CUBIC, OR SOLID MEASURE.

1728 inches	make	1 solid foot
27 feet	make	1 solid yard
40 feet of rough, or 50 feet of hewn timber	make	1 ton or load
42 feet	make	1 ton of shipping
1 yard of earth	make	1 load

Thus, a CORD of wood is 4 feet broad, 4 feet deep, and 8 feet long, being 128 cubic feet.—A STACK of wood is 3 feet broad, 3 feet deep, and 12 feet long, being 108 cubic feet.

The dimensions of timber, stone, excavations, and all works which have length, breadth, and thickness, are taken by lineal measure; but the contents are calculated by cubic measure.

A CUBE is a solid body, and contains length, breadth, and thickness. A cubic number is produced by multiplying the simple number twice into itself: thus, 343 is a cube number, being produced by multiplying the number 7 twice into itself; as, $7 \times 7 \times 7 = 343$.

ANGULAR MEASURE, OR DIVISIONS OF THE CIRCLE.

60 seconds	=	1 minute	90 degrees	=	1 quadrant
60 minutes	=	1 degree	360 degrees or 12 signs	=	1 circumference
30 degrees	=	1 sign			

MEASURE OF TIME.

60 seconds	=	1 minute	28, 29, 30, 31 days	=	1 calendar month
60 minutes	=	1 hour	12 calendar months	=	1 year
24 hours	=	1 day	365 days	=	1 common year
7 days	=	1 week	366 days	=	1 leap year
28 days	=	1 lunar month			

In 400 years, 97 are leap years, and 303 common.

WEIGHT OF ENGLISH COIN.

	dwts.	gr.		dwts.	gr.
Gold: Sovereign	5	3¼	Florin	7	6 6-11ths
Half-sovereign	2	13½	Shilling	3	15 3-11ths
Double Sovereign	10	6½	Sixpence	1	19 7-11ths
Silver: Crown	18	4 4-11ths	Fourpence	1	5 1-11th
Half-Crown	9	2 2-11ths			

PLANTING ORCHARDS, GARDENS, &c.

Trees required to plant an acre of land.

Distance. feet.	in.	No.	Distance. feet.	in.	No.	Distance. feet.	in.	No.
1	0	43,560	6	0	1,210	12	0	302
1	6	19,360	6	6	1,031	13	0	258
2	0	10,890	7	0	889	14	0	223
2	6	6,960	7	6	775	15	0	194
3	0	4,840	8	0	680	16	0	171
3	6	3,556	8	6	602	17	0	151
4	0	2,722	9	0	538	18	0	135
4	6	2,151	9	6	482	19	0	121
5	0	1,742	10	0	436	20	0	109
5	6	1,440	10	6	361	21	0	99

TO MEASURE UNSQUARED TIMBER.

In order to ascertain the contents, multiply the square of the quarter girth, or of ¼ of the mean circumference, by the length. When the buyer is not allowed his choice of girth in taper trees, he may take the mean dimensions, either by girthing it in the middle for the mean girth, or by girthing it at the two ends, and taking half of their sum. If not, girth the tree in so many places as is thought necessary, then the sum of the several girths, divided by their number, will give a mean circumference, the fourth part of which being squared, and multiplied by the length, will give the solid contents.

The superficial feet in a board or plank is known by multiplying the length by the breadth. If the board be tapering, add the breadth of the two ends together, and take half their sum for the mean breadth, and multiply the length by this mean breadth.

The solid contents of squared timber are found by measuring the mean breadth by the mean thickness, and the product again by the length. Or multiply the square of what is called the quarter girth in inches by the length in feet, and divide by 144, and you have the contents in feet.

Boughs, the quarter girth of which is less than 6 inches, and parts of the trunk less than 2 feet in circumference, are not reckoned as timber.

1½ inch in every foot of quarter girth, or ⅛ of the girth, is allowed for bark, except of elm. 1 inch in the circumference of the tree, or whole girth, or one-twelfth of the quarter girth is the general fair average allowance.

The quarter girth is half the sum of the breadth and depth in the middle.

The nearest approach to truth in the measuring of timber, is to multiply the square of ⅓ of the girth, or circumference, by double the length, and the product will be the contents.

COAL WEIGHT.

14 pounds	make	1 stone	20 cwt., or 10 large sacks		1 ton
28 pounds		1 quarter cwt.	21 tons 4 cwt.		1 barge or keel
56 pounds		1 half cwt.	20 keels, or 424 tons		1 ship load
1 sack of 112 pounds		1 cwt.	140 cwt., or 7 tons		1 room
1 double sack of 224 pounds		2 cwt.			

HAY AND STRAW.

36 pounds	make	1 truss of straw	19 cwt. 32 lbs.		1 load of new hay
56 pounds		1 truss of old hay	11 cwt. 64 lbs.		1 load of straw
60 pounds		1 truss of new hay	1 square yard of new hay		6 stone
36 trusses		1 load	1 square yard of oldish hay		8 stone
18 cwt.		1 load of old hay	1 square yard of old hay		9 stone

Hay is considered as new for three months, and is called old in England on the 1st of September.

In the English army, a horse in full work is allowed 16lbs. of hay, and 10lbs. of corn per day; or 10lbs. of oats, 12lbs. of hay, and 8lbs. of straw per day.

To find the weight of Hay contained in a Stack.—Multiply the length of the stack by its breadth, and multiply the result by its height, all in feet; divide the total by 27, which will give the number of square yards; this multiply by 6, 8, or 9, according to the age of the hay, as above, and the product will be the weight in stones. In measuring the height, allow off two-thirds off the amount of feet from the eaves to the top. Thus, say a stack is 30 feet long and 20 feet broad, this multiplied is 600 feet, the height to the eaves 8 feet, from the eaves to the top 3 feet—take off this last 1, and add it to the 8=9, then multiply 600 by 9=5400; then 5400 divided by 27 gives 200 square yards, and 200 multiplied by 6, makes 1200 stones of new hay.

CARPENTRY TABLES.

The square of 10 feet—100 superficial feet; 100 superficial feet—1 square of boarding, flooring, &c. 38 deals, 12 feet long, 2½ inches thick, make 1 ton.

Ten feet boards to a Square.

24 boards 5 inches broad		15 boards 3 inches broad	
20 „ 6 „		13 „ 9 „	add 2ft. 6in.
17 „ 7 „	add 1 foot	12 „ 10 „	

Twelve feet boards to a Square.

20 boards 5 inches broad		12 boards 8 inches broad,	add 4 feet
16 „ 6 „	add 4 feet	11 „ 9 „	add 1 foot
14 „ 7 „	add 2 feet	10 „ 10 „	

13	12 feet deals	1 square of wrought flooring
12½	12 feet deals	1 square of rough flooring
14	12 feet battens	1 square of wrought flooring

BRICKLAYING TABLES.

1 square yard of clay makes 460 bricks	10 bricks 1 foot superficial guaged arching
1 burnt brick is 9 inches long, 4½ inches wide, 2½ inches thick, and weighs 4 lbs. 15 oz.	272 superficial feet 1 rod of reduced brickwork, 1½ brick thick
32 bricks cover a square yard	306 cubic feet 1 rod
16 bricks 1 foot of reduced brickwork	450 stock bricks 1 ton
7 bricks 1 foot superficial marle facing, laid Flemish bond	1 rod of brickwork 13 tons
	500 bricks 1 load

Brickwork is generally measured by the rod of 16½ feet, or 272¼ square feet.