Margaret

Mrs Frances Le Lacheur
La Vallée
St Martins
Guernsey

Margaret Coffin's

Accompt Book

Gaspe Sept.r 1st 1820

Reduction
of
Weights and Measures

24 Grains ..... make ..... 1 Pennyweight
20 Pennyweights ..... 1 Ounce
12 Ounces ..... 1 Pound

In 576429 Grains how many Pounds

	576429
3	192143
8	24017-21
20	1200-17-
12	100-17-21

In 28lb 4oz 19 dwts how many Grains?

lb 12 oz 20 dwts

28 - 4 = 19
12
348
20
6819
24
27276

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Apothecaries Weight

20 Grains	make	1 Scruple
3 Scruples		1 Dram
8 Drams		1 Ounce
12 Ounces		1 Pound

In 4527961 Grains how many Pounds

```
20 | 4527961
 3 | 226398 — 1
 8 | 75466
12 | 9433 — 2
     786 — 1 — 2 — 0 — 1
```

In 28lb 5oz 3dr how many Grains

```
lb   oz  dr
28 . 5 . 3
12
341
8
2731
3
8193
20
163860
```

Avoirdupois Weight

16 Drams	make	1 Ounce
16 Ounces		1 Pound
28 Pound		1 Quarter
4 Quarters		1 Hundred Weight
20 Hundred Weight		1 Ton

In 35 Ton 17 Cwt. 1 qr 23 lb 7 oz how many Drams?

```
T    Cwt  qr  lb   oz
35 . 17 . 1 . 23 . 7
20
717
4
2869
28
22953
5740
80333
16
1285687
```

In 20571005 Drams how many Cwt?

```
16 {2 | 20571005
   {8 | 10285502 — 1
      | 1285687 — 6
16 {2 |
   {8 | 642843 — 1
      | 80333 — 3
28 {4 |
   {7 | 20088 — 3
      | 2869 — 5
 4    |
      | 717 — 1
```

Wool WEIGHT

7 Pounds	make	1 Clove.
2 Cloves		1 Stone.
2 Stones		1 Tod
6 Tods and a Half		1 Wey
2 Weys		1 ~~Last~~ Sack
12 Sacks		1 Last

In 42590 Lasts how many Stone?

42590
12
311080
2
1022160
6½
6132960
311080
6644040
2
13288080
2

In 14764210 Pounds how many Lasts?

	14764210
7	2109172—6
2	1054586—1
2	527293
6½	81122
2	40561
12	3380—1

Long Measure

3 Barley Corns	make	1 Inch.
12 Inches		1 Foot.
3 Feet		1 Yard.
6 Feet		1 Fathom.
5 yards and a half		1 Pole or Rod.
40 Poles		1 Furlong.
8 Furlongs		1 Mile.
3 Miles		1 League.
60 Miles or 69½		1 Degree.

How many Feet will reach round the World supposing it at the best calculations to be 8340 Leagues?

8340
3
25020
8
200160
40
8006400
5½
40032000
4003200

In 4126107089 Barley Corns how many Leagues?

	4126107089
3	1375369029—2
12	114614109—9
3	3820470—
5½	694635
40	17365—35
8	2170—5
3	723—1

Cloth Measure

2 Inches Is a quarter	make	1 Nail
4 Nales		1 Quarter of yd
3 Quarters		1 Flemish Ell
4 Quarters		1 Yard
5 Quarters		1 English Ell
6 Quarters		1 French Ell

In 147236 Nails how many French Ells?

4	147236
6	36814
	6135—4

Ans. 6135 Ells 4 Qrs.

In 20 Piece of Cloth each 17 Flemish Ells. how many Yds?

20
17
340

340
3
4 | 1020
255

Wine Measure

2 Pints	make	1 Quart
4 Quarts		1 Gallon
42 Gallons		1 Tierce
2 Tierces		1 Puncheon
63 Gallons		1 Hogshead
2 Hogsheads		1 Pipe or butt
2 Pipes		1 Ton

In 147260 Pints how many Puncheons

2	147260
4	73630
7	18407—2
6	2629—4
2	438—1
	219

In 967 Hogsheads how many Pints?

967
63
2901
5802
60921
4
243684
2
487368

Ale & Beer Measure

2 Pints	make	1 Quart
4 Quarts		1 Gallon
8 Gallons		1 Firkin of Ale
9 Gallons		1 Firkin of Beer
2 Firkins		1 Hilderkin
2 Hilderkins		1 Barrel
1 Barrel and a half		1 Hogshead
2 Barrels		1 Puncheon
2 Hogsheads		1 Butt
2 Butts		1 Ton

In 484 Gallons how many Butts?

	484
9	53 — 7
2	26 — 1
2	13
1½	9
2	4 — 1

In 122 Firs how many Hilderkins?

122
2
244
2
488
½
488
244
732
2

Dry Measure

2 Pints	make	1 Quart
2 Quarts		1 Pottles
2 Pottles		1 Gallon
2 Gallons		1 Peck
4 Pecks		1 Bushel
4 Bushels		1 Coom
2 Cooms		1 Quarter
4 Quarters		1 Chaldron
5 Quarters		1 Whey or Load
2 Whey		1 Last

In 1207 Quarters how many Pecks?

1207
2
2414
4
9656
4
38624

In 42701 Bushels how many Lasts?

	42701
4	10673 — 1
2	5337 — 1
5	1067 — 2
2	533 — 1

Time

60 Seconds ..... make ... 1 Minut
60 Minuts ..... 1 Hour
24 Hours ..... 1 Day
7 Days ..... 1 Week
4 Weeks ..... 1 Month
13 Months, 1 day, 6 Hours ..... 1 Julian Year

How many Seconds are there in a Julian Year ?

M.	D	H	M
13	0	1	6
		4	
		32	
		7	
		365	
		24	
		1466	
		730	
		8766	
		60	
		525960	
		60	

How many Hours is it since the Birth of Christ to the Year 1700 allowing the year to consist of 13 Months. ?

1700
13
22100
4
88400
7
618800
24
24/5200
123/600

The Rule of Three

Direct

Teaches from three given numbers to find a 4th.

Of the three given numbers two are called the Terms of and the other the Term of demand.

Rule. 1st State the question that is place the three given numbers in a straight line making the first & third of one denomination reduce them both to the same and if the second be a compound number reduce it to the lowest Denomination mentioned.

Multiply the second and third numbers together and divide the product by the first and the quotient if their be no remainder is the answer or fourth number required.

4th. If of the devision their be any remainder reduce it to the next denomination below that with the second number was reduced to . **Proof** The method of proof is by reversing the question or working it back again

What is the value of an Cwt of Sugar at 5½ per lb.

As 1 lb : 5½ d :: 1 Cwt

2 | 4

11 | 4

28

112

11

2 | 1232

12 | 616

20 | 51-4

2-11-4

What is the value of 19½ Chaldron of Coals at 1£ 11s 6 p Chaldron

As 1 : 1..11..6 :: 19½ Chal

2 | 20 | 2

2 | 31 | 39

12

378

39

3402

1134

14742

2 | 7371

12 | 614-3 d

20 | 30.14.3.

What is the value of 1 Cwt of Coffee at 5½d per Ounce?

As 1 lb : 5½ d :: 112 lb

2 | 16

11 | 672

112

1792

11

2 | 19712

12 | 9856

20 | 821-4

41-1-4

What is the Tax upon 745£ 14s 8d at 3s 6d in the Pound?

As 1 £ : 3s..6d :: 745..14..8

20 | 12 | 20

20 | 42 | 14914

12 | | 12

240 | | 178976

42

357952

715904

7516992

7516992 ÷ 240 = 31320 3/4 d

12 | 2610

20 | 130..10..0 3/4

Bought 4 Bales of Cloth each 6 pieces & each piece 27 Yds. at 16£ 4s per piece what is the value of the whole & the rate per Yard?

