

BUSINESS ARITHMETIC

Tuesday, January 19, 1937

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.

## BUSINESS ARITHMETIC RAPID CALCULATION TEST

Tuesday, January 19, 1937 — 9.15 a. m. to 12.15 p. m.

1-2 a Complete *each* of the following: [5]

.075 is equivalent to .....%.

\$50 per ton is equivalent to ..... per hundred weight.

$\frac{3}{4}$ % of \$200 is .....

60 is 150% of .....

An electric motor that was listed at \$75 was sold for \$60; the rate of discount .....%.

b Complete the following record of production: [5]

|              | New York<br>branch | Chicago<br>branch | Total |
|--------------|--------------------|-------------------|-------|
| July         | 116                | 156               |       |
| August       | 79                 | 219               |       |
| September    | 124                | 173               |       |
| October      | 169                | 121               |       |
| November     | 182                | 94                |       |
| December     | 123                | 117               |       |
| <b>Total</b> |                    |                   |       |

c Make the extensions: [5]

39 lb @ 25¢ =

150 doz. @ 26¢ =

56 bu. @ \$1.12½ =

750 lb @ \$6 per C =

160 lb @ 2½¢ =

[Footing not required]

d Compute the interest on *each* of the following: [5]

\$126 for 10 days at 6 % =

\$120 for 15 days at 4 % =

\$210 for 26 days at 6 % =

\$360 for 6 months at 2 % =

\$450 for 80 days at 4½% =

[Footing not required]

**BUSINESS ARITHMETIC**

Tuesday, January 19, 1937 — 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 business 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 The list price of a motor boat is \$350, less 10% and 10%. What is the net price?

b A classroom is  $36' \times 26'$ . What are the dimensions of the architect's drawing of this room if he uses a scale of  $\frac{1}{8}'' = 1'$ ?

c A salesman is paid a salary of \$140 a month and  $1\frac{1}{2}\%$  commission on sales. If his sales for the month of December amounted to \$8260, what was his total income for the month?

d The December reading of a gas meter was 143,580 cubic feet and the November reading was 136,280 cubic feet. At \$.95 a thousand cubic feet, find the amount of the gas bill.

e A real-estate agent sold an apartment house for \$62,500. How much did the original owner receive if the agent deducted 4% commission and his expenses amounted to \$362?

4 While a certain make of shoes was selling at \$6.45 a pair, a store sold an average of 25 pairs a day. By reducing the price to \$5.95 a pair, the store increased its sales to 40 pairs a day with no increase in total selling expense. The shoes cost \$4.85 a pair.

a Was the amount of daily profit increased or decreased by reducing the price [2]? How much was the increase or decrease [6]?

b What was the per cent of increase or decrease in the store's daily profit? [2]

5 A gas range is billed to the dealer at \$141.75, less  $33\frac{1}{3}\%$ . He desires to make a profit of 20% on the cost and to offer a 10% discount during a special sale. At what price must the range be marked? [10]

6 A. H. Williamson, on retiring from business, invested a portion of his money as follows: \$27,500 in  $5\frac{1}{2}\%$  bonds at  $137\frac{1}{2}$  and \$25,000 in 4% bonds at 125. [In each case the brokerage was included in the purchase price.]

a What was Williamson's total annual income from these bonds? [6]

b What rate per cent of income did Williamson receive on each investment? [4]

7 On December 1, William Allen received his bank statement, which showed a bank balance of \$829.47. His checkbook balance on that date was \$613.22. The following checks were outstanding: \$8.90, \$175.50, \$93.25. Comparing the statement with the checkbook, Allen discovered that a canceled check for \$15.40 was not recorded in the checkbook. He also found that a deposit of \$55 had been entered a second time in the checkbook by mistake. The amount of one of the canceled checks was \$67.25 while the amount on the checkbook stub was \$76.25.

a Reconcile the balances. [8]

b Indicate clearly on your reconciliation statement the amount that represents the correct checkbook balance. [2]

8 Adams & Ford are paying \$6600 rent annually for the first floor and basement. They have the opportunity to buy the building for \$82,000. Adams & Ford estimate that they could receive a total of \$5500 in annual rent for the other three floors and that they would have the following expenses: taxes \$1450, insurance \$240, heat \$700, repairs \$500, elevator service \$1250, janitor service \$1100. If money is worth 6% to the firm in their business, would they gain or lose and how much by purchasing the building? [10]

9 The Hudson Company bought a quantity of furniture amounting to \$2840 subject to 25% trade discount and on terms  $\frac{2}{10} \text{ } \frac{n}{60}$ . In order to take advantage of the cash discount, the Hudson Company borrowed the money for 50 days at 6% and paid the bill.

a How much did the company gain by borrowing the money? [8]

b What was the amount due on the note at maturity? [2]

BUSINESS ARITHMETIC — *concluded*

10 During the past year the Empire Music Shop has been selling at \$126 radios that cost \$140 less 25% and 10%. Because of increased cost of labor and materials, the manufacturer notified the Empire Music Shop that the list price would remain the same but would be subject to new discounts of 10% and 10%.

*a* At the old price, how much profit did the Empire Music Shop make on each radio? [4]

*b* With the new discounts, at what price must the Empire Music Shop sell the radios in order to make the same per cent of profit on sales as formerly? [6]

11 On October 15, the Mohawk Produce Company bought 3600 bushels of potatoes at \$1.15 a bushel and put them in storage. Three months later the company sold the potatoes for \$1.42 a bushel and had to pay 3¢ a bushel for storage and a total charge of \$136.80 for sorting, carting and insuring. In sorting the potatoes it was found that there was a loss of 180 bushels due to decay. How much did the Mohawk Produce Company gain on the transaction? [10]

12 As briefly as possible, give a definite reason for *each* of the following practices: [10]

*a* Occasionally a merchant may find it desirable to sell certain articles below the regular sales price.

*b* Many firms pay their employees by check.

*c* Fire-insurance rates are usually lower on a building than on its contents.

*d* The cash price of an article is less than the instalment price.

*e* The rate of interest charged by savings banks on loans is higher than the rate allowed on deposits.