University of the State of New York

High School Department

179TH EXAMINATION

ARITHMETIC

Friday, October 2, 1903 — 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 Simplify
$$\dfrac{\tfrac{3}{4}\times 2\tfrac{2}{7}\div(\tfrac{4}{9}+3\tfrac{1}{3})+\tfrac{9\tfrac{3}{7}}{17}}{(\tfrac{3}{5}-\tfrac{3}{8})(\tfrac{1}{3}+1\tfrac{1}{4})}$$

2 A bin 3 meters 5 decimeters long, 1 meter 2 decimeters wide and 1 meter 4 decimeters deep is full of corn which is sold @ 9 francs a hectoliter; find in francs the selling price of the corn.

3 Find the amount of \$402.50 at 4% simple interest from September 27, 1901 to the present date.

4 A boy bought oranges @ 18¢ a dozen and sold them @ 5¢ each; find his per cent of gain.

5 Find the number of gallons of water that will be contained in a cistern $7'\times 6'\times 5'$. [231 cubic inches = 1 gallon.]

6 Find the cost, @ 30¢ a cubic yard, of digging a trench 10 rods long, 6 feet deep, 4 feet wide at the top and 3 feet wide at the bottom.

7 A commission merchant sold wheat for \$1450 and invested the proceeds in flour; the commission on each transaction was 2%. Find the amount invested in flour.

8 The net amount of a bill of goods after discounts of 15% and 20% is \$516.80; find the list price.

9 Find the cost, @ \$75 per M, of oak flooring for a room $16'\times 18'$, allowing $\tfrac{1}{5}$ for waste and matching.

10 If A can do a piece of work in 6 days and B in 8 days, how many days will it take them to do it when they work together?

11 Find the area of the largest circle that can be cut from a square containing 272.25 square inches.

12 A train runs at the rate of 5 miles in $6\tfrac{1}{2}$ minutes; find how long it will take the train to run 42 miles.

13 A man bought 40 shares of N. Y. C. R. R. stock @ $116\tfrac{1}{4}$ and sold them at $121\tfrac{3}{8}$, brokerage in each case $\tfrac{1}{8}$%; how much was his net gain?

14 Find the proceeds of a note for \$250, without interest, discounted at a bank for 3 months at 6%.

15 Add $\tfrac{12}{30\tfrac{1}{1}}$ and $\tfrac{111}{323}$