

The University of the State of New York

308TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, January 24, 1950 — 9.15 a. m. to 12.15 p. 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 on *each* of the following: [5]

$$\$900 \text{ for 1 month at } 6\% = \$$$

$$\$420 \text{ for 9 days at } 6\% = \$$$

$$\$560 \text{ for 60 days at } 4\frac{1}{2}\% = \$$$

$$\$240 \text{ for 70 days at } 3\% = \$$$

$$\$ 60 \text{ for 88 days at } 6\% = \$$$

b Complete *each* of the following statements: [6]

86% expressed as a decimal is —.

$\frac{1}{4}\%$ of \$760 is \$—.

75 increased by 20% of itself is —.

If an article costing \$15 sells for \$20, the per cent of gain based on the cost is — %.

396.7 divided by 100 is —.

36 is $\frac{2}{3}$ of —.

c Add: [4]

\$ 63.79

8.41

52.60

11.08

49.62

37.73

.59

86.04

57.82

10.79

\$

d Make the extensions: [5]

240 bu. at \$.62 $\frac{1}{2}$ per bu. = \$

16 yd. at \$2.50 per yd. = \$

50 ft. at \$.86 per ft. = \$

500 lb. at \$16 per ton = \$

350 lb. at \$6 per cwt. = \$

BUSINESS ARITHMETIC

Tuesday, January 24, 1950

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 time requirement is four or 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 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 Aylmer owned 50 shares of stock which paid a quarterly dividend of \$.60 per share. What amount of money did Aylmer receive as dividends during a period of one year?
- b Reid's electric meter read 19,913 kilowatt hours on November 2. Two months later it read 20,081 kilowatt hours. If the average cost per kilowatt hour was $5\frac{1}{2}\phi$, what was the amount of Reid's electric bill for the two months?
- c Blake works on a 40-hour-per-week basis at \$.90 per hour, with time-and-a-half for over-time. In a certain week he worked 44 hours. What was the total amount of Blake's earnings for that week?
- d A desk sold for \$63 after a 10% discount had been deducted from its original price. What was its original price?
- e A ninety-day promissory note, dated August 16, 1949, was discounted at the bank on October 13, 1949. For how many days did the bank figure the discount?

4 a The average weekly sales for the four-week period ending December 31, 1948, were reported by the Ryan Company to have amounted to \$1650. During the same period of 1949 the weekly sales were reported as follows: 1st week, \$1723.80; 2nd week, \$2904.18; 3rd week, \$1001.30; 4th week, \$3170.72. Determine the per cent of increase or decrease of the *average* weekly sales for this selected period of 1949 as compared to 1948. [4]*

b On November 22, Leonard bought 10 adding machines at \$120 each, less a trade discount series of 25% and 10%. The terms of payment were $\frac{2}{10}, \frac{N}{30}$. For what amount should Leonard write a check in payment for these machines on December 1? [6]*

5 a A truck which cost \$2400 had a trade-in value of \$1500 after three years of use. What was the average annual *per cent* of depreciation? [4]*

b Blair insured his building, valued at \$16,000, for \$9600 under a policy containing an 80% co-insurance clause. A fire loss of \$8400 occurred. How much should Blair collect from the fire insurance company? [6]*

6 Robinson and Alden are partners in a retail coal business, with investments of \$20,000 and \$10,000, respectively. During 1949, the firm's net sales were \$116,539. The cost of the merchandise sold was \$70,312. Operating expenses were \$35,827. The partnership agreement provides that the net profit is to be divided as follows: first, each partner is to receive 4% interest on his investment; then the remaining profit is to be divided equally. What amount of money should each partner receive as his total share of the net profit for the year? [10]*

7 a Mann went into bankruptcy, with liabilities totalling \$95,840. The net cash distributed to his creditors was \$62,296. What amount was paid to a creditor with a claim of \$3600? [4]*

b Thomas, a farmer, sent 600 bushels of apples to a commission merchant to be sold. The merchant sold 200 bushels for \$3.50 per bushel, 150 bushels for \$3.00 per bushel, and the remainder for \$2.80 per bushel. He charged Thomas \$.20 per bushel commission. Freight, storage and other expenses amounted to \$31.85. What amount did Thomas receive as net proceeds for the sale of these apples? [6]*

[3]

[OVER]

- 8 *a* Horton, a furniture dealer, had been buying chairs for \$35 and selling them for \$49. Recently the price Horton paid for this type of chair was increased to \$40. At what price must he sell chairs of this kind in order to gain the same per cent of profit on their cost? [4]*
- b* The budget for 1950 for the village of Preston requires \$87,500 to meet all expenses. Fines, licenses and other revenue will supply \$4051.19. The taxable property in the village has a total assessed valuation of \$2,156,300. What is the tax rate per \$1000 which must be levied on property in Preston in 1950? [6]*

9 Hawkins built an apartment house, containing six apartments, for \$48,000. Estimated annual expenses connected with owning this building are:

Taxes	\$834
Insurance	120
Fuel	330
Repairs, depreciation and other expenses..	996

What monthly rent must Hawkins charge for each of the six apartments in order to meet these expenses and receive a net income of 8% on his investment? [10]*

- 10 *a* Beale can purchase a washing machine for a total cost of \$225 by paying $33\frac{1}{3}\%$ of the price as a down payment, and the balance in equal monthly installments of \$12.50 each. How many months will it take him to pay for the machine? [4]*
- b* Herman, a salesman, receives a monthly salary of \$200, and is also paid commissions of varying rates on different sales. During 1949, his total earnings, including both salary and commissions, were \$7600. If his sales for the year were \$65,000, what average per cent of commission did he earn? [6]*

11 Answer all parts of this question. [This is an accuracy test. One credit for each correct answer; no partial credit; no credit allowed unless work is shown.] [10]

- a* Add 1.796; 38.09; 361.294; .7045
- b* Subtract 116.95 from 382.2
- c* Divide 30.66 by 36.5
- d* Add $5\frac{1}{3}$; $9\frac{1}{2}$; $\frac{5}{6}$; $16\frac{1}{4}$ [Reduce the answer to its simplest form.]
- e* Using the four-step process, multiply $24\frac{1}{3}$ by $9\frac{1}{4}$
- f* Divide $7\frac{1}{5}$ by $2\frac{1}{4}$ [Reduce the answer to its simplest form.]
- g* Change 2 yd. 1 ft. 7 in. to inches.
- h* Multiply 1.086 by 3.2
- i* Subtract $16\frac{4}{5}$ from $21\frac{1}{2}$ [Reduce the answer to its simplest form.]
- j* Express .675 as a common fraction. [Reduce the answer to its simplest form.]

12 Using the title and information given below, prepare a curve or broken-line graph to show the facts. [To the teacher: deduct one credit for each error or omission.] [10]

EMPIRE MOTION PICTURE THEATER RECEIPTS FOR DEC. 4-DEC. 10, 1949

Sunday	\$650
Monday	240
Tuesday	270
Wednesday	210
Thursday	180
Friday	390
Saturday	560

* 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.]