

The University of the State of New York
304TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, August 24, 1948 — 8.30 to 11.30 a. m., only

Fill in the following lines:

Name of pupil.....Name of school.....

Instructions

Do not open this sheet until the signal is given.

All parts of the rapid calculation test are to be worked mentally and the *answers only* placed on the question paper. At the end of 15 minutes, work must stop and the sheet used for this part of the examination must then be detached from the rest of the question paper and immediately handed to the examiner.

All answers must be written with pen and ink.

This is a mental test — scrap paper may not be used.

RAPID CALCULATION TEST

1-2 a Compute the interest: [5]

\$220 for 1 month at 6 % = \$
 \$1500 for 6 days at 3 % = \$
 \$60 for 78 days at 2 % = \$
 \$560 for 30 days at $1\frac{1}{2}$ % = \$
 \$2400 for 11 days at 6 % = \$

b Make the extensions: [5]

320 yd at $12\frac{1}{2}$ ¢ per yd = \$
 480 bu. at \$1.25 per bu. = \$
 $62\frac{1}{2}$ lb. at 64¢ per lb. = \$
 450 lb. at \$2 per cwt = \$
 1600 lb. at \$15 per ton = \$

c Divide 84 by $\frac{1}{4}$ [2]

d Complete the following statements: [4]

$\frac{1}{2}$ % of \$960 is \$ _____.
 .796 expressed as a per cent is _____.
 75 is 25% greater than _____.

An article that cost \$50 is sold for \$60.
 The per cent of gain on the selling
 price is _____%.

e Complete the following summary of votes: [4]

Districts	Cameron	Woodley	Total Votes
No. 1	115	87	
No. 2	146	192	
No. 3	183	96	
No. 4	85	212	
Totals			

BUSINESS ARITHMETIC

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Write at top of first page of answer paper (a) names of schools where you have studied, (b) number of weeks and recitations a week in business arithmetic previous to entering summer high school, (c) number of recitations in this subject attended in summer high school of 1948 or number and length in minutes of lessons taken in the summer of 1948 under a tutor licensed in the subject and supervised by the principal of the school you last attended.

The minimum time requirement is four or five recitations a week for a school year. The summer school session in business arithmetic will be considered the equivalent of one semester's work during the regular session (four or five recitations a week for half a school year).

For those pupils who have met the time requirement the minimum passing mark is 65 credits; for all others 75 credits.

For admission to this examination attendance on at least 30 recitations in this subject in a registered summer high school in 1948 or an equivalent program of tutoring approved in advance by the Department is required.

Answer questions 1-2 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown written in ink. 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] [Two credits for each correct answer; no partial credit. Answers only are required in this question.]

a Tripp has been paying \$720 per year rent for his house. He signs a lease calling for a 15% increase in rent. How much will he pay per month for rent under the terms of the lease?

b A fountain pen that sold for \$5 in 1944 now sells for \$8.50. What is the per cent of increase in the price?

c A chair sells for \$80 less 10%. What additional rate of discount must be offered in order to sell the chair for \$60?

d A machine that cost \$1200 when new has a trade-in value of \$840 after 6 years of use. What is the average annual depreciation on the machine?

e Stevens, a bankrupt, owes a debt of \$1150 to McCarthy. How much will McCarthy receive in payment of this debt if Stevens' net cash available is distributed to creditors at the rate of 64¢ on the dollar?

4 a Wilson's checkbook balance, on June 1, was \$3186.40. The bank statement he received on that date showed a balance of \$3723.10. Checks outstanding were as follows: \$219.28; \$196.34; \$123.08. In addition, the bank had deducted a service charge of \$2. Reconcile these figures and indicate the correct available checkbook or bank balance. [6]*

b A share of 5% preferred stock, with a par value of \$100, can be purchased for a total cost of \$85, including brokerage and taxes. What actual per cent will a purchaser of a share of this stock earn on his investment, to the nearest *tenth* of a per cent? [4]*

5 Winters sent 1000 bushels of potatoes to his commission agent to be sold. The agent sold 350 bushels at \$2.10, 475 bushels at \$2.20, and the remainder at \$2.40. Expenses were: sorting and storage \$18.50; telephone and telegraph \$4.60; cartage \$8.75. The agent charged 5% commission. What was the average price per bushel, to the *nearest cent*, that Winters actually received for the potatoes? [10]