As 1 p : 16..4 :: 4/6 24

20

324

24

1296

648

20 | 7776

388 : 16 :

As 27 : 16..4 :: 1

20

27) 324 (12

27

54

54

...

Ans. 388..16 at 12s per Yd.

Suppose a Gentleman's Income is 500 Guineas a Year, & he spends 19s 7d per Day one day with another how much will he have saved at Year's end?

As 1 D : 19..7 :: 365 days

12 | 235

235 | 1825

1095

730

85775

12 | 7147 : 11

20 | 357 : 7 : 11

500 Guineas = 525 £

525 : 0 : 0

357 : 7 : 11

167 : 12 : 1

Ans. 167£ 12s 1d

What is the value of an Cwt of Sugar at 5½ per lb.

As lb 1 : d 5½ :: Cwt 1

2 | 4
11 | 4
28
112
11
2 | 1232
12 | 616
2,0 | 51-4
2-11-4

What is the value of 1 Cwt of Coffee at 5½d per Ounce?

As lb 1 : d 5½ :: lb 112

2 | 16
11 | 672
112
1792
11
2 | 19712
12 | 9856
2,0 | 82,1-4
41-1-4

Bought 4 Bales of Cloth each 6 pieces & each piece 27 Yds. at 16£4s per piece what is the value of the whole & the rate per Yard?

As p 1 : £ 16..4 :: 4/6 24

20
324
24
1296
648
2,0 | 777,6
388:16:

As 27 : £ 16..4 :: 1

20
27) 324 (12
27
54
54
...

Ansr. £388..16 at 12s per Yd.

Suppose a Gentleman's Income is 500 Guineas a Year, & he spends 19s 7d. per Day one day with another how much will he have saved at Year's end?

As D 1 : s 19..7 d :: days 365

12 | 235
235 | 1825
1095
730
12 | 85775
20 | 7147 : 11
357 : 7 : 11

500 Guineas = £ 525

£ 525 : 0 : 0
357 : 7 : 11
167 : 12 : 1

Ansr. 167£ 12s 1d

What is the value of 19½ Chaldron of Coals at 1£11s6 p Chaldron

As Ch 1 : £ 1..11..6 d :: Chal 19½

2 | 20 | 2
2 | 31 | 39
12
378
39
3402
1134
14742
2 | 7371
12 | 614-3 d
20 | 30.14.3.

What is the Tax upon 745£14s 8d at 3s 6d on the Pound?

As £ 1 : s 3..6 d :: 745..14..8

20 | 12 | 20
20 | 42 | 14914
12 | | 12
240 | | 178976
42
357952
715904
7516992

7516992 ÷ 240 = d 31320 ¾

12 | 261,0
20 | 130..10..0 ¾

Bought 12 Rolls of Cloth each containing 36 Ells which cost me 45 £ I demand how many Yards there were in all and what the Cloth cost per Yard

36
12
432
5
4 | 21 60
540

As 540 : 45 : : yd
20
900
12
540 | 10800 | 20 (12
1080 (1..8
. . . 0

Ans: 540 yards at 1.. 8 per yard

A Merchant becomes a Bankrupt and his Debts amount to 8750 £ 10s but all his Effects and Book Debts amount to no more than 3475 £ 6.s 3d what will this enable him to pay in the Pound

As £ 8760 .10 : £ 5475 .6 .3 : : £ 1
20 20 20
175210 109506
12
1314075
20 12
175210 | 26281500 | 150
17521 12..6
. 8 | 605
8 | 605
. 0

Ans: 12..6..

A Wine Cooper imported 18 Pipes of Wine (each 126 Gallons) which cost him at Purchase 549 £ 10s ..6d the Freight of it cost him 33 £.12s Customs 61 £..1s Loading Unloading Carts and Porters 17 £ 0s 6d I demand what this Wine stood him in per Gallon.

£ d Gallons
549 .. 10 .. 6 120
33 .. 12 .. 0 18
61 .. 1 .. 0 2268
17 .. 0 .. 0
661 .. 10 .. 6

As 2268 : 661 .. 10 .. : : 1
20
2268 | 13230 | 5..10
11340
1890
12
2268 | 22680 | 10
2268
. . . . 0

Ans: 5..10

Two Persons walking together till they came to a very high Steeple, one says to the other, I wonder how many Yards high it is says his Companion, I'll soon tell you: He then set up his walking Stick, which was 1 yard 9 Inches long and the Sun shining bright he measured the Shade of the Stick which was 8 yards long; he also measured the Shadow of the Steeple and found it 172 yards long. I demand the Height of the Steeple.

Yds yd ft In Yds
As 8 : 1..0..9.. : : 172
3 43
3 860
12 688
45 5 | 7740
12 | 1548
3 | 129
43

Ans: 43 yards

Bought a Ton of Iron and Steel their being in Number 130 Bars which cost me £29..3.4d their were 70 Bars of Steel which weighed each 8lb. and cost 5d. per lb. I demand what the Iron and Steel weighed each what they cost separately what the Iron cost per lb. and what each Bar weighed one with another

1 Ton = 2240 lbs
360 lbs of Steel — 70 — 8
1680 lbs of Iron — 560

As £ : 5d : : 560 lbs

5
12 | 2800
20 | 233—4
11..13..4

£29..3..4
11..13..4
£17..10..0

As 1680 : 17..10.. : : 1

20
330
12
1680 | 4200 | 2½
3360
840
4
1680 | 3360 | 1/2
33..6..0

60 | 1680
28

Ans. 560lbs of Steel. 1680lbs of Iron. The Steel cost 11£13..4d and the Iron 17£10s. each Bar of Iron 28lbs. at 2d½ per lb

Inverse Proportion

Teacheth from three numbers given, as before, to find a fourth, between which and one of the Terms of Supposition, there shall be the same proportion as between the Terms of demand and the other Term.

Rule Multiply the Terms of Supposition together, and divide by the Terms of Demand, and the quotient is the answer or fourth number required

N.B. To distinguish whether a question belongs to the Rule of Three Direct or Inverse, observe, that, when the question is properly stated, if the third term be greater than the first and the nature of the question requires that the forth term shall be greater than the second; or if the third be less than the first, that the fourth shall be less than the second, the question belongs to the Rule of Three Direct. But if the third term be greater than the first and it appears, from considering the question, that fourth must be less than the second; or if the third be less than the first, that the fourth must be greater than the second, it belongs to the Rule of Three Inverse

If 100 Workmen can finish a piece of work in 12 days, how many are sufficient to do the same in 3 days.

As da 12 : men 100 : : da 3

12
3 | 1200
400

Ans. 400 men

How much in length that is 44 inches broad will make a square foot.

As In 144 : ft 1 : : In 44

2
9 | 288
32

Ans. 32 Inches

If 42 cwt. may be carried 36 miles for 33s how many pound. can I have carried 20 miles for the same money

As m 36 : 4 1/2 : : m 20

2
18
28
144
36
504
36
3024
1512
20 | 18144

907 .. 3 .. 3 - 4/20

Ans. 907 lb 3 oz 3 dr 4/20

A wall that is to be built to the height of 27 feet was raised 9 feet by 12 men in 6 days: how many men must be employed to finish the wall in 4 days at the rate of working.

As feet 27 : 12 : : 9

27
54
24
9 | 324
36

Ans. 36 men

A borrowed of his friend B 250£ for 7 months, promising to do him the like kindness: some time after B had occasion for 300£ how long may he keep it to be made full amends for the favour.

