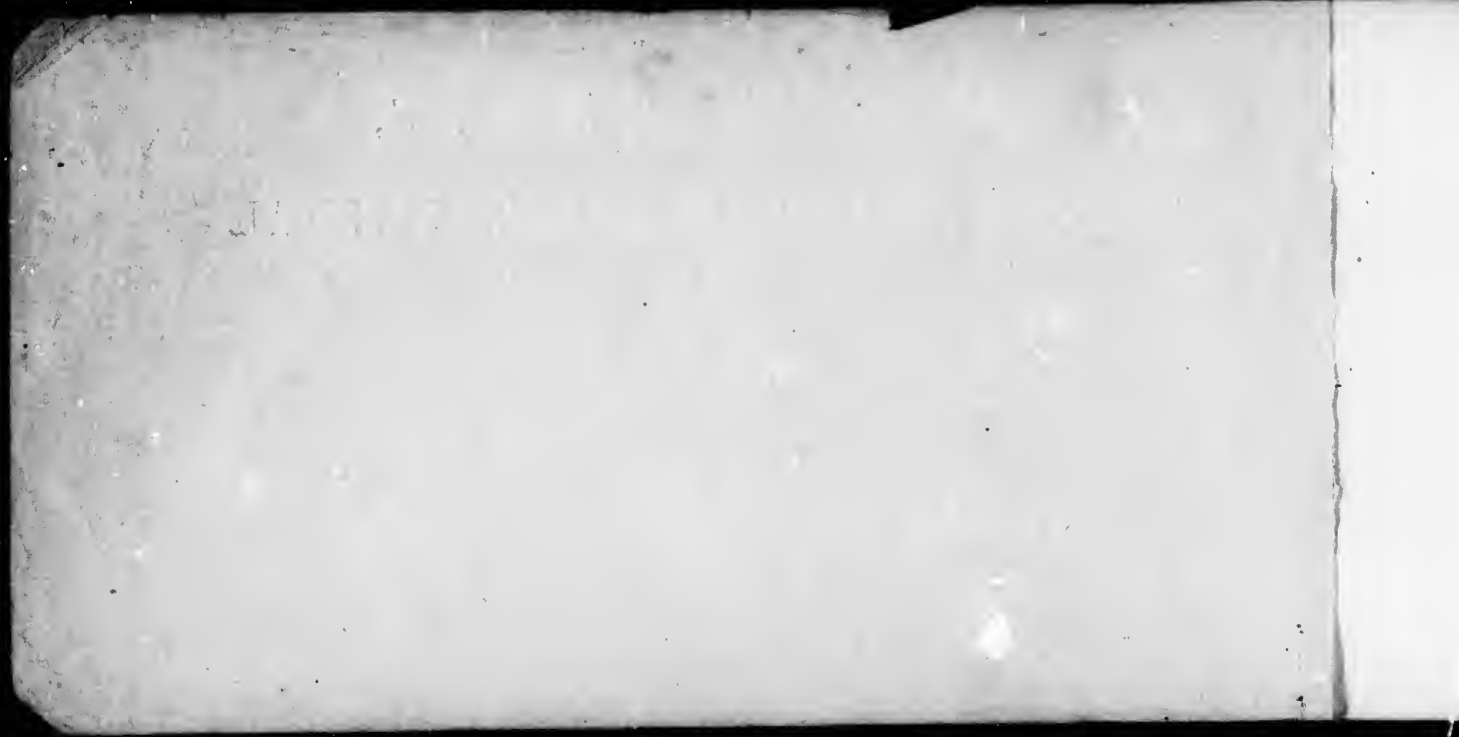
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TABLES OF MEASURES,
ENGLISH, OLD FRENCH, AND METRICAL.

Montreal:
B. DAWSON & SON, 23 GREAT SAINT JAMES STREET.

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W96



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T A B L E S
FOR REDUCING
ENGLISH, OLD FRENCH, AND METRICAL
MEASURES.

BY ARTHUR WURTELE,
PROVINCIAL LAND SURVEYOR AND CIVIL ENGINEER.

Montreal:
PUBLISHED BY B. DAWSON & SON, 23 GREAT SAINT JAMES STREET.

1861.

Entered, according to the Act of the Provincial Parliament, in the year one thousand eight hundred and sixty one, by Benjamin Dawson & Son, in the office of the Registrar of the Province of Canada.

PRINTED BY J. C. BECKET.

P R E F A C E .

These tables have been prepared, in the hope that they may be useful in diminishing the labour and trouble occasioned by the use of two systems of measures in Canada, of which I have had some experience as a Surveyor and Civil Engineer.

Among unprofessional persons there is a very general want of information with respect to the relative value of our two standards, the old French system and the English, and no means of acquiring that information, except in old almanacs, not to be found, and in expensive works generally inaccessible.

Tables for reducing the metrical system, now established in France, Belgium, and Holland, have been introduced for the purpose of facilitating the use of many valuable tables and formulas in French scientific works. There is another reason for these tables, in the probability that the metrical system will, at some future period, be adopted as a universal decimal system of measures; even now it can be used with advantage in scientific works.

The fact of this decimal system being already the standard of three nations in Europe, including one of the greatest powers of the 19th century, without being founded on any national measure, is certainly a strong recommendation of it as a universal measure. The difference between the mètre and the yard is not so great as to prevent the easy substitution of one for the other in Canada, and thus without rousing the national jealousies of any party, do away with the anomaly of two standard measures; at the same

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time it would only be a continuation of the many reforms, which have been introduced into our young country, so successfully within the last few years.

