University of the State of New York

High School Department

169TH EXAMINATION
ARITHMETIC

Thursday, June 20, 1901 — 9.15 a. m. to 12.15 p. m., only

Answer the first five questions and five of the others but **no more.** *If more than five of the others are answered only the first five answers will be considered. Give all operations (except mental ones) necessary to find results. Reduce each result to its simplest form and mark it Ans. Each complete answer will receive 10 credits. Papers entitled to 75 or more credits will be accepted.*

1 Define *five* of the following: concrete number, prime number, cancelation, commission, ratio, negotiable note, indorsement.

2 Simplify $\left(\frac{\frac{3}{4}-\frac{2}{3}}{\frac{2}{3}-\frac{1}{4}}+\frac{4}{5}+\frac{3}{4}\times\frac{8}{9}\right)\div 7$

3 Find the greatest common divisor and the least common multiple of 646 and 425.

4 A rectangular plot of ground is surrounded by a walk 1 meter 7 decimeters wide; the dimensions of the plot, including the walk, are 37 meters 4 decimeters by 30 meters 4 decimeters. Find the area of the walk in square meters.

5 Find the simple interest of $620 at $4\frac{1}{2}$% from September 27, 1900 to the present date.

6 A merchant marks an article $6, but selling it at a discount of 10% for cash, gains 20%; find the cost of the article.

7 Find the cost, @ 16¢ a square yard, of plastering the walls and ceiling of a room 18′×16′ and 12′ high, allowing 75 square feet for openings.

8 A merchant buys through an agent 640 yards of carpet @ 75¢ a yard and pays $\frac{3}{4}$% commission; the freight bill is $2.80. What is the lowest price a yard at which the merchant can sell the carpet without loss?

9 A person failing in business owes $10,800 and has property worth $7200; what will a creditor receive whose claim is $180?

10 The distance around a circular park is 314.16 rods; find the area of the park.

11 A man sold through a broker 176 shares of stock @ $96\frac{1}{2}$, brokerage $\frac{1}{8}$%; what sum should the broker remit?

12 A cylindric cistern 6 feet deep is 7 feet in diameter; how many gallons will it hold? [1 gallon=231 cubic inches.]

13 Find the square root of 129.2769.

14 A four months note for $584, without interest, is discounted at a bank at 5% on the day of its date; find the proceeds of the note.

15 A block insured for $7500 at $\frac{1}{4}$% is destroyed by fire at the end of 8 years and the company pays $\frac{4}{5}$ of the claim; what part of the insurance received is the total premium paid?