As £ 250 : 7 : : £ 300

7
300 | 1750
5 .. 3 .. 2 - 1/3

Ans. 5 mo 3 w 2 ds 1/3

How many yards of canvas that is ell wide, will line 20 yards of say that is 3 qrs wide

As qrs 3 : yds 20 : : 1/Ell 1/5

3
5 | 60
12

Ans. 12 yards

A Regiment of Soldiers, consisting of 900, are to have new Coates, each containing 3 yds. 2 qrs. of Cloth 3 qrs. wide, and they are to be lined with Shalloon which is 3 qrs. wide, I demand how many Yards of Cloth there are in all for their Coats, and how many Yards of Shalloon it will take to line them.

yds qrs
3 . 2
4
14
900
4/12600
3150

As 1 qr : 3150 yds :: 3 qrs
5
3/15750
5250

Ans. 3150 yds of Cloth, & 5250 yds Shalloon to line them.

If for 30s. I have 9 cwt. 3 qrs. 21 lb. carried 50 Miles, how many Pounds ought I to have carried 150 Miles for the same money.

As 30 : cwt qr lb
4
39
28
313
8 C
1113
50
150/55650,0/371
45
166
105
. . 15
15

Ans. 371 Pounds

PRACTICE

Practice is a compendious Method of working the Rule of Three Direct, when the first term is an Unit, or one; and is of general use among Merchants and Tradesmen, on account of its being the most easy and concise manner of answering such Questions as commonly occur in Business

An aliquot part of any number is such a part as being taken a certain number of times, will exactly make that number; as 1 is an aliquot part of 4, for being taken 4 times. or multiplied by 4, it produces one; and 2 is an aliquot part of 6, for being taken 3 times it makes 6, &c.

A Table of Aliquot Parts

Of a Pound

10s	is	½
6s 8d		⅓
5s		¼
3s 4d		⅙
2s 6d		⅛
2s		1/10
1s 8d		1/12
1s		1/20

A Shilling

6d	is	½
4d		⅓
3d		¼
2½d		⅛
1d		1/12

Of a Penny

2½d	is	½
¼d		1/48

Of an Hundred Weight

22rs or 56lb	is	1/2
12r 2 8lb		¼
14lb		⅛
7lb		1/16

Of a quarter of a Cwt

14lb	is	½
7lb		¼
4lb		1/7
3½lb		⅛

Case 1st

When the price is less than a Penny.

Rule

Divide the given Number by the aliquot parts of a Penny,

3456 at ¼d

¼ is ¼ | 3456
| 864
12 | 72
20 | 3 .. 12

3456 at ¼d = £3 .. 12 ..

347 at ½d

½ is ½ | 347
| 173 ½
12 | 14 .. 3½

347 at ½d = £14 .. 3½

846 at ¾d

846
| 423
½ is ½ | 211 ½
| 634 ½
12 | 3,2 .. 10½
20 | 2 .. 12 .. 10½

846 at ¾d = £2 .. 12 .. 10½

810 at ¾d

810
½ is ½ | 405
¼ is ½ | 207 ½
| 607 ½
12 | 50 .. 7½
20 | 2 .. 10 .. 7½

810 at ¾d = £2 .. 10 .. 7½

Case 2d When the price is an Aliquot part of a Shilling.

Rule Divide the given number by the Aliquot part of and the quotient is the answer in shillings, which reduce into Pounds

352 at 1½d

332

1½ w ⅛ — 44

20 | 2..4

5771 at 4d

5771

d

4 w ⅓ — 2253

20 | 112..17

3275 at 2d

3275

d

2 w ⅙ — 879-2

20 | 43..19..2

899 at 6d

899

d

6 w ½ — 449-6

20 | 22..9..6

372 at 1⅓d

372

1⅓ w ⅛ — 46..6

¼ w 1/6 — 7..9

54..3

20 | 2..14..3

827 at 4½d

827

d

4 w ⅓ — 275-8

½ w ⅛ — 34-3½

310..1½

20 | 15..10..1½

2150 at 9¾d

2150

6 w ½ — 1075

3 w ¼ — 537-6

½ w 1/8 — 89-7

¼ w ½ — 44-9½

1746..10½

20 | 87..6..10½

352 at 2½d

352

d

2 w 1/6 — 38-8

½ w ¼ — 14-8

73..4

20 | 3..13..4

2700 at 7/11d

2700

d

6 w ½ — 1330

1½ w ¼ — 337..3

6873

84..7..3

1720 at 11½d

1720

6 w ½ — 860

4 w ⅓ — 553-4

1½ w ¼ — 215

1648 4

20 | 82..8..4

Case 3. When the price is pence and farthings, and is no Aliquot part of a shilling

Rule. Find what Aliquot part of a shilling is nearest to the given Price, and divide the proposed number by it.

And if there be any remainder, consider what part it is of this Aliquot part of the given price, and divide the former quotient

Case 4th When the price is any number of Shillings under 20

Rule 1st When the price is an even number, multiply the given number by ½ of it doubling the first figure to the right hand for Shillings, and the rest are Pounds.

2nd When the price is an odd number find for the greatest even number as before, to which add ½ of the given number for the odd Shilling, and the sum is the answer

32 ℔ 1 at 2s.

32 ℔ 1
2
63 .. 4
1 at ½ 16 .. 11
81 .. 13

37 ℔ 2 at 11s.

37 ℔ 2
5
186 .. 0
1 at ½ 18 .. 12
204 .. 12

32 ℔ 1 at 14s.

32 ℔ 1
7
308 .. 14

26 ℔ 1 at 19s.

26 ℔ 1
9
237 .. 12
1 at ½ 13 .. 4
250 .. 16

Case 5th When the price is Shillings and pence, which make some aliquot part of a Pound.

Rule Divide the given quantity by the Aliquot part and the quotient is the answer in Pounds.

℔ 150 at 1s 8d

1s 8 at ⅓ ℔ 150
393 .. 16 .. 8

2 ℔ 15 at 2s 6d

2 ℔ 15
2 .. 6 at ⅛ 33 .. 7 .. 6

31 ℔ 50 at 3s 4d

31 ℔ 50
3. 4 at ⅙ 323 .. 0 .. 0

2 ℔ 10 at 8s 6d

2 ℔ 10
6 .. 8 at ⅓ 903 .. 6 .. 8

Case 6th When the price is Shillings and pence which make no aliquot part of a pound.

Rule Take the nearest less sum which is an aliquot part, and find the value of the proposed at that rate; then to sum add the amount of the remaining parts of the price, found by some of the foregoing rules, and it will give the answer required

7211 at 1s 3d

7211

1 @ 1/20	360 .. 11 .. 0
3 @ 1/4	90 .. 2 .. 9
	450 .. 13 .. 9

801 at 10s 9d

801

10 @ 1/2	400 .. 10
6 @ 1/20	24 .. 0 .. 6
3 @ 1/2	12 .. 0 3
	436 .. 10 .. 9

309 at 17s 3d

309

10 @ 1/2	134 .. 10
3 @ 1/2	77 .. 3
2 @ 1/8	30 .. 18
3 @ 1/8	3 .. 17 .. 3
	266 .. 10 3

969 at 19s 11d

969

10 @ 1/2	484 .. 10
5 @ 1/4	242 .. 5
4 @ 1/3	193 .. 16
6 @ 1/8	24 .. 4 .. 6
3 @ 1/2	12 .. 2 3
2 @ 1/3	8 1 .. 6
	964 .. 19 3

Case 7th When the price is Shillings, Pence, and Farthings.

Rule Divide the price into Aliquot parts of a Pound, or of each other and the sum of the Quotients belonging to each Aliquot rule, will be the answer required.

875 at 1s 4¾d

875

0 @ 1/20	43 .. 15
4 @ 1/3	14 .. 11 .. 8
1/2 @ 1/8	1 .. 16 .. 3 1/2
1/4 @ 1/2	0 .. 18 .. 2 3/4
	61 .. 1 .. 4 1/4

2710 at 19s 2½d

2710

10 @ 1/2	1355
8 @ 1/2	677 .. 10
4 @ 1/5	342 .. 0
2 @ 1/24	22 .. 11 .. 8
1/2 @ 1/4	5 .. 12 .. 11
	2602 .. 14 .. 7

3715 at 9s 4½d

3715

5 @ 1/4	928 .. 15
4 @ 1/5	743 .. 0
4 @ 1/12	61 .. 18 .. 4
1/2 @ 1/8	7 .. 14 .. 9 1/2
	1741 .. 8 .. 1 1/2

430 at 19s 6½d

430

10 @ 1/2	213 .. 10
8 @ 1/2	107 .. 10
4 @ 1/5	86 .. 0
6 @ 1/8	10 .. 13 .. 9
1/4 @ 1/24	0 .. 8 .. 11 1/2
	419 .. 13 .. 11 1/2

Case 8th When the price is Pounds, Shillings, Pence, and Farthings.