The tables are in a very compact form, and the reductions generally decimal; thereby giving means of using them to any degree of exactness, by simply removing the decimal point to the left, as many places as required; in every place the last decimal is the result of a greater number of decimals, and from the care with which the whole has been gone over, it can safely be asserted, that they will be found reliable.

The manner of using the tables will be understood at once by examining the examples worked out in each.

The table of multipliers and reciprocals gives the means of reducing any quantity by one Multiplication, and shews the factors used in calculating the tables.

The decimal equivalentents will be useful in reducing final results to the duodecimal form.

The factors of reduction were adapted after examination and comparison of figures, used in works by Brande, Byrne, Hymer, &c.; &c.. and they are given as reliable; though there is some uncertainty as to the exact determination of the factors, for no two comparisons give exactly the same results, indeed, with our present means of comparison it cannot be considered that it is possible to compare the yard and metre or other measures, within the $\frac{1}{100,000}$ part.

v.

Some of the tables are altogether new, and will be found very convenient to Surveyors and Contractors, such as English square feet to French arpents, French toises of masonry, to cubic yards, &c., &c.

ARTHUR WURTELE, P. L. S.

MONTREAL, 6th February, 1861.

STANDARD MEASURES.

The English standard measure is the yard, and was, by Act of Imperial Parliament in 1824, declared to be the distance, at a temperature of 62° F., between two points on a brass bar made by Bird in 1760, and then in the keeping of the clerk of the House of Commons. This standard was destroyed by fire in 1834, and no copy having been made, the only means of recovering the exact length of the yard is through careful comparisons made before the fire with a standard measure belonging to the Royal Astronomical Society. The Act of Parliament also referred the yard to a natural standard: which is, that the yard shall bear a proportion to the length of a pendulum vibrating seconds in vacuo at the level of the sea in London of 36 to 39.1393 in. This natural standard, however, has been found very defective, and from the many conditions of a vibrating pendulum, it has been found impossible to make use of it for the purpose intended, with the degree of exactness required by the present state of science.

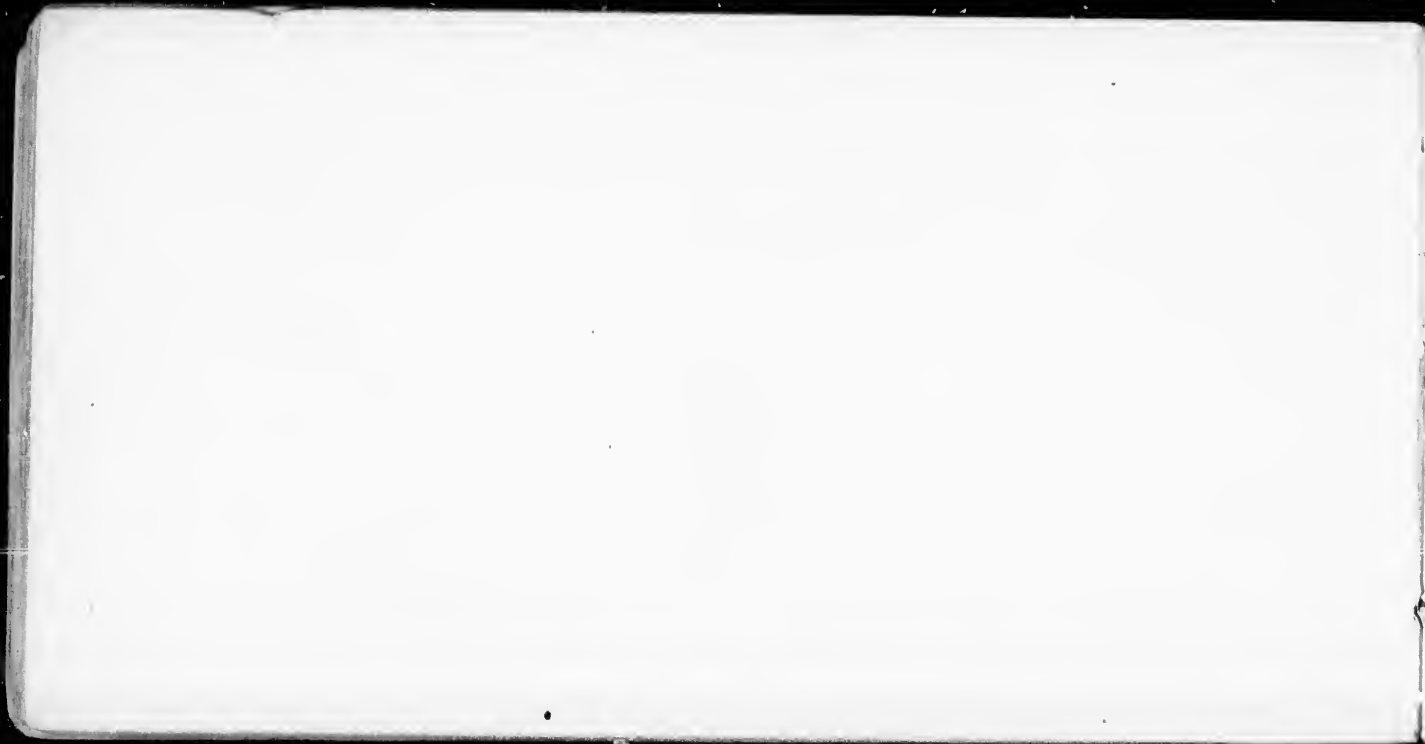
The French standard measure is called the mètre, and is fixed as the distance, at a temperature of 32° F., between two points on a brass bar in the keeping of the Academy of Science at Paris. The mètre is defined to be the ten millionth (10,000,000) part of the