6 a Jenkins and Stewart are partners in a firm, with investments of \$6800 and \$3400, respectively. The partnership agreement provides that all profits are to be shared in proportion to the partners' investments. How much will Stewart receive as his share of a net profit of \$8642.10? [4]*

b Haight has been buying desks for \$60 and selling them for \$84. The cost of these desks was recently advanced to \$75. At what price must they be sold in the future in order to yield the same per cent of profit on their cost? [6]*

BUSINESS ARITHMETIC — *concluded*

- 7 *a* Albertson can buy an electric refrigerator for \$250 cash, or by making a down-payment of \$40 and 10 monthly instalments of \$24 each. By what per cent does the instalment price exceed the cash price of the refrigerator? [6]*
- b* How much will Albertson save if he borrows \$250 at 6% for 10 months to pay cash for the refrigerator? [4]*
- 8 *a* Dixon insured his house, valued at \$12,000, for \$8000 under an 80% coinsurance policy. The rate was \$.57 per \$100 for a three-year policy. What was the *average annual* cost of the policy to Dixon? [4]*
- b* A fire caused a loss of \$3900 to Dixon's house. How much would the insurance company pay Dixon for this loss? [6]*
- 9 *a* Frisbie had been spending an average of \$250 per year for fuel to heat his house. He had the house insulated, paying \$375 for the material used and \$2.25 per hour for 20 hours of labor required for the work. The following year he spent \$197.50 for fuel. If his saving in fuel continues to be the same, in how many years will this saving equal the cost of having the house insulated? [6]*
- b* Frisbie's house, for which he paid \$11,000, is assessed for 70% of its cost. The tax rate in the community last year was \$31.20 per \$1000. What was the amount of tax on Frisbie's house? [4]*
- 10 Judson purchased 550 suits at \$24 each. He sold 230 of them for \$40 each and 140 for \$35 each. At what price must he sell the remaining suits in order to make a gross profit of 30% on the cost of the entire transaction? [10]
- 11 Answer *all* parts of this question. [10] [This is an accuracy test. One credit for each correct answer; no partial credit; no credit allowed unless work is shown. Reduce each answer to its simplest form.]
- a* Add 317.4; 86.67; 295; 189.444
- b* Subtract 68.75 from 93.4
- c* Multiply 47.2 by 10.9
- d* Divide 573.24 by 84.3
- e* Change 2 ft 5 in. to inches
- f* Add $1\frac{1}{4}$; $3\frac{3}{8}$; $10\frac{1}{2}$; $6\frac{3}{8}$
- g* Subtract $19\frac{5}{8}$ from $26\frac{1}{2}$
- h* Divide $96\frac{1}{4}$ by $2\frac{1}{2}$
- i* Express $\$25\frac{1}{8}$ as it should appear as an answer, in accordance with good business usage
- j* Using the four-step process, multiply $32\frac{1}{2}$ by $5\frac{1}{4}$
- 12 Write the letters *a, b, c, d, e* in a column on your answer paper. After *each* letter write *true* if the corresponding statement below is correct; if the statement is false, write the *amount* that should be substituted for the underscored amount to make the statement correct. [10] [Two credits will be deducted for each incorrect answer.]
- a* A series discount of 20% and $12\frac{1}{2}$ % is equal to a single rate of discount of 30%.
- b* A United States savings bond costs \$18.75 and is worth \$25 ten years later. The *average* annual rate of return is $3\frac{1}{3}$ %.
- c* An invoice of goods is purchased for \$180 on May 10, terms 2/10, n/30. If the bill is paid on June 9, the purchaser will pay \$176.40.
- d* Desmond works in a factory where he is paid \$1.25 per hour for a 40-hour week, with time and a half for overtime. Last week he worked 48 hours. His total earnings were \$65.
- e* A fur coat priced at \$350 is subject to a Federal tax of 20% and a local sales tax of 2%. The price the buyer must pay is \$428.40.

* To the teacher: One-half the number of credits should be deducted for each different error in method. [No credit should be allowed for a solution that contains an error in method and an error in computation.]