

PUPIL-TEACHERS' DEPARTMENT.

QUESTIONS

Selected from those set to English Pupil-Teachers in February, 1880.

ARITHMETIC.

1. Multiply $3\frac{1}{2}$ by $3\frac{1}{10}$ and divide $\frac{20\frac{2}{3}}{3}$ by $\frac{41\frac{1}{2}}{4}$, and find the difference between the sum and difference of these results.

2. A work consists of three volumes, 150 pages each, every page containing thirty-five lines, each line averaging eleven words, each word four and a-half letters. The author is remunerated at the rate of .15d. per letter; what amount does he receive.

3. Express the sum of $\frac{1}{2} + \frac{1}{3} + \frac{1}{4}$ and the difference of $4\frac{1}{4}$ and $18\frac{1}{2}$ as decimals.

4. What fraction of a guinea, together with .0125 of a crown, is equal to $\frac{1}{4}$?

5. Express $\frac{3}{4}$ of $1\frac{1}{2}$ of a mile in French metres, taking 32 metres as equal to 35 yards.

6. What is the amount of 18 per cent. on the money realized by selling 7,866 decanters at 2s. 6 $\frac{1}{2}$ d. each?

7. Find the *average* per year of the following incomes (a year being = to 12 months; a month = 4 weeks; a week = 7 days:--(1) 8 $\frac{1}{2}$ d. per day; (2) half-a-guinea a week; (3) £5 a month; (4) 50 guineas a year.

8. A woman sells on an average 17 dozen of apples per day at the rate of two apples for three halfpence. Having bought the apples at the rate of half-a-crown per hundred, what does she gain per cent.?

9. Bought 20 Exmoor ponies, and sold 11 of them for £200; lost one, and received £15 each for the rest, realizing a profit of

25 per cent. on the whole transaction. What price did I pay on an average for each pony?

10. Find the simple interest and amount of £417 7s. 9d. for 1 year and 10 months, at 4 $\frac{1}{2}$ per cent. per annum.

11. If a dealer in coals sells them at £1 1s. 6d. per ton, gaining thereby 14 $\frac{1}{2}$ per cent., at what price did he purchase the coals per ton?

12. I receive £533 6s. 8d. for £560 due 2 years hence; at what rate per cent. per annum is the discount calculated?

13. How much must I pay for apples, at the rate of £.049 per dozen, to get enough to cut up so as to give 19 children each $\frac{1}{2}$ of an apple; and what percentage of the quantity of apples purchased would remain over?

14. Find the simple interest and amount of £189 16s. 6d. for 3 $\frac{1}{2}$ years; the do. and do. of the same sum for 341 days; at 3 $\frac{1}{2}$ per cent. per annum; and add the *amounts* together.

15. Taking the cost of flagstones at 1s. per square foot, what sum must be given for stones; each 14 inches $\times$ 9, sufficient to lay down a certain court-yard, if a court-yard of half the size requires 560 stones each a foot and a half square?

16. The working expenses of a certain company average £62 10s. per day, and their weekly expenses amount to $\frac{3}{4}$ per cent. of their gross profits for an ordinary year. At the same rate of expenditure and income, how much more *net* profit will they realize this year than they did in the year 1879?

17. If you buy £500 stock in 3 per cent. Consols at 96 $\frac{3}{4}$, and sell out again at 82 $\frac{1}{2}$, what sum do you lose?