quadrant of the earth, and was determined by the results of the trigonometrical operations carried on between Dunkirk and Barcelona for that purpose, in accordance with a law of the Revolutionary Government of France, in 1795. The arc of the meridian, above mentioned, was a length of 1,075,059 mètres, and was measured with the greatest accuracy, by Delambre & Mechin, but Bessel has since shewn that the quadrant which most nearly agrees with the ellipsoid of the Earth, according to existing measures of arcs of the meridian is 10,000,565.278 mètres, instead of 10,000,000 as stated above; consequently the definition of the mètre is defective, but that fact does not alter its value as a standard.

The standard measures for Lower Canada are fixed by the Consolidated Statutes of Lower Canada, Chap. 62, where it is enacted that the copies of the English and Old French standard measures, in the keeping of the clerk of the Legislative Assembly, shall be the standard measures of Lower Canada. The temperature not being stated by the Act, renders these standard measures indefinite to a certain extent: as the temperature to which standards are reduced is in England 62° F., and in France 32° F.

The United States standard measure is generally stated to be identical with the English,

though it differs slightly, the American yard being longer than the English in the proportion of 1.00005804 to 1 according to R. C. Mathewson, United States Deputy Surveyor; it is a bar of brass, made by Troughton, of London, for the United States Coast Survey, and kept in the Office of Weights and Measures at Washington; this standard was established by Congress in 1838.



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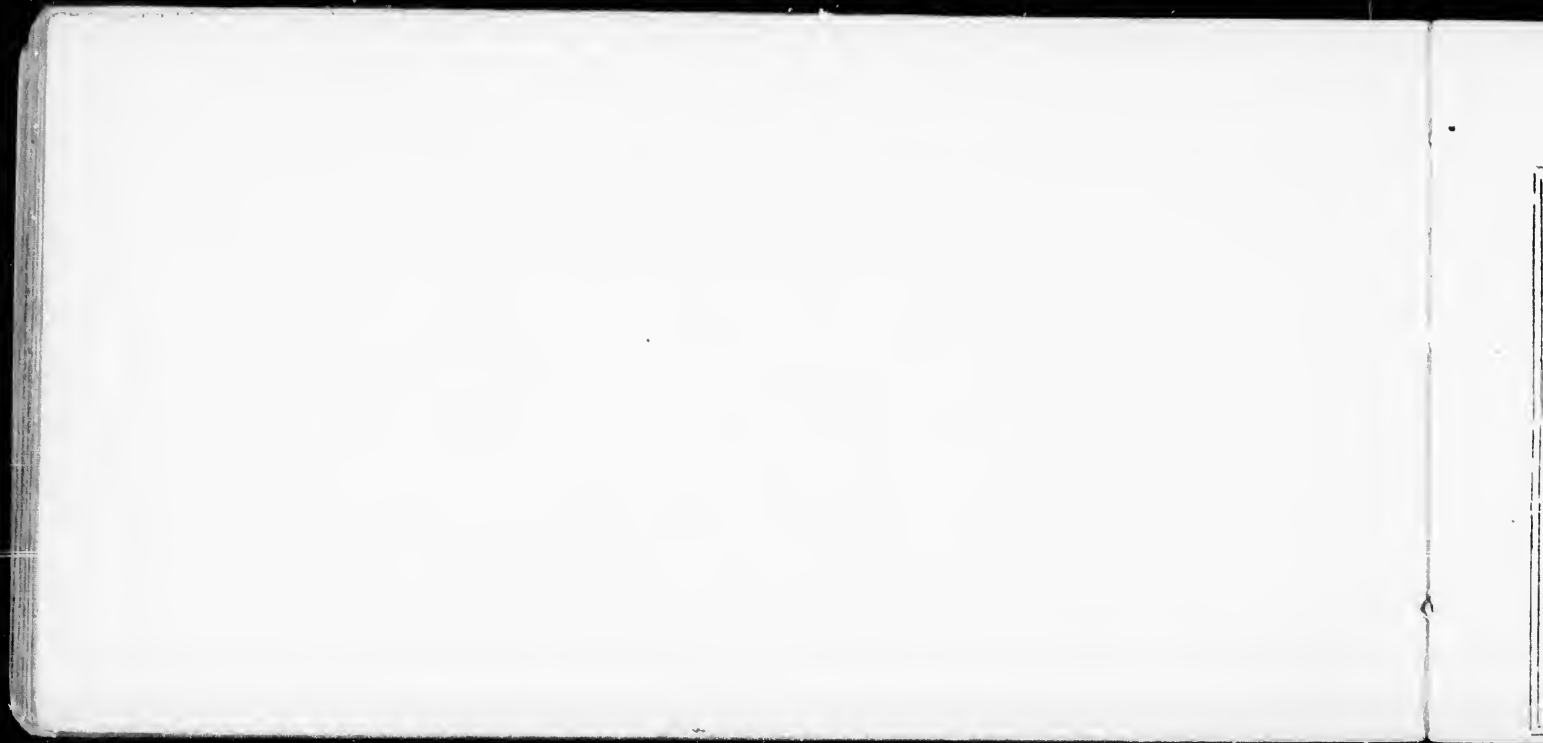
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TABLES.



