COMMERCIAL ARITHMETIC
Tuesday, January 24, 1933

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, January 24, 1933 — 9.15 a. m. to 12.15 p. m.

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

	Dept. A	Dept. B	Total
Monday	86	112	
Tuesday	121	69	
Wednesday	142	139	
Thursday	92	89	
Friday	137	126	
Saturday	58	67	
Totals			

b Underline the correct answer for *each* of the following: [3]

30 is 75% of (22.5; 40; 4; 7.5)

$25 per ton is equivalent to ($1\frac{1}{4}\phi$; $2\frac{1}{2}\phi$; 25ϕ; $12\frac{1}{2}\phi$) per pound.

.5% of $120 is ($60; $6; $.60; $.06)

c Find the interest on *each* of the following: [4]

$276 for 80 days at 6% =

$150 for 30 days at 4% =

$86 for 20 days at 6% =

$320 for 3 months at $4\frac{1}{2}\%$ =

[Footing not required]

d Make the extensions: [4]

248 articles @ $37\frac{1}{2}\phi$ =

75 articles @ 60 ϕ =

200 articles @ $1.12\frac{1}{2}$ =

120 articles @ $2\frac{1}{2}\phi$ =

[Footing not required]

e Place answers in proper columns: [4]

Selling price	Cost	Gain	Rate of gain on selling price	Rate of gain on cost
$125	$100	$25	....	....
$36	$24	$12	....	....

The University of the State of New York

256TH HIGH SCHOOL EXAMINATION

COMMERCIAL ARITHMETIC

Tuesday, January 24, 1933 — 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 When potatoes sell for 75 cents a bushel, which is better for the agent, a commission of 2% or of 2¢ a bushel?

b In the window of a certain store, a suit is marked " $17.50— Formerly $25." At what rate was the price reduced?

c A grocer ordered a special brand of coffee consisting of equal parts of each of three grades costing respectively 16¢, 25¢ and 22¢ a pound. How much did the special brand cost a pound?

d A dealer buys goods on terms 2% cash, net 30 days. On an invoice amounting to $300, how much would be saved by borrowing money at 6% for 30 days in order to take advantage of the cash discount?

e A girl received 75%, 87%, 93% and 81% respectively on the first four tests in commercial arithmetic. What percentage must she receive on the fifth test in order that she may have an average of 85% for the five tests?

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

a A house valued at $7000 was insured at 80% of its value. What was the premium, if the rate was $6 per $1000?

b The graduating class of a certain school desires to leave as a memorial two prizes of $5 each to be awarded annually for the two best compositions. How much money must be invested in 4% bonds to insure the necessary income?

COMMERCIAL ARITHMETIC — *continued*

c At 60 cents a square yard, find the cost of plastering the ceiling of a room 22' 6" by 18'.

d A city employee who is paid each month receives an annual salary of $2400. He agrees to return to the city 10% of his salary for the year 1933. How much will he actually receive for the month of January?

e An agency collected 75% of a claim of $1200 and charged 10% for collecting; how much commission did the agency receive?

5 A dealer estimates that his selling and overhead expenses amount to 16% of his total sales. If he buys a rug for $22 less 10% and 10%, at what price must he sell it in order to gain 18% of the selling price? [10]

6 A bank holds a 5½% mortgage for $4500 on a house and lot. The mortgage is dated December 1, 1931. Interest is payable semiannually. The following payments have been made:
June 1, 1932   Interest and $800 on the principal
December 2, 1932   Interest to December 1, 1932
What amount will be due on June 1, 1933, the date of final settlement? [10]

7 Blair, Rose and Ward entered into a partnership on January 1, 1932. Blair invested $7200, Rose $4800 and Ward $12,000. It was agreed that each partner should receive 5% annually on his investment, and that the remaining profit or loss should be divided equally among the partners. At the end of the year, the books showed a profit on sales of $9688, other income $592 and expenses $2630. What was each partner's total income for the year? [10]

8 It has been decided to paint the four sides of a building 42 feet wide by 90 feet long by 32 feet high two coats. It is estimated that for the first coat one gallon of paint will cover 450 square feet of surface and that for the second coat one gallon will cover 675 square feet. Deducting 348 square feet for openings, find how much the paint for the two coats will cost at $3.60 a gallon. [10]

9 On September 15, 1932, James Ward's bank account was overdrawn by $275.70. On that date he discounted at 6% the following notes: a 60-day non-interest-bearing note for $325.50, dated August 22, 1932, and a 90-day interest-bearing note for $242.60, dated August 16, 1932.

a Find the proceeds of *each* note. [4 credits for each note]

b What was Ward's bank balance after the proceeds were credited to his account? [2]   [OVER]

10 A man paid $15,000 for a house that he plans to rent. The estimated annual expenses are as follows: taxes $341.25, insurance $21.75, general repairs and upkeep $400, water rate $4.25 a quarter. What monthly rent must he charge in order to pay all expenses and obtain 8% on his investment? [10]

11 Coats that cost $15.75 had been selling for $24.75 at the rate of 5 a day. When the price was reduced to $21, the sales increased to 10 a day.

 a Was the amount of daily profit increased or decreased by the reduction in price? [2]

 b What per cent did the dealer gain or lose by the reduction in price? [8]

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

 a In some cases, the profits or losses are not divided equally among the partners.

 b Some firms sell merchandise subject to a cash discount, such as 2%.

 c In discounting notes, banks compute the discount on the unexpired time.

 d In some cases, a salesman receives a commission on his total sales in addition to his salary.

 e The trade discount on an article may change from time to time.