

many sq. ft. of boards will it require to fence the garden?

569. Suppose that you sell to John Clarke, of New York, for cash, 75 yd. of carpet, \$1.55 per yd.; 30 yd. drugget, at \$1.30 per yd.; 5 mats at \$3.15 each, and 35 yd. of oil cloth, at \$1.05 per yd. Make a receipted bill of these articles, in regular form.

570. What is the value of $(\frac{2}{3} \times \frac{5}{8} + 3\frac{2}{7}) \div \frac{3}{8}\frac{3}{4}$?

571. What is the least number that 8, 12 and 16 will each divide without remainder?

572. What will 11 lb. 4 oz. of tea cost, if 3 lb. 12 oz. cost \$3.50?

(Solve by proportion.)

573. If a man travels 107 miles in 15 days, employing only 9 hours a day, how far would he go in 20 days, travelling 12 hours a day, at the same rate per hour?

574. What debt can be discharged in a year by weekly payments in arithmetical progression, the first being \$24, and the last \$1,224?

575. What is the length, in feet and inches, of each side of a square carpet, made from $208\frac{1}{2}$ yds. of Brussels carpeting, $\frac{3}{4}$ yd. wide?

576. What is the length of the side of a cubical box which contains 389017 solid inches?

Examination XXV. Nov. 5, 1874.

577. Find the sum of the following numbers, arranging them properly for addition: 14.2351; 651.012; 2.219; .0374; .00146.

578. Multiply 4.44; 5.555; 6,23; .5.
 579. Divide 6.435945 by 4027.5.
 580. Find the sum of $16\frac{1}{2}$, $\frac{2}{3}$, and $\frac{8}{15}$.
 581. Find the product of $\frac{6}{11}$, $\frac{1}{3}$, and $\frac{3}{17}$.
 582. If $3\frac{3}{4}$ bu. of oats cost $\$2\frac{2}{3}$, what will 2 bu. cost?
 583. Resolve 122, 850 into its prime factors.
 584. Find the greatest common divisor of 195, 285, and 315.
 585. Find the least common multiple of 49, 14, 84, 168 and 98.
 586. Sold 2,462 feet of boards, at \$ 7.25 per 1000
 " 600 " scantling, " 11.75 " 1000
 " 10,12 " plank, " 1.25 " 100
 " 77 " hewn timber " .15 " foot

Write a bill of the same and receipt it. The seller may be John Smith, and the buyer James Brown.

587. What part of $\frac{7}{8}$ of a mile is $4\frac{1}{2}$ rods, expressed in decimals?

588. The longitude of New York city is $73^{\circ} 58' 54.43''$ W.; of Buffalo, $78^{\circ} 53' 25''$ W. What is the difference of time?

589. Write the rule for multiplication of decimals.

590. Write the rule for division of decimals.

591. Define *ratio*, state how it may be expressed, what each term is called, and give an example.

592. The same of *proportion*.

593. What is either *extreme* of a proportion equal to? What either *mean*?

594. What is the simple interest on \$2,500 for 1 yr. 8 mo. 12 da., at 7 per cent?

595. A. has a note against B. for \$1,728, payable 90 days after date, without interest, which he gets dis-

counted at bank at the rate of 7 per cent. : what does he receive?

596. Extract the square root of 1104601.

597. If a man can do a piece of work in 20 days, working 10 hours a day, how long will it take him to do the same if he works 12 hours a day?

(Solve by proportion.)

598. A farmer puts a flock of sheep in three pastures; in the first he puts $\frac{1}{3}$ of his flock, in the second $\frac{1}{2}$, and in the third, 32 sheep. How many has he?

(Solve by analysis.)

599. Find 12 per cent. of $\$ \frac{1}{12}$.

600. A commission merchant sold 500 pieces of muslin, each piece containing 21 yards, for 23 cents a yard: what is his commission at $2\frac{1}{2}$ per cent?

Examination XXVI, Feb. 25, 1875.

601. The population of Me. is 627,413; of N. H., 301,471; of Vt., 300,187; of Mass., 1,240,499; of Conn., 410,749; of R. I., 192,815. What is the aggregate population of these States?

602. B. had \$12,311; and after paying his debts, and giving away \$2,108, he has \$8,199 left. What was the amount of his debts?

603. How many peaches in an orchard of 14 rows of trees, each row having 27 trees, and each tree 108 peaches?

604. How many cheeses of 45lb. each, at 12 cts.