824. Mention three arithmetical operations in which percentage is used.

825. What is the interest on $4,010 for 1 yr. 1 mo. 13 da. at 7 per cent. simple interest?

826. What is the commission on the sale of a house for $9,346.80. at 6¼ per cent. ?

827. If $4.30 is paid for an insurance of $860, what is the rate ?

828. In a proportion, the two extremes and one mean being given, how may the other mean be found?

829. In what terms of a proportion may equal factors be cancelled?

830. If a man walk 192 mi. in 6 da., walking 8 h. a day, how far can he walk in 18 days, walking 6 h. a day? (Solve by compound proportion.)

831. If 251 A. 65 P. of land are laid out in a form of a square, what will be the length of each side?

832. How many sheets of tin each 14 × 22 in., will it take to cover a roof. 30 ft. × 18 ft. 4 in. ?

833–837. At $0.36 per sq. yd., for plastering, and $0.75 per roll for paper hanging, how much will it cost to plaster the walls and ceiling, and paper the walls of a room 18 × 16 × 9 ft., making allowance, in papering, for 2 windows, each 3 × 6 ft., and 3 doors, each 3 × 7 ft., the paper being 1 ft. 6 in. wide and 7 yd. in a roll? (2 credits for computing plastering surface correctly; 2 for papering; and one for cost.)

Examination XXXV.   Feb. 28, 1878:

838. How many pounds of tea, at 72 cents a pound,

would pay for 3 hogsheads of sugar, each weighing 1464 pounds, at 15 cents a pound?

839. A teamster agrees to cart 132 bbl. of flour for a merchant on Monday, 84 on Wednesday, and 108 on Friday; what is the largest number he can carry at a load, and yet have the same number in each?

840. In $\frac{3}{7}$ how many ninety-eighths?

841. How many yards in three remnants of cloth containing respectively $2\frac{1}{4}$ yd., 1 1-9 yd. and $2\frac{3}{8}$ yd?

842. The sum of two numbers is $59\frac{8}{9}$, and the greater is $30\frac{35}{36}$: what is the other number?

843. Find the value of $(2\frac{2}{3} + 3\frac{4}{5}) \times (8\frac{1}{5} - 4\frac{1}{2})$.

844. How many cords in a pile of wood 196 ft. long, 7 ft. 6 in. high, and 8 ft. wide?

845. What will be the cost of removing the earth from the cellar of a house 48 ft. 9 in. long, 32 feet wide, and 9 feet deep, at $0.57 per cubic yard? (2 credits: 1 for contents in cu. ft.; 1 for cu. yds. and price.)

847. A has 25 per cent. of his property invested in a house, 10 per cent. in a farm, 5 per cent. in a barn, and the rest in a grove worth $4,800. What is the amount of his property?

848. Bought a barrel of syrup for $20; what must I charge a gallon in order to gain 20 per cent. on the whole?

849. B. sends $6,897.12 to his agent in New Orleans, requesting him to invest in cotton after deducting his commission at 2 per cent.; what was the sum invested?

850. It costs me $72 annually to keep my house insured for $18,000; what is the rate?

851. The difference in the time of St. Petersburgh Washington is 7 hr. 9 min. 19¼ sec. What is the difference in the longitude of the two places?

852. What is Insurance?

853. What is the Policy?

854. What is the Premium?

855. A man bought a farm, giving a note for $3,400, payable in gold in five years; at the expiration of the time gold was 175 per cent.; what did his farm cost in currency?

856. Find the simple interest of $460.90 for 3 yr. 5 mo. 13 da. at 3⅜ per cent.

857. C. bought a house for $3,486, which rents for $418.32. What rate per cent. does he make on the investment?

858. Find the compound interest of $380.80 for one year at 8 per cent. interest payable *quarterly.*

859. What is True Discount?

860. What is Bank Discount?

861. What is the difference between the *bank* and *true* discount on $1,000 at 7 per cent., payable in 90 days?

862. What are the terms of Ratio severally called?

863. How is the ratio of two given numbers found?

864. Reduce the ratio 65 : 85 to its simplest terms.

865. Of how many ratios, at least, must a proportion consist?

866. The average cost of keeping 25 soldiers one year is $3,000; what would it cost to keep 139 soldiers 7 years? (Solve by proportion.)

867. Find the square root of 466.489.

868-69. A pile of cord wood is 256 ft. long, 8 ft.

high, and 16 ft. wide; what would be the length of each side of a cubical pile containing the same quantity?

Examination XXXVI. June 6, 1878.

870. The Atlantic cable costs as follows: 2500 miles at $485 per mi.; 10 miles deep sea cable, @ $1,450 per mi.; 25 miles shore ends @ $1,250 per mi. What was the cost?

871. What is the number which divided by 453 gives the quotient 307, and the remainder 109?

872. Which are the so called "Fundamental Rules" of Arithmetic? and (873), why are they so called?

874. What is a *prime factor?*

875. Find the prime factors of 2366.

876. A man working for $2 a day, and paying $4 a week for board, saved $72 in ten weeks. How many week-days was he idle?

877. What is a *fractional unit?*

878. Reduce $\frac{4}{15}$, $\frac{5}{75}$, $\frac{33}{86}$ and $4\frac{1}{4}$ to the least common denominator.

879. From $28\frac{16}{63}$, subtract $3\frac{3}{17}$.

880. Divide $\frac{5}{13} \times 18 \cdot 25$ by $\frac{1}{4} \times \frac{7}{3} \times \frac{5}{17} \times \frac{34}{35} \times 51 \cdot 72$.

881. Divide 46.1975 by 54.35.

882. From a hogshead of molasses, 28 gal. 3 qt. were drawn; what *common fraction* represents the part of a hhd. which remained?