

*Examination XXXIX. June. 5, 1879.*

958. In multiplication, which factor must be an abstract number, or used as such?

959. How many times is  $4\frac{3}{10}$  contained in 6,000?

960. The subtrahend being  $14\frac{87}{100}$ , the minuend  $15\frac{2}{15}$ , find the remainder.

961. How many square feet in a piece of land, 13 rods square?

962. If I buy stocks at 10 per cent. below par and sell at 10 per cent. premium, what per cent. do I gain on my first investment?

963. Find the interest on \$5,500 for 1 yr. 6 mo. 9 da. at 6 per cent.

964. When it is noon on the prime meridian, where will it be  $9\frac{1}{2}$  o'clock A. M.?

965. What will 7,580 bricks cost, at \$3.50 per M.?

966. What is the difference between common and decimal fractions?

967. Divide fifteen thousandths by five ten-millionths.

968. Find the greatest common divisor of 133 and 187.

969. Find the least common multiple (or dividend) of the same numbers.

970. A cellar is to be dug 30 ft. long and 20 ft. wide: at what average depth will 50 cubic yards of earth have been removed?

971. A. B. and C. trade together. A. puts in \$1,000 for 10 months, B. \$800 for 12 months, C. \$900 for 14 months. They gain \$1,200. What is the share of each?

972. What is the square root of a number?
973. Find the sum of the composite numbers below 47.
974. Name the 4th decimal *order*.
975. Change .03125 to a common fraction, in its *lowest terms*.
976. If  $3\frac{1}{2}$  cords of wood cost \$11.37 $\frac{1}{2}$ , what will  $12\frac{1}{2}$  cords cost? (Solve by Proportion.)
977. John Brown bought of James Ray, on May 20, 1879,  $2\frac{1}{2}$  yards broadcloth, at \$3.50 a yard, 2 pairs gloves at \$1.87 $\frac{1}{2}$  a pair, 19 yards silk, at \$1.75 a yard, and 33 yards sheeting, at 9 cents a yard. Make a bill in proper form and receipt it, as clerk.
978. How many rods of fence will be required to inclose a square field containing 90 acres?
979. What will be the cost of 4 lb. 5 oz. 6 pwt. of gold dust, at 75 cts. per pwt.?
980. Give the rule for extraction of square root.
981. Give the table of linear (or long) measure.
982. A coal dealer bought 300 long tons of coal at \$3.75 a ton, and sold it at \$4.60 per short ton. What was the total profit?
983. What is the rate per cent. of profit in selling 300 long tons of coal, bought at \$3.75 a ton, at \$4.60 a short ton?
984. What would be the proceeds of the following note discounted at bank on the day that it was made:

BUFFALO, MAY 20, 1879.

Thirty days after date, for value received, I promise to pay to the order of John Young, one hundred and five  $\frac{50}{100}$  dollars, at the Marine Bank.

\$105  $\frac{50}{100}$ .

ICHABOD CRANE.

985. On what month and day must a note for 30 days, dated May 20, 1879, be paid, or in default of payment, be protested?

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*Examination XL. Nov. 6, 1879.*

986. What number divided by 453 gives 307 as a quotient, and 109 as a remainder?

987. How does a divisor of a number differ from a multiple of that number?

988. Find the greatest common divisor of 56, 140, 182, and 98.

989. What are the prime factors of 11970?

990. Explain the principle (not process) of cancellation, and illustrate by an example.

991. What change do we make in the value of a fraction if we take the same number of parts but diminish their size?

992.  $3050-5940=17-33$ . Why?

993. Prove that  $.625 = \frac{5}{8}$ .

994. A vat 13 ft. square contains 1224 cu. ft. How deep is it?

995. Change .0000625 mi. to decimal of a foot.

996.  $(24 \times \frac{3}{5} \text{ or } 7) \times (\frac{5}{8} \text{ of } 3 \times \frac{4}{15}) = \text{what?}$

997. The volume of a cube contains 91125 cu. ft. What is the length of each edge of the cube?

998. How many sq. ft. in the entire surface of a cube, each edge of which is 75 ft.?

999. I have an acre of land in shape of a rectangle, one side of which is 9 rods in length. What is the length of the other side?