LINEAL MEASURES.			SUPERFICIAL MEASURES.		
ENGLISH.		METRICAL.	ENGLISH.		METRICAL.
	1 Inch	= 0.0254 Mètres.		1 Sq. Foot	= 0.00093 Ares.
12 Inches	= 1 Foot	= 0.3048 "	9 Sq. Feet	= 1 Sq. Yard	= 0.00836 "
3 Feet	= 1 Yard	= 0.9144 "	$30\frac{1}{4}$ Sq. Yrds	= 1 Sq. Rod	= 0.2529 "
$5\frac{1}{2}$ Yards	= 1 Rod	= 5.0291 "	40 Sq. Rods	= 1 Rood	= 10.1168 "
4 Rods	= 1 Chain	= 20.1164 "	4 Roods	= 1 Acre	= 40.4671 "
80 Chains	= 1 Mile	= 1609.315 "	640 Acres	= 1 Sq. Mile	= 25898.948 "

LINEAL MEASURES.

OLD FRENCH.	ENGLISH.	METRICAL.	ENGLISH.
	1 Pouce = 1.066 Inches.		1 Millimètre = 0.039 Inches.
12 Pouches = 1 Pied	= 12.789 "	10 Millimètres = 1 Centimètre	= 0.394 "
6 Pieds = 1 Toise	= 6.395 Feet.	10 Centimètres = 1 Décimètre	= 3.937 "
3 Toises = 1 Perche	= 19.184 "	10 Décimètres = 1 Mètre	= 1.094 Yards.
10 Perches = 1 Arpent	= 191.838 "	10 Mètres = 1 Décamètre	= 1.988 Rods.
84 Arpents = 1 League	= 3.052 Miles.	10 Décamètres = 1 Hectomètre	= 4.971 Chains.
		10 Hectomètres = 1 Kilomètre	= 0.621 Miles.

SUPERFICIAL MEASURES.

OLD FRENCH.		ENGLISH.		METRICAL.	ENGLISH.
<p>1 Sq. Pied = 1.136 Sq. Feet. 324 Sq. Pieds = 1 Sq. Perche = 1.351 Sq. Rods. 100 Sq. Prehs = 1 Arpent = 0.845 Acres. 1 Arpent = 36801.7 Sq. Ft.</p>		<p>1 Milliare = 1.076 Feet. 10 Milliares = 1 Centiare = 1.196 Sq. Yds. 10 Centiares = 1 Deciare = 0.395 " Rods. 10 Deciares = 1 Are = 3.954 " 10 Ares = 1 Decare = 0.988 Roods. 10 Decares = 1 Hectare = 2.471 Acres.</p>			

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WEIGHTS.

ENGLISH—AVOIRDUPOIS.		METRICAL.	METRICAL.	ENGLISH.
	1 Drachm	=	1.77 Grammes.	
16 Drachms	= 1 Ounce	=	28.35 "	
16 Ounces	= 1 Pound	=	.4536 Kilogramme.	
28 Pounds	= 1 Quarter	=	12.70 " "	
4 Quarters	= 1 Cwt.	=	50.80 " "	
20 Cwt.	= 1 Ton	=	1015.994" "	
			1 Milligramme	= .015 Troy grains
			10 Milligramme	= 1 Centi " = .154 "
			10 Centi "	= 1 Deci " = 1.5433 "
			10 Deci "	= 1 Gramme = .564 Drachms Av.
			10 Grammes	= 1 Deca " = 5.644 "
			10 Deca "	= 1 Hecto " = 3.528 Ounces.
			10 Hecto "	= 1 Kilo " = 2.205 Pounds.
			10 Kilo "	= 1 Myria " = .787 Quarters.

GENERAL TABLE.

	FRENCH.	ENGLISH.	MULTIPLIER.	RECIPROCAL.
Lineal.	Pied de Roi	to Foot.	1.065765	0.938293
“	Arpent	to Foot.	191.8377	
“	Mètre	to Foot.	3.280899	0.304795
“	League	to Mile.	3.051963	
Square.	Pied	to Foot.	1.135855	0.880394
“	Arpent	to Acre.	0.844851	1.183641
“	Are	to Acre.	0.024711	40.467107
Cube.	Pied	to Foot.	1.210555	0.826068
“	Stère	to Yard.	1.308021	0.764513
“	Litre	to Foot.	0.035317	28.315316

DECIMAL EQUIVALENTS.

LINEAL.		SQUARE.		CUBE.		LINEAL.		SQUARE.	
Foot.	Inches.	Foot.	Inches.	Foot.	Inches.	Fr. Perch.	PIED.	Fr. Perch.	Pied.
0.1	1.2	0.1	14.4	0.1	172.8	0.1	1.8	0.1	32.4
0.2	2.4	0.2	28.8	0.2	345.6	0.2	3.6	0.2	64.8
0.3	3.6	0.3	43.2	0.3	518.4	0.3	5.4	0.3	97.2
0.4	4.8	0.4	57.6	0.4	691.2	0.4	7.2	0.4	129.6
0.5	6.0	0.5	72.0	0.5	864.0	0.5	9.0	0.5	162.0
0.6	7.2	0.6	86.4	0.6	1036.8	0.6	10.8	0.6	194.4
0.7	8.4	0.7	100.8	0.7	1209.6	0.7	12.6	0.7	226.8
0.8	9.6	0.8	115.2	0.8	1382.4	0.8	14.4	0.8	259.2
0.9	10.8	0.9	129.6	0.9	1555.2	0.9	16.2	0.9	291.6

LINEAL—FRENCH FEET TO ENGLISH FEET.

French Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	1.07	10.66	106.58	1065.77	10657.65	1 Fr. Foot = 12.789 Eng. Inch. EXAMPLE. 300 = 319.73 30 = 31.97 3 = 3.20 <hr/> 333 = 354.90
2	2.13	21.32	213.15	2131.53	21315.30	
3	3.20	31.97	319.73	3197.30	31972.95	
4	4.26	42.63	426.31	4263.06	42630.60	
5	5.33	53.29	532.88	5328.83	53288.25	
6	6.39	63.95	639.46	6394.59	63945.90	
7	7.46	74.60	746.04	7460.36	74603.55	
8	8.53	85.26	852.61	8526.12	85261.20	
9	9.59	95.92	959.19	9591.89	95918.85	

LINEAL—ENGLISH FEET TO FRENCH FEET.

English Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thousd's
1	0.94	9.38	93.83	938.29	9382.93
2	1.88	18.77	187.66	1876.59	18765.86
3	2.81	28.15	281.49	2814.88	28148.79
4	3.75	37.53	375.32	3753.17	37531.72
5	4.69	46.91	469.15	4691.46	46914.65
6	5.63	56.30	562.98	5629.76	56297.58
7	6.57	65.68	656.81	6568.05	65680.51
8	7.51	75.06	750.63	7506.34	75063.44
9	8.44	84.45	844.46	8444.64	84446.37

EXAMPLE.

$$5000 = 4691.46$$

$$200 = 187.66$$

$$80 = 75.06$$

$$5280 = 4954.18$$

LINEAL—FRENCH LEAGUES TO ENGLISH STATUTE MILES.

Leagues	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	3.052	30.520	305.196	3051.963	30519.634
2	6.104	61.039	610.392	6103.927	61039.268
3	9.156	91.559	915.589	9155.890	91558.902
4	12.208	122.079	1220.785	12207.854	122078.536
5	15.260	152.598	1525.982	15259.818	152598.179
6	18.312	183.118	1831.178	18311.780	183117.804
7	21.364	213.637	2136.374	21363.744	213637.438
8	24.416	244.157	2441.571	24415.707	244157.072
9	27.468	274.677	2746.767	27467.671	274676.706

1 League = 15,120 Pieds.
= 16,114.38 Eng. Ft.

EXAMPLE.

400 = 1220.785

50 = 152.598

1 = 3.052

451 = 1376.435

LINEAL—FRENCH MÈTRES TO ENGLISH FEET.

Mètres.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	3.28	32.81	328.09	3280.90	32808.99	<p>1 Mètre = 39.371 Inches.</p> <p style="text-align: center;">EXAMPLE.</p> <p>1000 = 3280.90</p> <p>700 = 2296.63</p> <p>20 = 65.62</p> <p>5 = 16.40</p> <hr/> <p>1725 = 5659.55</p>
2	6.56	65.62	656.18	6561.80	65617.98	
3	9.84	98.43	984.27	9842.70	98426.97	
4	13.12	131.24	1312.36	13123.60	131235.96	
5	16.40	164.04	1640.45	16404.50	164044.95	
6	19.69	196.85	1968.54	19685.39	196853.94	
7	22.97	229.66	2296.63	22966.29	229662.93	
8	26.25	262.47	2624.72	26247.19	262471.92	
9	29.53	295.28	2952.81	29528.09	295280.91	

LINEAL—ENGLISH FEET TO FRENCH MÈTRES.

English Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	.305	3.05	30.48	304.79	3047.95
2	.610	6.10	60.96	609.59	6095.89
3	.914	9.14	91.44	914.38	9143.84
4	1.219	12.19	121.92	1219.18	12191.78
5	1.524	15.24	152.40	1523.97	15239.73
6	1.829	18.29	182.88	1828.77	18287.67
7	2.134	21.34	213.36	2133.56	21335.62
8	2.438	24.38	243.84	2438.36	24383.56
9	2.743	27.43	274.32	2743.15	27431.51

EXAMPLE.

$$5000 = 1523.97$$

$$200 = 60.96$$

$$80 = 24.38$$

$$5280 = 1609.31$$

LINEAL—ENGLISH YARDS TO FRENCH MÈTRES.

Yards.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	.91	9.14	91.44	914.38	9143.84	1 Mètre = 1.0936 Yards. EXAMPLE. 1000 = 914.38 700 = 640.07 60 = 54.86 <hr/> 1760 = 1509.31
2	1.83	18.29	182.88	1828.77	18287.67	
3	2.74	27.43	274.32	2743.15	27431.51	
4	3.66	36.58	365.75	3657.53	36575.34	
5	4.57	45.72	457.19	4571.92	45719.18	
6	5.49	54.86	548.63	5486.30	54863.01	
7	6.40	64.01	640.07	6400.68	64006.85	
8	7.32	73.15	731.51	7315.07	73150.68	
9	8.23	82.29	822.95	8229.45	82294.54	

LINEAL—FRENCH KILOMÈTRES TO ENGLISH MILES.

