

**ARITHMETICAL EXAMPLES
FOR THE
USE OF MARLBOROUGH
COLLEGE. PART I**

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Arithmetical examples for the use of Marlborough college. Part I by David Nutt

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DAVID NUTT

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COLLEGE. PART I**

ARITHMETICAL EXAMPLES

FOR

THE USE OF

MARLBOROUGH COLLEGE.

PART I.

LONDON:

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1866.

181. g. 227.



I.

MISCELLANEOUS EXAMPLES

IN THE FIRST FOUR RULES.

1. Reduce 333333 square yards to acres.
2. If a sovereign weighs 5 dwt. 8 gr., what is the value of 106 lbs. 9 oz. 16 dwt. of the same metal?
3. How many pounds, shillings, pence and farthings in 19 guineas, 13 crowns, 21 florins, 16 shillings and 11 farthings?
4. A merchant bought 7 chests of tea, containing respectively 25 cwt. 1 qr. 17 lbs.; 152 lbs. 13 oz.; 24 cwt. 2 qr. 19 lbs.; 29 cwt. 27 lbs.; 37 cwt. 1 qr. 1 lb. 10 oz.; 2 tons 13 cwt. 88 lbs. and 1625 lbs. 7 oz. Find the whole weight of tea bought.
5. From June 18. 1815 to Dec. 25. 1864, how many days?
6. Divide 3964 tons 17 cwt. 1 qr. 11 lbs. by 19 and by $27\frac{1}{4}$.
7. The earth describes every year an orbit 597,600,000 miles long; what is its average rate of motion per hour?
8. If 196 cwt. of sugar cost £ 735, what will one cwt. cost?
9. The Austrian National Debt amounts to 2,306,236,856 florins. Express its amount in words, reduce its value to English Money (an Austrian florin = $\frac{1}{8}$) and find how long it would take to count at the rate of 96 florins a minute, working 10 hours a day.
10. The remainder of a division is 37, the quotient 326, the divisor $2\frac{1}{4}$ times the sum of both. Find the dividend.

11. Multiply 379,864 by $17,346\frac{3}{4}$.
12. Find the cost of 49,000 cubic feet of gas at $4/7$ per 1000.
13. Find the value of 11 chests of tea, each containing 39 lbs., at $5/7\frac{1}{4}$ a lb.
14. The fares of 15 persons travelling the same distance amounted to £8. 8. 9; what was each person's share, if five of them travelled half-price?
15. The distance of Herschel from the Sun is one thousand, eight hundred and ten millions of miles. Find how long it will take a ray of light to reach the planet, at the rate of 192,268 miles per second?
16. An old miser left his daughter a writing-table, in which there were found 13 drawers, in each drawer 7 divisions and in each division 3 purses each containing 70 pounds in gold, 14 crowns, 3 half-crowns and 217 pennies. Find the value of the legacy.
17. Arrange the figures 194,678 in the six different ways in which 194 are the first three figures in order, and in the six different ways in which 678 are the last three figures in order; and add the twelve arrangements together.
18. How many herrings can be bought for $2/6$ at 2 for three half-pence — and what would be the value of 10,000 at the same rate?
19. The total value of coal raised annually amounts to £ 20,908,803. 10. and the weight of it to 83,635,214 tons. Find the average value per ton, and the total increase in value represented by a rise of 6d. per ton.
20. There are 250,000 persons employed in coal mining; find their average receipts per annum.
21. A man bought 1000 yards muslin at $3/7\frac{1}{4}$, and sold it at a profit of $2\frac{1}{4}$ d. a yard. Find the whole amount received and total gain.

