COMMERCIAL ARITHMETIC

Tuesday, June 21, 1932

NAME OF SCHOOL

NAME OF CANDIDATE

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Fill above blanks before signal to begin work is given by examiner.

Do not open this sheet till the signal is given.

Examiner will place this sheet closed on desk of each candidate. Candidate will open the sheet and begin work at signal from examiner. All parts of this test are to be worked mentally and the results placed on the sheet. At the end of 15 minutes work must stop and the pages used for this test must then be detached from the rest of the question paper and immediately collected.

All work must be done with pen and ink.

COMMERCIAL ARITHMETIC RAPID CALCULATION TEST

Tuesday, June 21, 1932 — 9.15 a. m. to 12.15 p. m.

1–2 *a* Complete the following sales record: [5]

Department	Cash	Charges	Total
A	116	113	
B	135	136	
C	89	161	
D	106	69	
E	117	92	
Total			

b Underline the correct answer for *each* of the following: [7]
  36 increased by 25% of itself is (45; 48; 54)
  1.2 divided by 20 equals (6; .6; .06; 60)
  .0325 expressed in per cent is (325%; $3\frac{1}{4}$%; $32\frac{1}{2}$%)
  In dividing a number by 100, the result may be obtained by moving the decimal point
    (two places to the left; two places to the right; one place to the left)
  $\frac{1}{8}$ of 1%, expressed as a decimal, is (.125; .0125; .00125; 1.25)
  $\frac{2}{3} \div \frac{3}{4}$ equals ($\frac{5}{9}$; $\frac{8}{15}$; $\frac{8}{10}$)
  $30 per ton is equivalent to ($15; $1.50; $.15) per 100 pounds.

c Make the extensions: [4]
  428 articles @ $.12$\frac{1}{2}$ =
  144 articles @ $.03$\frac{1}{3}$ =
  62$\frac{1}{2}$ pounds @ $.24 =
  2500 pounds @ $28 per ton =
    [Footing not required]

d Find the interest on *each* of the following: [4]
  $324 for 90 days at 6% =
  $180 for 23 days at 6% =
  $280 for 4 months at 4$\frac{1}{2}$% =
  $420 for 45 days at 4% =
    [Footing not required]

254TH HIGH SCHOOL EXAMINATION

COMMERCIAL ARITHMETIC

Tuesday, June 21, 1932 — 9.15 a. m. to 12.15 p. m., only

Write at top of first page of answer paper (*a*) name of school where you have studied, (*b*) number of weeks and recitations a week in commercial arithmetic.

The minimum time requirement is five recitations a week for a school year.

Answer questions 1–2 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown. Practical business methods must be used in solutions.

1–2 Rapid calculation test on attached sheet. [20]

3 Answer all parts of this question. [10] [Deduct 2 credits for each incorrect answer. Answers only are required in this question.]

  a What is the single discount that is equivalent to the series 25%, 20% and 20%?

  b A dealer marked a rug $68. During a special sale, it was sold for $54.40. What was the rate of discount on the marked price?

  c A man saves 20% of his earnings. If he receives $150 a month, in how many years can he pay for a building lot costing $900?

  d A dealer sold $2\frac{1}{2}$ gross of pencils at 40¢ per dozen; how much was received for the pencils?

  e A man gave a 3-months' note for $450 with interest at 6%; how much will he be required to pay when the note is due?

4 Answer all parts of this question. [10] [Deduct 2 credits r each incorrect answer. Answers only are required in this estion.]

  a What is the rate of income on a 5% bond purchased at $62\frac{1}{2}$? [No brokerage]

  b If a tax rate is $22.50 on $1000, what is the rate, expressed in mills, on $1?

  c A salesman is paid $18 a week and 2% commission on all sales. If his sales for one week amount to $387, what is his total income for the week?

  d A 90-day note is dated May 17, 1932; on what date will it become due?

  e If the population of a certain city increased from 64,840 to 72,945 in a 5-year period, what was the average annual per cent of increase in population?

5 A grower shipped to New York, to be sold on commission, two carloads of potatoes weighing respectively 34,500 pounds and 35,700 pounds. Freight charges paid by the commission merchant amounted to $157.08. Before the potatoes could be sold, they had to be graded and sacked. This cost the commission merchant $70.20. Two thirds of the potatoes were #1 grade and were sold at 55¢ per bushel (60 pounds) and the remainder, which were #2 grade, were sold at 40¢ per bushel. After deducting 5% commission, what amount should be remitted to the grower? [10]

6 The assessed valuation of property in a certain school district is $1,680,500. The total amount necessary to meet the expenses of the school for the coming year is $29,741.52. The estimated receipts from various sources are $8500.

  a Find the tax rate. [Carry the decimal to *five* places.] [8]

  b What would be H. C. Roger's tax if his property is valued at $8000 and is assessed at 80% of its value? [2]

7 Harvey Wilson purchased eight $1000 railroad bonds bearing 4% interest, at $840 each, brokerage $20, and 50 shares of Wilson Electric at 32, brokerage $7.50. The stock is paying a quarterly dividend of $.50 a share.

  a Find the total cost of the stock and the bonds. [5]

  b Find Wilson's annual income. [3]

  c Find the rate of income on Wilson's investment. [2]

8 A. H. Smith owns a business block valued at $40,000 and a stock of goods valued at $15,500. He has them insured for 3 years on the following basis: the building for 80% of its value at $6.75 a thousand, and the stock for full value at $.75 a hundred. What will be the average yearly cost for insurance? [10]

9 A man considers purchasing for $24,500 the building in which his store is located. It is estimated that the annual expenses will be as follows: taxes $568, insurance $105, repairs $375. His money is worth 6% to him in his business. Which would be cheaper, to buy the building or to continue to rent the store at $250 a month [2]? How much would be saved annually [8]?

10 A merchant bought 5 dozen folding stepladders at $21.60 a dozen, less 10% and 5%. By paying cash he received an additional discount of 1%. The merchant paid $4.58 for cartage. At what price should each stepladder be marked in order that the merchant may make a profit of 25% on the cost? [10]

11 R. B. Smith wishes to build a bin to contain 768 bushels of grain. It is possible to have the bin 8 feet wide and 15 feet long. If $1\frac{1}{4}$ cubic feet are required for 1 bushel, what must be the height of the bin in feet? [10]

12 Explain briefly *each* of the following statements or give a definite reason for it: [10]

  a It is sometimes more desirable to compute the rate of profit on the selling price than on the cost price.

  b Catalog prices are often subject to a series of discounts, such as 20%, 10%, 5%.

  c The premium rate for insurance on brick buildings is usually less than that on frame or wooden buildings.

  d A salesman is sometimes paid a commission on sales instead of a regular salary.

  e When a business man borrows money, he is generally required to furnish some security or collateral.