Kilo- mètre.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds.	
1	0.62	6.21	62.14	621.38	6213.82	1 Mile = 1609.31 Mètres.
2	1.24	12.43	124.28	1242.76	12427.65	
3	1.86	18.64	186.41	1864.15	18641.47	
4	2.49	24.86	248.55	2485.53	24855.30	
5	3.11	31.07	310.69	3106.91	31069.12	
6	3.73	37.28	372.83	3728.29	37282.94	
7	4.35	43.50	434.97	4349.68	43496.77	
8	4.97	49.71	497.11	4971.06	49710.59	
9	5.59	55.92	559.24	5592.44	55924.41	

SQUARE—FRENCH FEET TO ENGLISH FEET.

French Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	1.14	11.36	113.59	1135.86	11358.55	<p>EXAMPLE.</p> <p>3000 = 3407.57</p> <p>600 = 681.51</p> <p>90 = 102.23</p> <p>7 = 7.95</p> <hr/> <p>3697 = 4199.26</p>
2	2.27	22.72	227.17	2271.71	22717.10	
3	3.41	34.08	340.76	3407.57	34075.65	
4	4.54	45.43	454.34	4543.42	45434.20	
5	5.68	56.79	567.93	5679.28	56792.75	
6	6.82	68.15	681.51	6815.13	68151.30	
7	7.95	79.51	795.10	7950.99	79509.85	
8	9.09	90.87	908.68	9086.84	90868.40	
9	10.22	102.23	1022.27	10222.70	102226.95	

SQUARE—ENGLISH FEET TO FRENCH FEET.

English Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds.	
1	0.88	8.80	88.04	880.39	8803.94	<p>EXAMPLE.</p> <p>2000 = 1760.79</p> <p>500 = 440.20</p> <p>30 = 26.41</p> <p>8 = 7.04</p> <hr/> <p>2538 = 2234.44</p>
2	1.76	17.61	176.08	1760.79	17607.88	
3	2.64	26.41	264.12	2641.18	26411.82	
4	3.52	35.22	352.16	3521.58	35215.76	
5	4.40	44.02	440.20	4401.97	44019.70	
6	5.28	52.82	528.24	5282.36	52823.64	
7	6.16	61.63	616.28	6162.76	61627.58	
8	7.04	70.43	704.32	7043.15	70431.52	
9	7.92	79.24	792.35	7923.55	79235.46	

SQUARE—ENGLISH FEET TO FRENCH PERCHES.

Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	0.003	0.027	0.272	2.717	27.173	1 Perche = 368.017 Eng. S. Ft.
2	0.005	0.054	0.543	5.435	54.345	
3	0.008	0.082	0.815	8.152	81.518	
4	0.011	0.109	1.087	10.869	108.690	
5	0.014	0.136	1.359	13.586	135.863	
6	0.016	0.163	1.630	16.304	163.036	
7	0.019	0.190	1.902	19.021	190.208	
8	0.022	0.217	2.174	21.738	217.381	
9	0.024	0.245	2.446	24.455	244.553	

SQUARE—FRENCH ARPENTS TO ENGLISH ACRES.

Arpents	Units.	Tens.	Hundreds.	Thousands	Ten Thous'ds	
1	0.84	8.45	84.49	844.85	8448.51	<p>The Arpent is 32400 Square. French feet = 36801.7 Sq. E. Ft.</p> <p style="text-align: center;">EXAMPLE.</p> <p>2000 = 1689.70 700 = 591.40 30 = 25.35 2 = 1.69</p> <hr/> <p>2732 = 2308.14</p>
2	1.69	16.90	168.97	1689.70	16897.02	
3	2.53	25.35	253.46	2534.55	25345.53	
4	3.38	33.79	337.94	3379.40	33794.04	
5	4.22	42.24	422.43	4224.26	42242.55	
6	5.07	50.69	506.91	5069.11	50691.06	
7	5.91	59.14	591.40	5913.96	59139.57	
8	6.76	67.59	675.88	6758.81	67588.08	
9	7.60	76.04	760.37	7603.66	76036.59	

Ft.

SQUARE—ENGLISH ACRES TO FRENCH ARPENTS.

English Acres.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	1.18	11.84	118.36	1183.64	11836 41	<p>EXAMPLE.</p> <p>4000 = 4734.56</p> <p>200 = 236.73</p> <p>30 = 35.51</p> <p>1 = 1.18</p> <hr/> <p>4231 = 5007.98</p>
2	2.37	23.67	236.73	2367.28	23672.82	
3	3.55	35.51	355.09	3550.92	35509.23	
4	4.73	47.35	473.46	4734.56	47345.64	
5	5.92	59.18	591.82	5918.21	59182.05	
6	7.10	71.02	710.18	7101.85	71018.46	
7	8.29	82.85	828.55	8285.49	82854.87	
8	9.47	94.69	946.91	9469.13	94691.28	
9	10.65	106.53	1065.28	10652.77	106527.69	

SQUARE—FRENCH ARES TO ENGLISH ACRES.

Ares.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	0.025	0.247	2.471	24.711	247.114	The Are is a square Décamètre and equal to 1076.43 square feet.
2	0.049	0.494	4.942	49.423	494.229	
3	0.074	0.741	7.413	74.134	741.343	
4	0.099	0.988	9.885	98.846	988.457	
5	0.124	1.236	12.356	123.557	1235.571	
6	0.148	1.483	14.827	148.269	1482.686	
7	0.173	1.730	17.298	172.980	1729.800	
8	0.198	1.977	19.769	197.691	1976.914	
9	0.222	2.224	22.240	222.403	2224.029	

SQUARE—ENGLISH ACRES TO FRENCH ARES.