Rule Multiply the quantity proposed by the number of Pounds, and work for the rest by some of the former rules; and these sums added together will give the answer required.

137 at 1£ 1s. 5¾d

137

10 s ½	68..10
5 s ½	34..5
2 s 3	13..14
6 s ¼	3.. 8. 6
¼ s ¼	0.. 2.10¼
	237 .. 0.. 4¼

947 at 4£ 15.. 10¾d

947

4

3788

10 s ½	473..10
5 s ½	236..15
6 s 10	23..13..6
3 s ½	11..16..9
1 s 3	3..18..11
¼ s ¼	0..19..8¾
	4538..13..10¾

457 at 11£ 17s 9½

437

14

6398

10 s ½	322..10
3 s ½	11 4.. 3
2 s 3	4 3..14
6 s ¼	1 1.. 8..6
3 s ½	3 ..14..3
½ s 10	0 ..19 0½
	6804..10 ..9½

713 at 19£ 19.. 11¾d

713

19

13547

10 s ½	356..10
3 s ½	178 .3
4 s 3	142 ..12
6 s ⅛	17..16..6
3 s ½	8 ..18.. 3
2 s 3	3..18..10
½ s ¼	1.. 9.. 8½
¼ s ½	0..14 ..10¼
	14239 .. 3 .. 1 ¾

Case 9th

When the price that is required is a whole number, with parts annexed

Rule Work for the whole number according to the former rules, to which add ¼ ½ or ¾ of the price, according as the question requires.

2 7 3 ¼ at 2s. 6d

2 7 3

2s 6d ⅜	3 4 .. 2 .. 6
for ¼	0 .. 0 .. 7½
	3 4 .. 3 .. 1½

139 ¾ at 1£ 19s 4d

139

10s ½	6 9 .. 10
5s ½	3 4 .. 15
4s ⅕	2 7 .. 16
4s ½	2 .. 6 .. 4
for ½	0 .. 19 .. 8
for ¼	0 .. 9 .. 10
	2 7 4 .. 16 .. 10

93 ½ at 3£ 17s 8d

93

3

2 8 1 1

10s ½	4 6 8 .. 10
5s ½	2 3 4 .. 5
2s ⅛	9 3 .. 14
6s ¼	2 3 .. 8 .. 6
2s ⅓	7 .. 10 2
for ½	1 .. 18 .. 10
	3 6 4 0 .. 12 .. 6

3 7 1¾ at 4£ 13s 7d

371

4

1484

10s ½	185 .. 10
2s ⅓	37 .. 2
1s ½	18 11
6s ½	9 .. 5 .. 6
1s 6	1 .. 10 11
for ½	2 .. 6 .. 9£
for ¼	1 3 4¾
	1739 9 .. 7 ¼

Case 10th. When the quantity whose value is required is of several Denominations.

Rule Find the value of the highest Denomination, by some of the foregoing Rules; and for the others take such parts of the given price as the lower Denominations are of the higher or of each other, as is most convenient; and the several sums added, together will give the answer required

3 7 Cwt. 2 qrs. 14 lb. at 7£ 10s 9d pCwt?

£ s d

7 .. 10 .. 9

4

30 .. 3 .. 0

9

271 .. 7 .. 0

7 .. 10 .. 9

278 .. 17 .. 9

qrs 2s ½	3 .. 13 .. 4½
lb 14s ¼	0 .. 18 .. 10
	283 .. 11 .. 11½

17 Cwt 1 qr. 12 lb. at 1£ 19s 8d pCwt?

£ s d

1 .. 19 .. 8

2

3 .. 19 4

8

31 .. 14 .. 8

1 .. 19 .. 8

33 .. 14 .. 4

qrs 1s ¼	0 .. 9 .. 11
lb 9s ¼	0 .. 2 .. 3¾
4s ⅐	0 .. 1 .. 3
1s ¼	0 .. 0 .. 4¼
	34 .. 8 .. 6

23 Cwt 3 qrs. 8 lb. at 3£ 19s. 11d per Cwt

3..19..11
3
19..19..7
4
79..18..4
1..18..9
91..17..1
3 qrs 2 w/p 1..19 11 ½
1 w/½ 0..19..11 ¾
2 w/¼ 0..4..11 ¾
1 w/¼ 0..0 8 ½
93 2..8 ½

39 Cwt 0 qrs. 10 lb at 1£ 17s. 10d per Cwt?

1..17..10
4
7..11..4
9
68..2 0
3 13 6
73 13..6
8 w/¼ 0..2..8 ¼
2 w/¼ 0..0..8
73..18..10 ¼

Tare and Tell

Tare and Tett are practical rules for deducting certain allowances; which are made by Merchants and Tradesmen in selling their Goods by weights. Tare, is an allowance to the Buyer for the weight of the Box, Barrel, Bag &c, which contains the Goods bought, and is at so much, Box &c. or at so much per Cwt as at so much in the Gross weight. ...

Tare, is an allowance of 4 lb. in every 104 lb for waste, dust &c

Cloff, is an allowance, after Tare and Tett deducted, of 2 lb upon every 3 Cwt

Gross Weight, is the whole weight together with the Box Barrel, Bag, &c that contains them

Suttle is when part of the allowance taken from the Gross.

Neat Weight is what remains after all ...

Case 1st When the Tare is at so much p.c. Box Barrel Bag &c.

Rule Multiply the number of Boxes Barrels &c by the Tare, and Substract Product from the gross and the remainder will be the Neat Weight required.

In 241 Barrels of Figs, each 0 Cwt. 3 qrs 19 lb Gross, Tare 16 lb p. Barrel, how many pounds neat

0 . 3 . 19
12 × 10 × 2 + 1 = 241

11 . 0 . 4
10

110 . 1 . 12
2

220 . 2 . 24
0 . 3 . 19

221 2 . 15
21 2 . 2

200 . 0 . 13
4

800
28

6403

What is the neat Weight of 14 Hhds of Tobacco, each 3 Cwt 2 qrs 17 lb. Gross Tare 100 lb. per Hhd

lb lb Cwt qr lb
14 × 100 = 1400 ÷ 112 = 12 . 2 . 0 Tare

Cwt qrs lb
3 . 2 . 17
7 × 2 = 14

39 . 2 . 7
2

79 . 0 14 Gross
12 2 0 Tare

66 . 2 . 14

Ans: 66 Cwt 2 qrs 14 lb

Case 2nd When the Tare is at so much Pct. Cwt

Rule Divide the Gross Weight by the Aliquot Parts of a Cwt and substract the sum of the Quotients from the Gross, and the remainder will be the Neat Weight required

What is the Neat Weight of 1 Barrels of Potash, each Weighing 2 Cwt 1 lb Gross, Tare being at 14 lb Per Cwt.

201
7
1407

8 lb is 1/4 — 100 8
2 is 1/4 — 25 2
125 10
12 81 6

In 25 Barrels of Figs each 2 Cwt. 1 qr. Gross, Tare 16 lb Pct Cwt how much neat.

Cwt qr lb
2 1 0
3
11 . 1 . 0
3
36 . 1 0

14 is 1/8 — 1 . 0 3 8
2 is 1/7 — 1 . 0 . 0 8
8 . 0 . 3 16
48 . 0 24

Case 3d When there is an allowance both of Tare and Tett

Rule Subtract the Tare from the Gross weight by the foregoing Rules, and the remainder or Suttle, divide by 26, gives the Tett, which being subtracted from the Suttle, leaves the neat Weight required.