22. Divide 57,163,094,567,108 by 347,180.
23. Multiply 97 Miles, 4 furlongs, 12 poles by $17\frac{1}{4}$.
24. In £2137. 15. $4\frac{1}{4}$ how many half-crowns, florins, shillings, fourpenny-pieces and farthings?
25. Find the value of 297 chests of tea at £19. 7. 3 a chest.
26. The aggregate value of our exports from the twelve chief ports is £106,962,555; of this London exports £31,523,812 and Liverpool £50,297,135; what is the average value of the export trade of the others?
27. Multiply 98,756 by 60,324, and find what number added to the result will make it divisible by 90,000 without remainder.
28. If prize money to the amount of £1785 be divided equally among 126 seamen, how much will each receive?
29. Find the cost of 37 cows at £23. 5. $7\frac{1}{4}$ each.
30. A gentleman whose average expenditure is £3. 4. $9\frac{1}{4}$ per week saves every month £15. 7; find his annual income.
31. Divide 376 acres 2 roods 28 poles by 19.
32. The earth is distant 95 millions of miles from the sun; how long would it take an express train to reach the sun, travelling at the rate of 57 miles an hour?
33. What is the value of 25 gross of note books at $13\frac{1}{6}$ a dozen.
34. Sound travels at the rate of 1130 feet per second; if I see a flash of lightning $5\frac{1}{4}$ seconds before I hear the thunder, how far off is the storm?
35. The whole number of cotton factories in 1860 was 2862, of operatives at work in them 451,569 and the amount of cotton imported 1,390,938,752 lbs. Find the average number of operatives in each factory and the amount of cotton consumed by it.
36. Write down in words the following quantity as

expressed in figures, 9,003,008,005; and write in figures six hundred and three millions twenty thousands three hundred and three.

37. Divide 56,438,971 by 4064, and prove the result to be correct.

38. A manufacturer has 360 hanks of yarn made into a warp containing 2520 threads; what is the length of the warp, supposing 840 yards to make one hank?

39. Reduce 49 acres 28 poles 10 yards 8 feet 112 inches to inches; and prove your result.

40. A tradesman borrowed £2000., without interest, and paid in the following manner: at Christmas, £256. 10s. 6d.; at Lady-day, £402. 10s. 9½d.; and at Midsummer, £687. 10s. 11½d.; how much is still owing?

41. In the year 1821, there were coined in the British Mint 90 tons 19 cwt. 1 qr. 5 lbs. of gold, and its value was £9,520,732. 14s. 6d.; required the value of each ounce of gold.

42. A spinning mule of 528 spindles makes 7 stretches of 54 inches each in 3 minutes; what quantity of yarn is spun in 12 hours, if 840 yards make one hank?

43. "The silver of them that were numbered was an hundred talents and a thousand seven hundred and threescore and fifteen shekels; a bekah, that is, half a shekel, for every one that went to be numbered, for six hundred thousand and three thousand and five hundred and fifty men." — Ex. xxxviii. 25, 26.

How many shekels were there in a talent?

44. Add together £15 10s. 3½d., £5 7s. 8½d., and 2s. 0½d., and subtract from the result ¼ of £16 12s. 6d.

45. Multiply

14 yds. 2 ft. 8 in. by 21,

and £63 14s. 2d. by 17.

46. Find the cost of 64 yards of damask at 4s. 3d. a yard; and if it be made into 6 curtains, find the price of each.

47. Add together seventeen hundred and thirty-eight millions six hundred and four thousand five hundred and thirty-four, 45,947,865, and 9,710,434,050; subtract one thousand and one millions one thousand one hundred and one from the sum, and divide the result by 2079.

48. Find the value of 17 bushels of tares at $1/11$, 18 bushels of peas at 3s. $8\frac{1}{4}$ d., 7 qrs. of malt at 21s. 6d., 15 lbs. of hops at 1s. $4\frac{1}{4}$ d., 6 qrs. of oats at 19s. 7d., 14 bushels of beans at 4s. 7d.

49. In 37 crowns as many half-crowns, florins, shillings and pence, how many farthings?

50. Find the value of 17 cwt. 2 qrs. 9 lbs. at 7s. for $3\frac{1}{2}$ lbs.

51. A gentleman divided £4. 18 among 150 school-children, giving the girls a shilling each and the boys sixpence. How many boys and girls were there?

52. If the annual rent of a farm of 312 acres is £245. 14., what is that per acre?

53. What sum must be divided among 39 boys that each may receive 3s. $7\frac{1}{4}$ d.?

54. A grocer bought 74 cwt. of sugar at £2. 15 the cwt. and then mixed with it 6 cwt. of sand; what could he sell the mixture at to gain £18. 15 on the whole?

55. How much Cambric at $12/9\frac{1}{4}$ a yard can be bought for £33. 16. $10\frac{1}{4}$?

56. Divide £379. 9. $5\frac{3}{4}$ among 9 men and 4 women, giving each woman twice as much as a man.

57. Write down in words 270,054, and 200,200,002; and in numbers four millions fifteen thousand and thirty-six, and eighty-four thousand and seven.