Acres.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	40.5	404.7	4046.7	40467.1	404671.1
2	80.9	809.3	8093.4	80934.2	809342.1
3	121.4	1214.0	12140.1	121401.3	1214013.2
4	161.9	1618.7	16186.8	161868.4	1618684.3
5	202.3	2023.4	20233.6	202335.5	2023355.3
6	242.8	2428.0	24280.3	242802.6	2428026.4
7	283.3	2832.7	28327.0	283269.7	2832697.5
8	323.7	3237.4	32373.7	323736.9	3237368.6
9	364.2	3642.0	36420.4	364204.0	3642039.6

CUBIC—FRENCH PIEDS TO ENGLISH FEET.

Pieds.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	1.21	12.11	121.06	1210.55	12105.54
2	2.42	24.21	242.11	2421.11	24211.09
3	3.63	36.32	363.17	3631.66	36316.64
4	4.84	48.42	484.22	4842.22	48422.18
5	6.05	60.53	605.28	6052.77	60527.73
6	7.26	72.63	726.33	7263.33	72633.27
7	8.47	84.74	847.39	8473.88	84738.82
8	9.68	96.84	968.44	9684.44	96844.36
9	10.89	108.95	1089.50	10894.99	108949.91

CUBIC—ENGLISH FEET TO FRENCH PIEDS.

Feet.	Units.	Tens.	Hundreds.	Thousands.	Ten Thousd's
1	0.83	8.26	82.61	826.07	8260.68
2	1.65	16.52	165.21	1652.14	16521.35
3	2.48	24.78	247.82	2478.20	24782.03
4	3.30	33.04	330.43	3304.27	33042.71
5	4.13	41.30	413.03	4130.34	41303.39
6	4.96	49.56	495.64	4956.41	49564.06
7	5.78	57.82	578.25	5782.47	57824.74
8	6.61	66.09	660.85	6608.54	66085.42
9	7.43	74.35	743.46	7434.61	74346.09

CUBIC—FRENCH TOISES (MASONRY) TO ENGLISH YARDS.

Toises.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	3.23	32.28	322.81	3228.15	32281.45	1 Toise of Stone is equal to 3 Toises Masonry = 9.68 cube yards.
2	6.46	64.56	645.63	6456.29	64562.91	
3	9.68	96.84	968.44	9684.44	96844.36	
4	12.91	129.13	1291.26	12912.58	129125.81	
5	16.14	161.41	1614.07	16140.73	161407.27	
6	19.37	193.69	1936.89	19368.87	193688.72	
7	22.60	225.97	2259.69	22596.92	225969.17	
8	25.83	258.25	2582.52	25825.16	258251.63	
9	29.05	290.53	2905.33	29053.31	290533.08	

CUBIC—YARDS REDUCED TO FRENCH TOISES, (MASONRY.)

Yards.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	REMARKS.
1	0.31	3.10	30.98	309.78	3097.75	1 Toise = 72 French C. Feet. = 87.16 Eng. C. Ft.
2	0.62	6.20	61.96	619.55	6195.50	
3	0.93	9.29	92.93	929.33	9293.25	<p>EXAMPLE.</p> <p>200 = 61.96 40 = 12.39 3 = 0.93</p> <hr/> <p>243 = 75.28</p>
4	1.24	12.39	123.91	1239.10	12391.00	
5	1.55	15.49	154.89	1548.88	15488.75	
6	1.86	18.59	185.87	1858.65	18586.50	
7	2.17	21.68	216.84	2168.43	21684.25	
8	2.48	24.78	247.82	2478.20	24782.00	
9	2.79	27.88	278.80	2787.98	27879.75	

CUBIC—FRENCH STÈRES TO ENGLISH YARDS.

Stères.	Units.	Tens.	Hundreds.	Thousands	Ten Thous'ds	
1	1.31	13.08	130.80	1308.02	13080.21	1 Stère = 35.317 Cube Feet.
2	2.62	26.16	261.60	2616.04	26160.43	
3	3.92	39.24	392.41	3924.06	39240.64	
4	5.23	52.32	523.21	5232.09	52320.85	
5	6.54	65.40	654.01	6540.11	65401.07	
6	7.85	78.48	784.81	7848.13	78481.28	
7	9.16	91.56	915.61	9156.15	91561.49	
8	10.46	104.64	1046.42	10364.17	104641.70	
9	11.77	117.72	1177.22	11772.19	117721.92	

CUBIC—ENGLISH YARDS TO FRENCH STÈRES.

Yards.	Units.	Tens.	Hundreds	Thousands.	Ten Thous'ds
1	0.76	7.65	76.45	764.51	7645.13
2	1.53	15.29	152.90	1529.03	15290.27
3	2.29	22.94	229.35	2293.54	22935.40
4	3.06	30.58	305.81	3058.05	30580.54
5	3.82	38.23	382.26	3822.57	38225.67
6	4.59	45.87	458.71	4587.08	45870.81
7	5.35	53.52	535.16	5351.59	53515.94
8	6.12	61.16	611.61	6116.11	61161.08
9	6.88	68.81	688.06	6880.62	68806.21

The Stère is a Cubic Mètre.

