1230. What is the bank discount on $120 for 120 days, at 7 %? (Consider 360 da. = 1 yr.)

1231. What is the true discount on $120 for 120 days, at 7 %? (Consider 360 da. = 1 yr.)

1232. If $\frac{3}{8}$ of an acre of land is worth $148, how much is $\frac{15}{18}$ of an acre worth? (Solve by proportion.)

1233. If 15 men in 9 days, by working 9 hours a day, build 36 rd. of stone-fence, how many rd. can 25 men build in 15 days, by working 8 hours a day? (Solve by compound proportion.)

1234. A and B enter into partnership: A furnished $240 for 8 mo., and B $559 for 5 mo. They lost $118: how much did each man lose?

1235. In 25 kilogrammes how many pounds, Troy weight? (1 gramme = 15.432 gr.)

1236. What is the square root of 222784?

1237. Give the method of proof for square root, and prove answer to Q. 1236.

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## Examination XLVII. March 2, 1882.

1238. What is arithmetic ?

1239. What is a concrete or denominate number ?

1240. By what must I divide .7847 to get 1.9 ?

1241. What kind of a number must a multiplier be ?

1242. What mixed number, multiplied by 25¼, will produce $54\frac{5}{13}$ ?

1243. What is a decimal fraction ?

1244. By how much does the cube of fifty-three hundreths exceed one millionth ?

1245. Reduce 5⅔, 9¾, 4⅝ to improper fractions, and then to their least common denominator.

1246. Add the numbers in Q. 1245.

1247. Reduce your answer to Q. 1246. to a whole number and decimal (carrying the result to five decimal places).

1248. If it requires 1 bu. 2 pk. of rye to sow an acre, how many quarts would be required for a rectangular field 484 ft. long by 270 ft. wide ?

1249. What is a druggists' profit if he buys 5 lb. of opium at $12 per lb. avoirdupois, and sells it at $1 per oz. Tróy ?  (7000 gr. = 1 lb. aviordupois).

1250. What would it cost to dig a cellar 30 ft. x 35 ft. x 8 ft., at $.84 per cubic yard ?

1251. The longitude of New York being 74° 0′ 3″ W. and that of San Francisco being 122° 23′ W., what time is it at San Francisco when it is 1. P. M. at New York ?

1252. Reduce 12 miles to kilometers.  (A meter = 39.37 in.).

1253. Into what pairs of factors may 12 be resolved ?

1254. What is the cost of 2 T. 15 cwt. (100 lbs.) 3 qr. 15 lb. of hay, at $12.50 per T. ?

1255. Bought a hhd. of sugar for $55.75, and sold it at a profit of 12½ per cent : what was the total profit ?

1256. What was the rate per cent. of a tax for $52.88½ on property assessed at $3,525.50 ?

1257.  What is the discount, at 8 per cent, on a note for $750, payable, without interest, in 2 yr. 3 mo. 20 da. ?

1258.  Find the proceeds of a note for $1,000, due in 90 days, discounted at bank at 6 per cent.

1259.  C owes D $900, of which $200 will be due in 3 mo., $300 in 6 mo. and the balance in 12 mo. What would be the mean or equated time of payment ?

1260.  In the firm of A. & B., A invested $200 for 7 mo. and B. $300 for 9 mo.  They gained $125 : what was each one's share of the gain.

1261.  How many feet long is each side of a square acre ?

1262.  If fifteen men can do a certain piece of work in 90 days of 10 hours each, in how many days of 12 hours each can 20 men do the same work ?

1263.  What is the premium on a building valued at $3,000, insured for $\frac{2}{3}$ of its value, at $2\frac{1}{4}$ per cent?

1264.  Find the lacking term in the proportion.
        10 gal. 3 qt. :——— : : 5 : 9.

1265.  Find the length of the edge of a cubical box containing 262144 cu. ft.

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*Examination XLVIII. June 15, 1882.*

(10 to 12 A. M.)

1266.  What do you understand by the prime factors of a composite number?

1267.  Find the greatest common divisor of 360, 648, 972.