In 132 Cwt 1 qr 3 lb Gross, Tare 10 lb Per Cwt and Tett as usual how much neat.

132 .. 1 .. 3 Gross
8 w 1/4 10 .. 3 .. 14
2 w 1/2 2 .. 2 .. 24
13 .. 2 .. 10 Tare
26) 138 2 .. 21 Suttle
3 .. 1 .. 9 Tett
133 .. 1 .. 12 Answer

In 7 Casks of Prunes, each weighing 3 Cwt 1 qr 12 lb Gross Tare 17 1/2 lb Per Cwt and Tett as usual how much Neat.

3 .. 1 .. 12 Gross
7
23 0 .. 7
14 w 1/2 2 .. 3 .. 14
3 1/2 w 1/4 0 .. 2 .. 24
3 2 .. 10 Tare
26) 19 .. 1 .. 24 Suttle
0 2 27 Tett
18 .. 2 .. 25 Answer

Case 4th When Tare, Tett, and Cloff are all allowed

Rule Deduct the Tare and Tett, as before, and Divide the remainder or Suttle, by 168, and the Quotient is Cloff which being subtracted from the Suttle, the remainder is the Neat Weight.

In 19 Chests of Sugar, each containing 13 Cwt 1 qr 17 lb Gross, Tare 13 lb Per Cwt and Tett and Cloff as usual how much Neat, and what is the value at 3 3/4 d Per lb.

13 .. 1 .. 17
9
120 2 .. 13
2
241 .. 0 .. 26
13 .. 1 .. 17
254 .. 2 .. 13 Gross
46
8 w 1/4 — 18 .. 0 .. 20
4 w 1/2 — 9 .. 0 .. 10
1 w 1/4 — 2 .. 0 .. 2
29 2 .. 4 Tare
26) 225 .. 0 .. 11
8 .. 2 .. 17 Tett
168) 216 .. 1 .. 22 Suttle
1 .. 1 .. 4 Cloff
215 .. 0 .. 18

lb. 1 : 5 3/4 :: Cwt 215 .. 0 .. 18
4 4
23 860
28
6888
1721
24098
23
72294
48196
4) 8854254
12) 1388631/2
29) 1154 7/12 — 11
577 .. 7 .. 11 1/2

29 Parcels, each Weighing 3 Cwt 0 Qrs 14 lb Gross; what is the value the neat weight at 1 £ 11 s 6 d Per Cwt. allowing 8 lb Per Cwt for tare, for tare, and Trett and Cloff as as usual,

Cwt qr lb
3 .. 0 .. 14
4
12 .. 2 .. 0
7
87 2 .. 0
3 .. 0 .. 14
90 .. 2 .. 14 Gross
8 lb 4 6 .. 1 .. 23 Tare
26184 0 .. 17
3 .. 0 .. 26 Trett
1681 80 .. 3 .. 19 Suttle
0 .. 1 .. 23 Cloff
80 .. 1 .. 22 Neat Wt

lb	£	s	d	Cwt qr lb
112 :	1	.. 11	.. 6	: : 80 .. 1 .. 22

20 4
31 321
28
12 9010
378 642
9010
378
72080
62070
277030

112 | 3405 7 8 0 | 12 30408
336
457
448
980
896
84
4

112 | 336 | 3/4
336
....

20	2534 .. 0
	126 .. 14 .. 03/4

Interest

Simple Interest is an Allowance made by the Borrower of any Sum of Money to the Lender, according to a certain Rate Per annum; which, by law must not exceed 3 Per Cent the is 8 £ for the use of 100 £ 1 Year; 10 £ for the use of it 2 Years and so on..

Principal is the Money lent.
Rate is the sum Per Cent. agreed on.
Amount is the Principal and Interest added together.

Rule 1st. Multiply the Principal by the Rate, and divide the product by 100 and the Quotient is the Interest for 1 Year.

2nd. Multiply the Interest for 1 Year by the number of Years given, and the product is the Interest for that time.

3rd. If parts of a Year, as Months or days be given they must be worked for by the aliquot parts of a Year or by the Rule of Three Direct.

What is the Interest of 230£ 10s for 1 Year 1a 4 per Cent per annum

230 .. 10
4
9,22 0
20
4,4 0
12
4,8 0
4
3,20

Ans. 9 . 4 . 4 3/4

What is the Interest of 347. 13 for 3 Years at 5 per Cent per Annum

347 .. 13
20
27,38 . 23
20
7,13
12
9,0 . 0

27 . 7 . 9
3
82,3 .. 3

What is the amount of 690 £ for 3 Years, at 4½ per Cent per Annum

690
4½
2760
345
31,05
20
1,00

31 . 1
3
93 . 3
690 0
783 . 3

What is the Interest of 205 : 13 for ¼ of a Year at 4 per Cent per Annum

205 : 13
4
8,23 . 0
20
4,6 . a
12
7,20
4
3,20

8 . 4 . 7
2 . 1 . 1 3/4

What is the amount of 120£ 10s for 2½ Years, at 4¾ per Cent per Annum.

120 .. 10
4¾
482 . 0
90 . 7 .. 6
3,720 . 7 .. 6
20
14,47
12
5,70
4
2,80

5 14 . 3½
2½
11 . 8 .. 11
2 . 17 2¾
14 . 6 .. 1¾

120 .. 10
14 .. 6 .. 1¾
134 .. 16 .. 1¾

What is the Interest of 47£ 10s for 4 Years and 32 Days at 4½ per Ct

47 . 10
4½
190 . 0
23 .. 15
213 .. 15
20
2,73
12
900

As 365 : 2 . 2 . 9 : : 32
20
42
12
513
32
1026
2565
12
365 | 26676 | 73
2555
1120
1095
31

1st Years 2 . 2 . 9
4
4 D° Interest 8 . 11 .. 0
32 Days D° 6 . 1
8 . 17 .. 1

What is the Amount of 200 Guineas for 4 Years 7 Months and 28 Days, at 4½ per Cent.

£ s
210 . 0
4½
840 . 0
105 . 0
9,450
20
9,00

£ s d
9 . 9 . 0
4
37 . 16 . 0
month
6 w & 4 . 14 . 6
1 w & 0 . 15 . 9
43 . 0 . 3

Days
As 365 : £ 9 . 9 :: 28
20
189
12
2268
28
11340
4536
365 | 36700 | 133
365
2020
1825
1950
1825
125
4
365 | 400 | 1/4
365
35

210 . 0 . 0
43 . 6 . 3
12 . 11¼
233 . 19 . 2¼

A Gentleman left his niece by will 338 £. 15 s to be paid her when she came to age, with Interest at 4 per Cent now she came to age in 3 Years 9 Months and 21 Days what has she to receive in all.

£ s
550 . 15
4
2235 . 0
20
7,00

£ s d
22 . 7 . 0
3
110 . 15 . 0
m
6 w & 11 . 3 . 6
3 w & 3 . 11 . 9
128 . 10 . 3

As 365 : £ 17 . 10 s :: 261
20
350
12
5364
21
53004
10728
365 | 1126440 | 308
1095
3144
2920
224
4
896
730
166

£ 338 . 15 s d
128 . 10 . 3
1 . 5 . 8
688 . 10 . 11½

What is the Interest due upon an Exchequer bill of 450 £ at 3¾ per Cent per Annum for 2 Years and 0 Days

£ s
450 . 0
3¾
1350 . 0
337 . 10
16875
20
17,50
12
6,00

£ s d
16 . 17 . 0
2¾
33 . 15 . 0
8 . 8 . 9
4 . 4 . 4¾
40 . 8 . 0 4

Days
As 365 : 16 . 17 . 0 :: 67
20
337
12
4050
67
28350
24300
365 | 2713500 | 743
2555
1583
1460
1230
1095
135
4
365 | 620 | 1/4
365
255

£ s d
46 . 8 1½
3 . 1 . 11 . 4
49 . 10 . 0 ¾

What is the Interest due upon an Invoice Bond of 300 £ value at 3½ per Cent per Annum from September 30 1798 to June 18 1799

£
300 . 0
3½
15,00 . 0
250 . 0
17,50 . 0
20
10,00

As 365 : £ 17 . 10 s :: 261
20
350
261
30
2100
700
365 | 91350 | 250
730
2835
1825
1010
12
365 | 12000 | 34
1095
105

If a Broker sells Goods to the Amount of 308£ 17s 10d what is his demand at 1½ per Cent.

