

*Examination XLII (a), June 3, 1880.*

1042. What are the fundamental rules of Arithmetic ?

1043. Why are they so called ?

1044. If a scholar's expenses are 90 dollars for board, 30 dollars for clothes, 12 dollars for tuition, 5 dollars for books and 7 dollars for incidentals, what would be the expenses of 27 boys at the same rate ?

1045. If 256 be multiplied by 25, the product diminished by 625, and the remainder divided by 35, what will be the quotient ?

1046. What are the terms of a fraction ?

1047. Subtract  $120\frac{9}{8}$  from  $450\frac{1}{2}$ .

1048.  $14\frac{2}{7}$ , less  $\frac{1}{2}$  of  $8\frac{2}{3}$ , is  $\frac{2}{3}$  of  $\frac{7}{9}$  of what number ?

1049. Reduce .9375 to a common fraction.

1050. How many times will .5 of 1.75 be contained in .25 of  $17\frac{1}{2}$  ?

1051. How much must be paid for lathing and plastering overhead a room 36 feet long and 20 feet wide, at 26 cents a square yard ?

1052. Reduce 150 sheets of paper to the decimal of a ream.

1053. A farmer having 760 sheep, kept 25 per cent of them, and sold the remainder. How many did he sell ?

1054. What is Commission ?

1055. What is Brokerage ?

1056. An auctioneer sold a house for \$3284, and

the furniture for \$2176.50; what did his fees amount to, at  $2\frac{1}{2}$  per cent.?

1057. A man purchased \$6275 stock in Pennsylvania Coal Company, and sold the same at a discount of 12 per cent. : what was his loss ?

1058. If  $12\frac{1}{2}$  hundred weight of sugar cost \$140, how must it be sold to gain 25% ?

1059. What will it cost to insure a factory valued at \$21,000, at  $\frac{4}{5}$  per cent. ; and the machinery valued at \$15,400, at  $\frac{3}{8}$  per cent. ?

1060. What is the interest on \$76.50 for 2 years, 2 months, at 5 per cent. ?

1061. Required the amount of \$387.20, from Jan. 1 to Oct. 20, 1879, at 6% ?

1062. What will \$450 amount to in 1 year, at 6% compound interest, payable quarterly ?

1063. What is the present worth of \$180, payable in 3 years, 4 months, discounting at 6 per cent. ?

1064. Wishing to borrow \$500 at bank, for what sum must my note be drawn, at 30 days, to obtain the required amount, discount being at 6% ?

1065. At what per cent. must \$1,000 be loaned for 3 years, 3 months, 20 days, to gain \$ 183.18 ?

1066. How long must \$204 be on interest at 6% to amount to \$217.09 ?

1067. If a staff 3 ft. 8 in. long cast a shadow 1 ft. 6 in., what is the height of a steeple that casts a shadow 75 ft. at the same time ? (Solve by proportion.)

1068. Extract the square root of  $\frac{7056}{9216}$

1069. The pedestal of a certain monument is a cube

of granite, containing 373248 solid inches : what is the length of one of its sides ?

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*Examination XLIII(b), June 17 1880.*

1070. Express in words: 5000000750001.

1071. If the product of two numbers is 346712, and one of the factors is 76, what is the other factor ?

1072. What is Cancellation ?

1073. Find the least common multiple of 4, 14, 28, and 98.

1074. The product of 3 numbers is  $\frac{5}{8}$  : two of the numbers are  $2\frac{1}{2}$  and  $\frac{7}{8}$  : what is the third ?

1075. What is the sum of six-millionths, four ten-thousandths, 19 hundred-thousandths, sixteen-hundredths, and four-tenths ?

1076. Reduce  $\frac{\frac{5}{8} \text{ of } 16.125}{4\frac{1}{3}}$  to a decimal fraction.

1077. Make a receipted bill of the following articles as if sold to John Smith by yourself:

16 lbs. of tea, at \$.85 per lb. . . .

28 " " coffee, at \$.25 $\frac{1}{2}$  per lb. . . .

15 Yards of linen, at \$.66 per yard. . .

1078. How many acres are there in 250 city lots, each of which is 25 feet by 100 ?

1079. Add 96 bu. 3 pk. 2 qt. 1 pt., 46 bu. 3 pk. 1 qt. 1 pt., 2 pk. 1 qt. 1 pt., and 23 bu. 3 pk. 4 qt. 1 pt.

1080. By the chronometer, it is 4 hr. 56 min. 4 $\frac{1}{8}$