University of the State of New York

Examinations Department

79th examination

ADVANCED ARITHMETIC

Monday, Jan. 25, 1892—9:15 a. m. to 12:15 p. m., only

48 credits, necessary to pass, 36

NOTE.—Give each step of solution, indicating the operations by appropriate signs. Use cancellation when possible. Reduce fractions to lowest terms. Express final result in its simplest form and mark it Ans.

- 1. Write three signs of operation, three of relation, and three of aggregation, and illustrate the use of one of each class.
- 2. Reduce the repetend .16213 to a common fraction in its lowest terms.
- 3. Multiply 48.275 by 3.14159 by the contracted method, finding the result to three places of decimals.
- 4. I buy an article by avoirdupois weight and sell it at the same price per pound by Troy weight. Do I gain or lose and how many per cent?
- 5. A note for \$575 bearing interest at $5\frac{1}{2}\%$ was given Sept. 1, 1891, for one year. What is the present worth of that note Jan. 26, 1892? 6
- 6. The diameter of a cylindrical vessel is 42 centimeters and its depth is 6½ decimeters; how many liters of water will it hold and how many kilos will this water weigh?
- 7. Jan. I I deliver to a commission merchant 5000 lbs. of butter to be sold on commission, and he advances me \$500 on it. Jan. 18 he sells the butter at 25 cents a pound on 30 days time and advances me \$100 more. The rate of his commission is 1%. How much does he still owe me and when is it equitably due?
- 8. Find the cost of a draft on Chicago for \$1000 at 60 days sight, money being worth 5% and exchange at 1½% premium.
- 9. Constantinople is in longitude 28° 59' E, and Philadelphia 75° 10' W. When it is 4 a. m. in Philadelphia what time is it at Constantinople?

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10. Find the 5th root of 759375.