£
308 .. 17 .. 10
10 is 1p — 25 4 .. 8 .. 11
7 .. 13 .. 6 .. 9
20
12,66
12
8, 0 .1

Ans: 7£ 12s 8d

If a Broker sells Goods to the Amount of 1000 Guineas what is his demand at ⅝ per Cent.

1000 Guineas = 1050 .. 0 .. 0
5
8 | 3 26 .. 0 .. 0
6,36 .. 5 .. 0
20
11,25
12
3 .. 0 .. 0

Ans: 6£ 11s 3d

What is the Brokerage of 1057£ 18s 6d at 1⅛ per Cent.

105£ .. 13s 6½
3/8 = 679 .. 17 .. 2 ½
1,67 .. 12 .. 9
20
13,32
12
6, 3 3
4
¼, 3 2

If I allow a Broker 1¼ per Cent what is his demand for disposing of Goods to the value of 729£ 10s 6d.

£
729 .. 10 .. 6
1¼
729 .. 10 .. 6
182 .. 7 .. 7 ½
9, 11 .. 18 .. 1 ½
20
2,38
12
4,57
4
½ 30

Ans: 9£ 2s 4½d

Insurance

Insurance is an allowance of so much per Cent. given to certain Persons and officers who engage to make good the loss of Ships, Houses, or Merchandizes, which may happen from Storms Fire, &c.

What is the Insurance of goods at 10¾ per Cent.

£
900 .. 0 .. 0
10 is 1p — 90 .. 0 .. 0
½ is 50 — 4 .. 10 .. 0
¼ is 2 — 2 .. 5 .. 0
96 .. 15 .. 0

Ans: 96£ 15s 0d

What is the Insurence of an East-India Ship and cargo valued at 35727£ 17s 6 at 17⅞ per Cent.

£
35727 .. 17 .. 6
10 is 1p — 3572 .. 15 .. 9
5 is ½ — 1786 .. 7 .. 10 ½
2 is ⅓ — 714 .. 11 .. 1 ½
⅞ = 312 .. 12 .. 4 ½
6386 .. 7 .. 1 ½

Ans: 6386£ 7s 1½d

Discount

Discount is an allowance made for the Payment of any sum of Money before it becomes Due, according to a certain Rate per Cent. agreed on between the Parties concern'd

The present worth of any Sum, Debt, Due some time hence, is such a Sum as, if put to Interest, for that time, at a certain Rate per Cent would amount to the Sum or Debt then Due.

Rule. 1st. As the Amount of 100£ for the given Rate and Time, is to 100£

So is the given Sum, or Debt, to the Present worth.

2nd. Subtract the Present Worth from the given sum and the D Remainder is the Discount required

Or thus

As the Amount of 100£ for the given rate and time, is to the Interest of 100£ for that time

So is the given Sum or Debt to the Discount required

What is the Present Worth of 15£ payable in 1/4 year, discounting at 3 per Cent.

£ s d
3 . 0
As 3 is to 1/4 — 1 . 10

£ s d
As 101 . 5 : 1 . 5 :: 130 . 0
20 20 20
2025 25 3000

2025 | 7 3 0 0 0 | 37
0 0 7 3 1 . 17
1 4 2 5 0
1 4 1 7 3
. . 7 3
12
2023 | 9 0 0 | 0
4
2023 | 3 6 0 0 | 7/4
2 0 2 3
1 5 7 3

£ s d
15 0 0
1 . 17 . 0 1/4
148 2 . 11 3/4

Ans. 148£ 2s 11¾d

What is the Present Worth of 75£ Due 15 Months at 3 per Cent.

£ s d
3 . 0
As 3 is to 4 — 1 . 5
6 3

£ s d
As 106 3 : 6 3 : : 75 . 0
20 20 20
2123 125 1300
1300
6 25 00
125
2123 | 1 8 7 5 0 0 | 20
1 7 0 0 0 | 8 8
1 7 3 0 0 4 . 8 . 2 3/4
1 7 0 0 0
. . 3 0 0
12
2123 | 6 0 0 0 | 2
4 3 3 0
0 6 5 0
4
6 6 0 0
6 3 7 5
2 2 5

£ s d
75 . 0 . 0
4 . 8 . 2 3/4
7 0 . 11 . 9 3/4

Ans. 70£ 11s 9¾d

What is the discount on 35£ 10s. due September 8, this being July 4, reckoning Interest at 3 per Cent. per Annum.

From Sept. 8th to July 4th is 299 Days

As 365 : 5.0 :: 299

£ s d
4 . 1 . 11
3 . 7 . 3¼
. 14 . 7¾

What ready money will discharge a debt of 543£ 7s due 48 . 10 days hence at 4½ per Cent. per Annum

As 365 : 4 . 12 . 6 :: 18 : 4 . 6½

£ s d
543 . 7 . 0
9 . 8 . 10¼
Answer 533 . 18 . 1¾

Bought a quantity of Goods for 150£ ready money, and sold them again for 200£ Payable 3/4 of a year hence, what was the gain in ready money, supposing discount to be made at 1/3 per Cent.

£ s d
5 . 0 . 0
2 . 10 . 0
1 . 5 . 0
3 . 15 . 0

As 103 . 15 . 0 : 3 . 15 . 0 :: 200

£ s d
150 . 0 . 0
7 . 4 . 4¾
157 . 15 . 7¼ [sic]

£ s d
200 . 0 . 0
137 . 4 . 6¾
42 . 15 . 3¼

Answer 42£ 15s 3d ¾

What is the Present Worth of 120 £ Payable as follows, viz 30 £ at 3 Months, 30 £ at 5 Months, and the last at 8 Months; discounting at 6 per Cent

£ s d
6 . 0 . 0
9 ∾ 1/4 1 . 10 . 0

As 101 . 10 : 1 . 10 :: 30
20 20 20
2030 30 . 1000

203,0) 3 0 0 0 (14 . 9 3/4
2 0 3
. 9 7 0
8 1 2
1 5 8

203) 1 8 9 0 (9
1 8 2 7
. . 6 3

203) 2 7 0 1/4
2 0 3
. 7 3

£ s d
6 ∾ 1/2 0 . 0 . 0
2 ∾ 1/3 3 0 . 0
1 . 0 . 0
4 0 . 0

As 104 : 4 . 0 :: 20
20
80 .
20
104) 1 6 0 0 (15
1 0 4
. 5 6 0
5 2 0
. 4 0
12
104) 4 8 0 (4
4 1 6
. 6 4
4
104) 2 5 6 (1/2
2 0 8
. 4 8

£ s d
1/2 6 . 0 . 0
4 ∾ 1/2 2 . 0 . 0
1 ∾ 1/4 0 . 10 . 0
2 . 10 . 0

As 102 . 10 : 2 . 10 :: 30 . 0
20 20 20
2050 30 1000

205) 3 0 0 0 (24
4 1 0
. 9 0 0
8 2 0
. 8 0
12
205) 9 0 0 (4
8 2 0
1 4 0 .
4
205) 5 6 0 (1/2
4 1 0
1 5 0

50 £ at 3 Months = 0 . 14 . 9 1/4
50 £ at 3 25 = 1 . 4 . 4 1/2
20 £ at 8 D = 0 . 13 . 4 1/2
2 . 14 . 6 1/4

£ s d
120 . 0 . 0
2 . 14 . 6 1/4
117 . 5 . 5 3/4

Answer 117 £ 5 . 5 3/4

Compound Interest.

