307. Involve § to the 7th power.

308. What is the square root of .0043046721?

309. Sold 9  $\frac{1}{2}$  cwt. of sugar at \$2 per cwt., and thereby lost 12 per cent.: how much was the whole cost?

310. A person owned  $\frac{5}{2}$  of a mine and sold  $\frac{2}{3}$  of his interest for  $\frac{1}{710}$ : what was the value of the entire mine?

311. When it is 2 h. 36' A. M. at the Cape of Good Hope, in longitude  $18^{\circ}$  24' east, what is the time at Cape Horn, in latitude  $67^{\circ}$  21' west?

312. What is the cost of 17 T. 18 cwt. 1 qr. 17 lb. of potash at \$53.80 per ton?

Examination XIV. Feb. 23, 1871.

313. Express in words the number 42567000129301.

814. Multiply five hundred and forty thousand six hundred and nine by seventeen hundred and fifty.

315. Give the rule for reduction descending.

816. How many steps of two and one-half feet each, would a man take in walking a mile?

317. How is a whole number reduced to a fraction of the same value having a given denominator?

318. What is the value of  $\frac{2}{3}$  of  $\frac{1}{2}$  of  $\frac{1}{2}$  when reduced to a simple fraction of the lowest terms ?

319. Give the rule for reducing several fractions to equivalent fractions having the least common denominator,

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320. Add  $3\frac{2}{3}$  to  $4\frac{21}{38}$ .

321. Write in figures, two and six hundred-millionths.

322. Reduce  $\frac{7}{625}$  to the equivalent decimal form.

323. Multiply seven thousand and five, by threehundred and five millionths.

324. Divide .5 of 1.75 by .25 of 171.

325. The ratio of two numbers is 9, and the antecedent 90; what is the consequent?

**326.** Find the value of the omitted term in the following proportion:

\$4:(?)::9:16.

327. If 56 lb. of butter cost \$15.68, what will .078 of a ton cost?

328. If 96 horses eat 192 tons of hay in one winter, how many tons will 150 horses eat in 6 winters?

329. In 1 yr. 4 mo., \$311.50 amounted to \$336.42 at simple interest: what was the rate per cent?

**330.** What is the interest of \$14,231.50 from June **15**, 1865, to April 30, 1870, at 8 per cent?

**331.** What is the value of a pile of wood 34 ft. long, 3 ft. wide and  $5\frac{1}{2}$  ft. high, at \$7.88 per cord?

332. How much will it cost to carpet a parlor 18 feet square, with carpeting  $\frac{3}{2}$  yd. wide, at 1.50 per yard?

333. The difference in the local time of two places is 2h. 18m.: what is the difference in longitude?

334. 33 is 2<sup>3</sup>/<sub>4</sub> per cent. of what number?

335. What is the length in rods of each side of a square field which contains 66 A. 1 R. 9 sq. rd.?

336. A note for \$470.66 drawn at 60 days, is discounted at bank at 6 per cent: what are the proceeds?

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