EXAMPLE.

$$200 = 152.90$$

$$40 = 30.58$$

$$3 = 2.29$$

$$243 = 185.77$$

CUBIC—FRENCH LITRES TO ENGLISH FEET.

Litres.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	0.04	0.35	3.53	35.32	353.17	The Litre is a Cubic Décimètre.
2	0.07	0.71	7.06	70.63	706.33	
3	0.11	1.06	10.59	105.95	1059.50	
4	0.14	1.41	14.13	141.27	1412.66	
5	0.18	1.77	17.66	176.58	1765.83	
6	0.21	2.12	21.19	211.90	2118.99	
7	0.25	2.47	24.72	247.22	2472.16	
8	0.28	2.83	28.25	282.53	2825.33	
9	0.32	3.18	31.78	317.85	3178.49	

CUBIC—FRENCH LITRES TO IMPERIAL GALLONS.

Litres.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	0.22	2.20	22.01	220.10	2200.97	Litre = 61.027 Cube Inches. Imp. Gal. = 277.274 Cube " 1 Imp. Bushel = 8 Gallons. = 36.347 Litres.
2	0.44	4.40	44.02	440.19	4401.93	
3	0.66	6.60	66.03	660.29	6602.90	
4	0.88	8.80	88.04	880.39	8803.86	
5	1.10	11.00	110.05	1100.48	11004.83	
6	1.32	13.21	132.06	1320.58	13205.79	
7	1.54	15.41	154.07	1540.68	15406.76	
8	1.76	17.61	176.08	1760.77	17607.72	
9	1.98	19.81	198.09	1980.87	19808.69	

CUBIC—IMPERIAL GALLONS TO FRENCH LITRES.

Gallons.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	4.54	45.43	454.35	4543.46	45434.61
2	9.09	90.87	908.69	9086.92	90869.23
3	13.63	136.30	1363.04	13630.38	136303.84
4	18.17	181.74	1817.38	18173.85	181738.45
5	22.72	227.17	2271.73	22717.31	227173.06
6	27.26	272.61	2726.08	27260.77	272607.68
7	31.80	318.04	3180.42	31804.23	318042.29
8	36.35	363.48	3634.77	36347.69	363476.90
9	40.89	408.91	4089.12	40891.15	408911.51

CUBIC—FRENCH MINOTS TO WINCHESTER BUSHELS.

Minots.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds	
1	1.11	11.1	110.8	1108	11080	1 Minot = 39 Litres. 1 Win. Bus. = 2150.42 Inches.
2	2.22	22.2	221.6	2216	22160	
3	3.32	33.2	332.4	3324	33240	
4	4.43	44.3	443.2	4432	44320	
5	5.54	55.4	554.0	5540	55400	
6	6.65	66.5	664.8	6648	66480	
7	7.76	77.6	775.6	7756	77560	
8	8.86	88.6	886.4	8864	88640	
9	9.97	99.7	997.2	9972	99720	

WEIGHT—FRENCH KILOGRAMMES TO ENGLISH POUNDS.

Kilo-grammes	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	2.20	22 05	220.47	2204.74	22047.37
2	4.41	44.09	440.95	4409.47	44094.74
3	6.61	66 14	661.42	6614.21	66142.11
4	8.82	88.19	881.89	8818.95	88189.48
5	11.02	110.24	1102.37	11023.69	110236.85
6	13.23	132.28	1322.84	13228.42	132284.22
7	15.43	154 33	1543.32	15433.16	154331.59
8	17.64	176.38	1763.79	17637.90	176378.96
9	19.84	198.43	1984.26	19842.63	198426.33

WEIGHT—ENGLISH POUNDS TO FRENCH KILOGRAMMES.

Pounds.	Units.	Tens.	Hundreds.	Thousands.	Ten Thous'ds
1	0.45	4.54	45.36	453.57	4535.69
2	0.91	9.07	90.71	907.14	9071.38
3	1.36	13.61	136.07	1360.71	13607.06
4	1.81	18.14	181.43	1814.28	18142.75
5	2.27	22.68	226.78	2267.84	22678.44
6	2.72	27.21	272.14	2721.41	27214.13
7	3.17	31.75	317.50	3174.98	31749.82
8	3.63	36.29	362.86	3628.55	36285.51
9	4.08	40.82	408.21	4082.12	40821.19

WEIGHT—FRENCH GRAMMES AND ENGLISH TROY GRAINS.

GRAMMES TO TROY GRAINS.				TROY GRAINS TO GRAMMES.				
Grammes	Units.	Tens.	Hundreds.	Grains.	Units.	Tens.	Hundreds.	
1	15.43	154.33	1543.32	1	0.065	0.648	6.480	1 lb. Troy = 373.22 Grms.
2	30.87	308.66	3086.63	2	0.130	1.296	12.959	
3	46.30	462.99	4629.95	3	0.194	1.944	19.439	
4	61.73	617.33	6173.26	4	0.259	2.592	25.918	
5	77.17	771.66	7716.58	5	0.324	3.240	32.398	
6	92.60	925.99	9259.90	6	0.389	3.888	38.877	
7	108.03	1080.32	10803.21	7	0.454	4.536	45.357	
8	123.47	1234.65	12346.53	8	0.518	5.184	51.836	
9	138.90	1388.98	13889.84	9	0.583	5.832	58.316	

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