Compound Interest is that which arises from the Principal and Interest taking together, as it becomes due at the end of each stated time of Payment.

Rule 1st. Find the Amount of the given principal, for the time of the first Payment, by Simple Interest.

2nd. Consider this Amount as the Principal for the second payment, whose Amount calculate as before and so on through all the Payment to the last, still accounting the last Amount as the Principal for the next Payment

What is the Compound Interest of 760£ 10s Forborne 4 Years at 4 per Cent:

£
760 .. 10
4
30,42 .. 0
20
8,40
12
4,80
4
¼,20

£ s d
760 .. 10 .. 0
30 .. 8 .. 4¼
790 .. 18 .. 4¼
4
31, 63 .. 13 .. 7 ¾
20
12,73
12
12,73
4
¾,32

£ s d
790 . 18 . 4¼
31 .. 12 .. 8¾
822 .. 11 1½
4
32,90 .. 4 .. 0
20
18,04
12
0,54
4
¾ 16

£
822 .. 11 .. 1½
32 .. 18 .. 0½
855 .. 9 . 2
4
34,21 .. 16 .. 8
20
4,36
12
4,40
4
¼ 60

£ s d
30 .. 8 .. 4¾
31 .. 12 .. 8¾
32 .. 18 .. 0½
34 .. 4 .. 4¼
129 .. 3 .. 6¼

What is the Amount of 15£ 10s for 9 Years at 3½ per Cent Per Annum Compound Interest:

£ s
15 . 10
3½
40 . 10
7 . 13
54 .. 5
20
10,85
12
10,20

£ s d
15 . 10 .. 0
10 . 10
16 .. 0 .. 10
3½
48 .. 2 .. 6
8 .. 0 .. 5
56 .. 2 .. 11
20
11,22
12
2,73
4
¾,00

£ s d
16 .. 0 .. 10
11 .. 2½
16 .. 12 .. 0¾
3½
49 .. 16 .. 2¼
8 .. 6 .. 0¼
58 .. 2 .. 2½
20
11,62
12
7,46
4
¼ 88

£ s d
16 .. 12 .. 0¾
11 .. 7¼
17 .. 3 .. 8
3½
51 .. 11 .. 0
8 .. 11 .. 10
60 .. 2 .. 10
20
12,02
12
0,34
4
¼,36

£ s d
17 . 3 . 8
12 .. 0¼
17 . 15 . 8¼
3½
53 .. 7 .. 0¾
8 . 17 .. 10
62 .. 4 .. 10¾
20
12,44
12
5,33
4
¼ 55

£ s d
17 . 15 . 8¼
12 .. 5¼
18 .. 8 .. 1½
3½
55 .. 4 .. 4½
9 .. 4 .. 0¾
64 .. 8 .. 5¼
20
12,88
12
10,68
4
½ 45

£ s d
18 . 8 . 1½
12 . 10½
19 .. 1 .. 0
3½
57 .. 3 .. 0
9 . 10 .. 6
66 . 13 . 6
20
13,33
12
4,02

£ s d
19 .. 1 .. 0
13 .. 4
19 . 14 .. 4
3½
59 . 3 .. 0
9 . 17 .. 2
69 .. 0 .. 2
20
13,80
12
9,62
4
½,48

£ s d
19 . 14 . 4
13 .. 9½
20 .. 8 .. 1½
3½
61 . 4 . 4½
10 .. 4 .. 0¾
71 .. 8 . 5¼
20
14,28
12
3.41
4
¼,64

£ s
20 . 8 . 1½
0 .. 14 .. 3¼
21 2 4¾

What is the Amount Intchest of 410 £ for boon for 2½ Years at 4½ per Cent per Annum; the Intchest payable half Yearly.

£	s	d
410	10	0
		2¼
820	0	0
102	10	0
9, 22	10	0
20		
4, 50		
12		
6, 00		

£	s	d
410	10	0
9	4	6
419	4	6
		2¼
838	9	0
104	10	1½
9,43	5	1½
20		
8, 05		
12		
1, 8 1		
4		
¾ 4, 2 0		

£	s	d
419	4	6
9	8	7¾
428	13	1¾
		2¼
857	0	3½
107	3	3¼
9,04	9	0¾
20		
12, 8 9		
12		
10, 7 4		
4		
½ 2, 9 9		

£	s	d
428	13	1¾
9	12	10½
438	6	0¼
		2¼
876	12	0½
109	11	5
9,86	3	6½
20		
17, 23		
12		
2, 8 2		
4		
¾ 4, 3 0		

£	s	d
438	6	0¼
9	17	2¾
448	3	3
		2¼
896	6	6½
112	0	9¾
10,08	7	3¾
20		
1, 67		
12		
8, 07		
4		
31		

£	s	d
9	4	0
9	8	7¾
9	12	10½
9	17	2¾
10	1	8
48	4	11

Find the several Amounts of 30 £ payable Yearly half Yearly and quarterly, being forbearn 3 Years, at 5 per Cent per Annum, Compound Intcrest.

£	s	d
30	0	0
3		
2,30		
120		
10,00		

£	s	d
30	0	0
2	10	
32	10	
3		
262	10	
20		
12, 5 0		
12		
6, 0 0		

£	s	d
32	10	0
2	12	6
35	2	6
3		
2,75	12	6
20		
15, 12		
12		
1, 5 9		
1 2 0 8		

£	s	d
35	2	6
2	15	1½
37	17	7½
3		
1289	8	1½
20		
17, 8 8		
12		
10, 5 4		
1 2 3 0		

£	s	d
37	17	7½
2	17	10½
60	15	6
3		
3,03	17	6
20		
9, 7 7		
12		
9, 3 9		
½ 2 2 0		

£	s	d
60	15	6
3	0	9½
Yearly Amo: 63	16	3¼

£	s	d
30		
2½		
100		
2, 5		
1, 2 5		
20		
5, 00		

£	s	d
30	0	0
1	5	0
31	5	0
2½		
31	5	0
25	12	6
1, 2 8	2	6
20		
3, 6 2		
12		
7, 5 0		
4		
½ 3 0 0		

£	s	d
31	5	0
1	5	7½
32	10	7½
2½		
105	1	3
26	5	3¾
1,31	6	6¾
20		
6, 2 6		
12		
3, 1 8		

£	s	d
32	10	7½
1	6	3
33	16	10½
2½		
107	13	9
26	18	5½
1,34	12	2½
20		
6, 9 2		
12		
1, 0 6		

£	s	d
33	16	10½
1	5	11
35	3	9½
2½		
110	7	7
27	11	9¾
1,37	19	4¾
20		
7, 3 9		
12		
7, 1 2		

£	s	d
35	3	9½
1	7	7
36	11	4½
2½		
113	2	9
28	5	8
1,41	8	5
20		
8, 2 8		
12		
3 4 1		
4		
¼ 1, 6 4		

£	s	d
36	11	4½
1	8	3¼
37	19	7¾
2½		
115	19	3½
28	19	9¾
1,44	19	1¼
20		
8, 9 9		
12		
11, 0 9		
4		
¾ 5 1		

£	s	d
37	19	7¾
1	8	11¾
39	8	7½
2½		
118	17	3
29	14	3¾
1,48	11	0¾
20		
9, 7 1		
12		
5, 5 8		
4		
½ 3 3		

£	s	d
39	8	7½
1	9	8½
60	18	4
2½		
121	16	8
30	9	2
1,62	5	10
20		
10, 4 3		
12		
5, 5 0		
4		
½ 2 0 0		

£	s	d
60	18	4
1	10	5½
62	8	9½
2½		
124	17	7
31	4	4¾
1,56	1	11¾
20		
11, 2 1		
12		
2, 6 3		
4		
½ 3 3		

£	s	d
62	8	9½
1	11	2¼

Equation of Payments

Equation of Payments is the finding a time, to pay at once, several Debts due at different times, so that no loss be sustained by either Party

Rule Multiply each Payments by the time at which it is due; then divide the sum of the Products by the sum of the Payments, and the Quotient will be the time required.

