High School Department

158TH EXAMINATION

ARITHMETIC

Tuesday, March 28, 1899 — 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 Write in arabic notation eight hundred eight thousand eighty-eight and eight ten-thousandths.   Express in words 61,056.003.   Write in roman notation 1861.

2 Simplify $\dfrac{5\frac{5}{8} \times \frac{14}{15} \div 2.5}{3\frac{9}{16} \div \frac{24}{25} \times \frac{15}{19}} + 2.75 - \frac{1}{6}$

3 Find in kilograms the weight of a bar of lead 7.2 decimeters long, 4½ centimeters wide and 25 millimeters thick, lead being 11.35 times as heavy as water.

4 A sum of money at 5% simple interest amounts in 1 year, 9 months and 18 days to $1395.20; find the principal.

5 Find the least common multiple of 126, 154 and 280.

6 Make a receipted bill of the following: James Ladd sold this day to Samuel Pierce 3 lbs. tea at 65 cents, 10 lbs. sugar at 5½ cents, 15 yards muslin at 8 cents, 2 barrels potatoes at $2.50.

7 Find the square root of 731.7025

8 Find the cost of plastering the walls and ceiling of a room 14 feet long, 10 feet wide and 9 feet high at 35 cents a square yard, making an allowance of one half for 2 doors each 3 feet by 7 feet, and 3 windows each 2 feet 8 inches by 6 feet.

9 Find in liters the capacity of a cistern 25 decimeters square and 3 meters deep.

10 If cranberries are bought at $4 a bushel, at what price per quart must they be sold in order to gain 20%?

11 Find the cost of digging a ditch 20 rods long, 4½ feet deep and 18 inches wide at 25 cents a cubic yard of excavation.

12 A has twice as much money as B, and C's money is equal to the sum of one third A's money and one half B's money; the three together have $25.   How much has each?

13 At what price must 4% stock be bought so that the investment may yield 5%?

14 A note for $500, at 6%, dated May 25, 1898, payable in one year, has the following indorsements: Aug. 1, 1898, $150; Feb. 21, 1899, $250.   Find the amount due at maturity.

15 A calf fastened to a stake by a chain 27 feet long can reach 1 foot beyond the end of the chain; compute the area over which the calf can graze.