

404. A., B. and C. bought a horse for \$100 and sold him for \$150, by which A. gained \$18 and B. \$19: how much had each paid for the horse?

405. A man had a yard 38 ft. long and 27 ft. wide: he reserved two grass plats each 8 ft. square, and had the rest paved with stone, at 45 cts. a sq. yd.: what did the paving cost?

406. The product of two equal factors is 34225: what is each factor?

407. Find the sum of 10 terms of the geometric series, 3, 6, 12, etc.

408. If January 1st is Sunday, how much can a man earn in the first three months of a leap year, at \$1.25 per day, not working Sundays?

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*Examination XVIII. June 6, 1872.*

409. If the minuend be 69 trillion and the difference 85 billion, what is the subtrahend?

410. If 892 is one factor, and 28544 the product, what is the other factor?

411. Resolve 180 into its prime factors.

412. Find the greatest common divisor of 222 and 564.

413. Reduce 8692 to a fraction whose denominator is 25.

414. What cost  $5\frac{7}{8}$  cords of wood at \$7.56 a cord?

415.  $\frac{5}{7}$  of  $\frac{1}{2}$  divided by  $\frac{5}{12}$  of  $\frac{2}{3}$  of  $\frac{2}{3}$  = ?

416. A body of 4800 troops has  $\frac{1}{5}$  as many cavalry as infantry: what is the number of infantry?

417.  $3\frac{6}{7} \times 2\frac{5}{8} \times 7\frac{8}{12} = ?$

418. The product of three numbers is  $74\frac{1}{5}$ ; two of them are  $8\frac{1}{7}$  and  $6\frac{1}{13}$ : what is the third?

419. Reduce 2 m. 5 f. 13 r. 4 yd. 2 ft. to inches.

420. What would be the cost of enough oil cloth to cover a room  $12 \times 16\frac{1}{2}$  feet, at 75 cts. per sq. yd.?

421. At \$198 per lb., what would be the cost of 10 oz. 10 pwt. 10 gr. of gold?

422. What is the difference in time of two places whose longitudes differ 7 degrees, 8 minutes and 4 seconds?

423. Write in figures (the fractional part as *decimal*) the number: seven millions and one ten-millionth.

424.  $49.2654756$  divided by  $.0750 = ?$

425. Reduce .8975 of a week, to whole numbers of lower denominations.

426. What is the amount of \$1,000 for 7 yr. 10 mo. 18 da., at 6 per cent., simple interest?

427. What is the present worth of \$1,609.30 for 10 mo. 24 d., discounted at 5 per cent.?

428. For what must apples, which cost \$1.25, be sold to gain 20 per cent.?

429. If \$800 yield \$56 interest in a certain time, what will \$390 yield at the same rate?

430. If a 3-cent loaf weigh 2 oz., when flour is \$7.50 per bbl., what should a 12 cent loaf weigh when flour is \$16 per barrel?

431. What number expresses the difference between the square and the cube of 24?

432. What is the square root of 253009?