

piece of work in 10 days, how long will it take 5 men to do it ?

355. Define Ratio.

356. Define Proportion.

357. Define Rule of Three.

358. Solve the following example by the Rule of Three, (or Proportion:)

If a railroad car goes 17 miles in 45 minutes, how far will it go in 5 hours at the same rate?

359. J. Ayers had D. Howe's note for \$1,728, dated Dec. 29, 1869; what will be the amount Oct. 9, 1872, at 9 per cent?

360. What principal will gain \$5.11, in 3 yr. and 6 mo. at 8 per cent?

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*Examination XVI. Nov. 9, 1871.*

361. Express by figures the number: five trillions eighty billions nine millions and one.

362. Add the following numbers :

(<sup>1</sup>) Two hundred and ten thousand four hundred;

(<sup>2</sup>) One hundred thousand five hundred and ten;

(<sup>3</sup>) Ninety thousand six hundred and eleven;

(<sup>4</sup>) Forty-two hundred and twenty-five;

(<sup>5</sup>) Eight hundred and ten.

363. Taking two hundred and ten thousand four hundred as a minuend, and one hundred thousand five hundred and ten as a remainder, what will the subtrahend be, expressed in words?

364. What is the *product* of ninety thousand six

hundred and eleven, and forty two hundred and twenty five?

365. The quotient of one number divided by another is 37; the divisor, 246; the remainder, 230; what is the dividend?

366. What is the greatest common divisor of 1649 and 5423?

367. What is the least common multiple (or dividend) of 21, 35 and 42?

368. What is the value of  $6\frac{2}{3}$  divided by  $8\frac{2}{3}$ ?

369. How many yards of cloth  $\frac{2}{3}$  of a yard wide are equivalent to 12 yards  $\frac{3}{4}$  yards wide?

370. Change  $\frac{4}{5}$  to an equivalent fraction having 91 for its denominator.

371. The difference between  $\frac{5}{8}$  and  $\frac{7}{8}$  of a number is 10: what is that number?

372. What is the sum of  $\frac{7}{8}$ ,  $1\frac{7}{8}$ ,  $10\frac{5}{8}$ , and 5?

373. What will 4868 bricks cost, at \$4.75 per M.?

374. An open court contains 40 square yards: how many stones, nine inches square, will be required to pave it?

375. Change .0008 to a common fraction.

376. Change  $\frac{3}{8000}$  to a decimal.

377. How many cords of wood could be piled in a shed 50 ft. long, 25 ft. wide and 10 ft. high?

378. How many acres of city land at \$2 per square foot, could be bought for a half million dollars?

379. Change 10 oz. 13 pwt. 9 gr. to the decimal of a pound Troy.

380. A man owning  $\frac{1}{4}$  of an iron foundry, sold 35 per cent. of his share: what part did he still own?

381. What will be the amount, at simple interest, of \$35.61, from Nov. 11, 1869, to Dec. 15, 1871, at 6 per cent?

382. If the consequent be  $\frac{7}{8}$ , and the ratio  $\frac{4}{5}$ , what is the antecedent?

383. At the rate of 9 yards for £5 12s. how many yards of cloth can be bought for £44 16s?

384. What is the square root of 576.02880036?

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*Examination XVII. Feb. 27, 1872.*

385. Add seven hundred and four; sixty thousand four hundred; five million eight thousand and sixty; 912875; thirty thousand and forty-nine; seven hundred and seven thousand nine hundred and six.

386. A. had \$3,958, B. \$1,463; A. lost \$1,365, B. gained \$1,165: which then had the most, and how much?

387. A peddler bought 491 yards of cloth at 81 cts. a yard; he used 29 yards, and sold the rest at 95 cts. a yard: how much did he gain?

388. A city had \$311,205 at the beginning of the year; the income of the year was \$884,743, and expenses \$396,756: what was the balance on hand at the end of the year?

389. A man exchanged 159 cords of wood at \$5 a cord, for a horse valued at \$144, and the balance in sheep at \$3 apiece: how many sheep did he receive?

390. How many pieces of muslin, each containing 33 yards, must be sold at 14ct. 5m. a yard to realize \$1,339.80?