The complete novel in the April Lippincott is "Diane, Priestess of Haiti," by John Stephens Durham. "Walnuts and Wine" is an admirably conducted humorous department.

The long story in the April St. Nicholas is "The Boys of the Rincon Ranch," by H. S. Caufield. Other features of interest are: "By Virtue of Phebe's Wit," by Alice Balch Abbot; and "Boy Choristers," by Frederic Dean.

The American Monthly Review of Reviews for April contains "American Captains of Industry," "A New Factor in Lake Shipping," "The Treaty Between England and Japan," "The New Lying-in Hospital in New York," "Educating the Deaf-Blind." and Francis Wayland Parker's "A Great Educator."

The cover of the April Book Buyer is particularly charming. The contents include an article on "The Animal Story of To-day," by Charles G. D. Roberts.

The Atlantic for April contains a number of remarkable contributions, chief among which is Bliss Carman's poem, "The Pipes of Pan." Others far above the usual average of a monthly magazine are: "Allegra," by Miss Repplier; "The Play and the Gallery," by Elizabeth McCracken; "Prothalamion," by J E. Spingam; and "Jane Austin," by Ferris Greenslet.

The Ladies' Home Journal for April is marked by the publication of the first instalment of "The Story of My Life," by Helen Keller.

SOLUTIONS OF QUESTIONS IN ARITHMETIC, ANNUAL EXAMINATIONS, 1901, PART 1., JUNIOR MATRICULATION.

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1. Find the L.C.M. and the H.C.F. of 13230, 32050 and 23625.

This is best done by resolving the numbers into their prime factors.

Then the L.C.M. is the continued product of the highest power which occurs of each factor.

Thus L.C.M. $2.3^3.5^3.7^2.641$

$= 212010750.$

And the H.C.F., or better G.C.M., is the continuous product of the factors common to all. This gives 5 as the H.C.F.

2. A stick was broken into two pieces so that $\frac{2}{3}$ of the longer piece equalled the shorter. The difference between the lengths of the two pieces was four inches. What was the length of the whole stick?

This is most readily done by Algebra.

Let x=the longer piece, Then $\frac{2}{3}x$ the shorter.

And $x - \frac{2}{3}x = 4$ in. $\therefore x = 12$ in.

And the stick $= x + \frac{2}{3}x = 12$ in. $+ 8$ in. $= 20$ in.

It may also be done by proportion, as follows:—

Suppose the longer part to be 30 in. Then the shorter is 20 in., and the difference between the parts is 10 in., and the whole stick is 50 in.

But the difference should be 4 in

$\therefore 10 : 4 \quad 50 : 20$ in. the length of stick.

Or the whole length $\frac{4}{10} \times \frac{50}{1} = 20$ in.

Otherwise by analysis, as follows:—

If the stick were broken in the middle each part would be half the length, and there would be no difference. Hence by adding 2 in. to $\frac{1}{2}$ and taking 2 in. from the other, the latter length is $\frac{2}{3}$ the former. But $\frac{2}{3}$ of $(\frac{1}{2} - 2$ in.) is $\frac{1}{3} \times \frac{1}{2}$ in.

$\therefore \frac{1}{2} - \frac{1}{3}$, or $\frac{1}{6}$ the stick $= 2$ in. $+ \frac{1}{3}$ in. $= \frac{1}{3}^0$ in. And the whole stick $= 20$ in.

3 A sells a quantity of wheat at \$1 per bushel and gains 20%; afterwards he sold a quantity of the same wheat to the amount of \$37.50 and gains 50%. How many bushels were in the last lot, and at what rate per bushel did he sell it?

As he gained 20% in selling at \$1, the cost price was $\frac{100}{120} \times \frac{\$1}{1} = \$\frac{5}{6}$ per bushel.

Hence in order to gain 50% he must sell at $\frac{150}{100} \times \frac{5}{6}$ or $\$\frac{5}{4}$ per bushel $= \$1.25$ per bushel. And the amount sold $= 37.50$

$1.25 = 30$ bushels.

4. Divide \$916 among A, B and C, so that 4% of A's share may equal $7\frac{1}{2}$% of B's, and $12\frac{1}{2}$% of B's may equal 20% of C's.