A owes B 52£. 7s 6d to be paid in 4½ Months, 80£ 10s to be paid in 5 months what is the equated time to pay the whole

A owes B 52£ 7s 6d to be paid in 4½ months 80£ 10s to be paid in 5½ months and 76£ 2s 6d to be paid in 3 months, what is the equated time to pay the whole

52. 7. 6 × 4½ = 235. 1. 9
80. 10. 0 × 5½ = 441. 15. 0
76. 2. 6 × 3 = 380. 12. 6
209. 0. 0 897. 1. 3

209) 897. 1. 3 (4 m 8 days
836
61
28
491
123
209) 1721 (8
1672
49

B owes A 240£ to be paid in 6 months, but in 1 month and a pays him 60£ and in 4½ Months 80£ more, how much longer than 6 months should B in equity defer the test.

£ £
60 × 1½ = 90. 0
80 × 4½ = 360. 0
140 140) 450. 0 (3 m
420
30

A Debt is to be Discharged thus, viz ½ at three Months but five Months, and the Rest at six Months what is the equated Time for the whole

½	at	3 m	1½
⅓	at	5	1 2/3
⅙	at	6	1
			4 1/6

BARTER.

Barter is the exchanging of one Commodity for another, and directs Traders so to proportion their Goods, that neither Party may sustain loss.

Rule 1st Find the value of that Commodity whose quantity is given; then find what quantity of the other, at the rate proposed, you may have for the same Money.

2nd *When* one has Goods at a certain Price ready Money, but in bartering values them at something more find what the other ought to rate his Goods at, so as to be on an equal Footing with the former.

Examples

How much Tea, at 9s: 6d ℔ can I have in Barter for 4 cwt 2 qrs of Chocolate, at 4s per ℔.

cwt qrs
4 2
4
18
28
144
36
504

504
2016

9 | 2016
7 | 224
28 | 32
4 | 8
2 cwt

How many Reams of Paper, at 2.9½ per Ream, must be given in barter for 37 Pieces of Irish cloth at 1.12.4 per piece.

A Merchant hath 1000 yards of canvas at 9½d. per yard, which he barters for serge at 10¼d per yard how many yards must he receive.

BARTER

As 1 piece : 1.12.4 :: 37 pieces
20
32
12
388
37
2716
1164
12) 14356
20) 1196.4
59.16.4

As 2.9½ : 1 ream :: 59.16.4
12
33
2
67

20
1196
12
14356
2
67) 28712 (428 36/67
268
191
134
572
536
36

Ans. 428 36/67

As 1 yd : 9½ d :: 1000 yds
2
19
9000
1000
2) 19000
12) 9500
20) 791.8
39.11.8

As 10¼ : 1 :: 39.11.8
4
41
20
791
12
9500
4
41) 38000 (926 34/41
369
110
82
280
246
34

Ans. 926 34/41

A and B Barter, A hath 41 cwt of hops at 30s. Per cwt for which B gives him 20£ in money, and the rest in Prunes at 5d. per lb what quantity of Prunes must A receive.

As 1 cwt : 1.10 :: 41
20
30
41
30
120
20) 1230
61.10

£ s
41.10
20.0
41.10

As 5 d : 1 lb :: 41.10
20
830
12
5) 9960
28) 4) 1992
7) 498
4) 71.4
17.3.4

Ans. 17 cwt 3 qrs 4 lb.

A has a quantity of paper of neat 1000 lb a 17d. Per lb which he Barters with B for two sorts of goods, the one at 5 the other at 8 d Per lb and to have ⅓ in money and of each sort of goods an equal quantity and how many lb of each must he receive, and how much in money.

As 1 lb : 17 d :: 1000 lb
17
11200
1500
12) 27200
20) 2266.8
3) 113.6.8
37.15.6½

£ s d
113.6.8
37.15.6½
75.11.1½

As 13 d : 1 lb :: 75.11.1½
4
52
20
1511
12
18133
4
52) 72534 (1394
52
205
156
493
468
254
208
46

Ans. 1394 lb and 37£ 15.6½d.

Two Merchants, A and B, barter; A has Sugar worth 4£. per Cwt. ready Money but in Barter he will have 4£ 5s. per Cwt. B has French Wine worth 5£ per Ahm; how much must he advance his Wine to equal the Advance of his Sugar in Barter

As £ £ s
4 : 45 :: 5
20 5
80)225 (2,10.3
160
·65
20
80)1200(16
80
500
480
·20
12
80)240(3
240
...

Ans. 2£ 16s 3d

A Cloth Cambles, at 5s. per Dozen, ready Money; but in Barter he would have 5s 6d per Dozen: D hath Cotton at 9d per lb ready Money; I demand what D must rate his Cotton at per lb that his Profit may be equivalent with Cs?

As 6 : 9 :: 6.6
12 12
72 78
9
72) 702 (9¾
648
54
4
72) 216 (¾
216
...

Ans. 9¾d

Loss and Gain

Loss and Gain is a rule that discovers what is got or lost in the buying or selling of Goods, and instructs Merchants and Traders to raise or pull the price of their Commodities, so as to gain or lose so much Per Cent

Questions in this rule are performed by the rule of three direct

If at 3s 6d. in the Pound profit, how much Pr Cent

As £ £ d
1 : 100 :: 3.6
20 12
20 42
12 100
240 240)4200(17.10.
24
180
168
·12
20
24)240(10s
24
...

If a lb of Tobacco cost 16d. and is sold for 20d. what is the gain Pr Cent.

20
16
·4

As 16 : 100 :: 4
4
16)400(25£
32
·80
80

Bought Cloth at 7s 6d Per Yard, which not proving so good as I expected, I am resolved to lose 17½ Per Cent. by it: how must I sell it Per Yard.

£ s
100.0
17.10
82.10

£ s d £ s
As 100 : 7.6 :: 82.10
20 12 20
2000 90 1650

2000) 148500 (74 / 6.2
140
85
80
5
20) 4 (¼
20
20

Ansr 6s 2¼d

Bought goods at Guineas Per Cwt. and sold them again retail at 3¼d Per lb. what was the gain Per Cent.

lb £ s lb
As 112 : 2.2 :: 1
20
42
12
112) 504 (4½
448
56
4
112) 224 (½
224

3¼
4½
¾

d £
As 4½ : 100 :: ¾
4 20
18 2000
3
18) 6000 (333 / 16.13
54
60
54
60
54
6
12
18) 72 (4
72

Ansr 16£. 13s 4d

If I buy 17½ Cwt of Sugar for 35 Guineas, and retail it at 7½d per lb what shall I gain per Cent

c qr £ s lb
As 17.2 : 36.15 :: 1
4 20
70 735
28 12
560 1960) 8820 (4½
140 784
1960 98
4
196) 392 (½
392

7½
4½
3

d £ d
As 4½ : 100 :: 3
4 12 4
18 18) 1200 (66 12
108
120
108
12
20
18) 240 (13
18
60
54
6
12
18) 72 (4
72

If I buy Tobacco at 10 Guineas per Cwt. at what rate must I retail it per lb. to gain Twelve per Cent.

lb £ s
As 112 : 10.10 :: 1
20
112) 210 (1.10½
112
98
12
112) 1176 (10
112
56
4
112) 224 (½
224

£ s d
As 100 : 1.10½ :: 112
12
22
4
90
100) 1008.0 (100
10
08
2.1

Wrong

£ £ s d s d
As 100 : 112 :: 1.10½ := 2.1

Ansr 2s 1d