

The University of the State of New York

329<sup>TH</sup> HIGH SCHOOL EXAMINATION

**BUSINESS ARITHMETIC**

Monday, January 21, 1957 — 9:15 a.m. to 12:15 p.m., only

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Fill in the following lines :

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

**Instructions for Part I**

*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.**

**Scrap paper may not be used, nor may computations be made on the question paper.**

Part I

RAPID CALCULATION TEST

1 a Subtract: [2]

\$341.00  
 29.22  
 -----  
 \$

b Compute the interest: [4]

\$355.50 for 60 days at 6% \$-----  
 \$ 60 for 97 days at 6% \$-----  
 \$720 for 2 months at 3% \$-----  
 \$648 for 30 days at 2% \$-----

c Make the following extensions: [4]

180 bushels at 50¢ per bushel \$-----  
 450 pounds at \$10 per cwt. \$-----  
 60 quarts at 20¢ per gallon \$-----  
 72 yards at 16 $\frac{2}{3}$ ¢ per yard \$-----

d Underscore the correct completion: [6]

5789.2 divided by 1000 is (.57892, 5.7892, 57.892, 5789.2).

1 $\frac{1}{2}$ % of 1800 is (9, 18, 27, 2700).

45% expressed as a fraction in lowest terms is ( $\frac{9}{200}$ ,  $\frac{45}{100}$ ,  $\frac{9}{20}$ ,  $\frac{45}{1000}$ ).

If an article costing \$80 is sold for \$120, the percent of gain, based on the cost, is (66 $\frac{2}{3}$ %, 50%, 33 $\frac{1}{3}$ %, 25%).

24 is  $\frac{2}{3}$  of (72, 48, 36, 16).

At 25¢ per pound, a person can buy (7, 14, 28, 112) pounds for \$28.

e Complete the following summary of election district returns: [No partial credit.] [4]

District	Jones	Smith	Totals
First	484	569	
Second	295	315	
Third	223	414	
Fourth	276	226	
<i>Totals</i>			

## BUSINESS ARITHMETIC

Monday, January 21, 1957

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.

Part I, 1 Rapid calculation test on attached sheet. [20]

### Part II

Answer any four questions from this part. All work must be shown.

2 Answer all parts of this question. [Two credits for each correct answer; no partial credit.] [10]

- a A student obtained marks of 84%, 92%, 96% and 85% on four tests given recently. What mark must he obtain on his fifth test in order to have an average mark of 88% for all five tests?
- b The June reading of a gas meter was 53,400 cubic feet, while the May reading was 50,800 cubic feet. At \$1.05 per thousand cubic feet, find the amount of the gas bill for this period.
- c A building valued at \$12,500 was insured for 70% of its value at 25¢ per \$100. What was the amount of the premium?
- d If a merchant saved \$19.50 by taking a cash discount of 2%, what was the invoice price of the merchandise he purchased?
- e In 1954, the population of a certain village was 12,450. In 1955, it had increased by 8%. What was the population in 1955?

3 A fruit dealer buys 10 crates of blueberries (32 baskets to the crate) at \$9.45 per crate, delivered. He estimates that 20 baskets will spoil and will have to be thrown away. At what price per basket must he sell the remainder in order to gain a profit of  $33\frac{1}{3}\%$  on the cost of the 10 crates? [10]

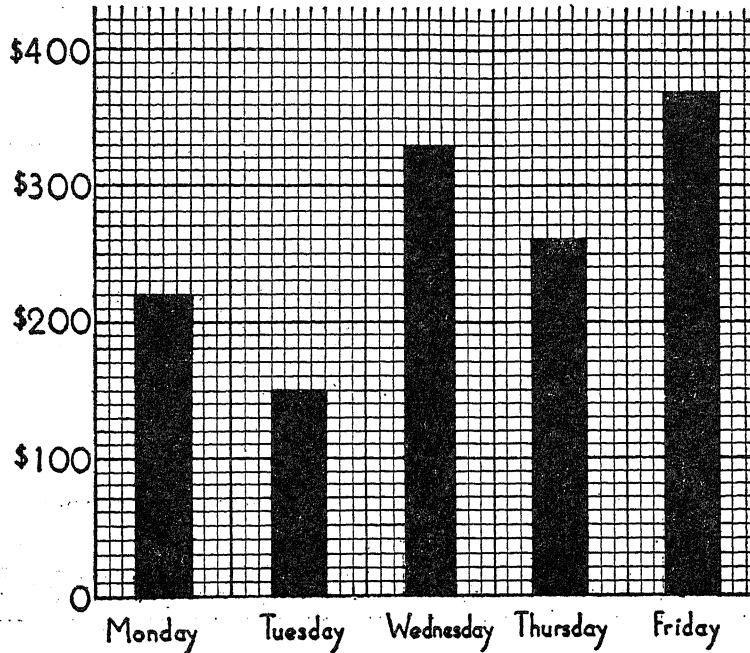
4 Answer all parts of this question. [This is an accuracy test. One credit for each correct answer; no partial credit; no credit allowed unless work is shown. Wherever necessary, reduce the answer to simplest form.] [10]

- a Add 408.38; 12.836; 24.27; 113.003
- b Divide 62.156 by 3.79
- c Add  $5\frac{1}{4}$ ;  $3\frac{1}{3}$ ;  $8\frac{1}{5}$
- d Divide  $38\frac{1}{4}$  by  $\frac{1}{2}$
- e Subtract  $159\frac{7}{8}$  from  $259\frac{1}{3}$
- f Multiply .97 by .659
- g Find  $\frac{1}{4}\%$  of 556
- h Express 1 yard, 2 feet, 7 inches as inches
- i Express  $\frac{1}{3}$  as a percent correct to the nearest tenth of a percent
- j Multiply  $26\frac{1}{3}$  by  $12\frac{1}{2}$

5 On May 1, 1955, John Jones discounted at his bank a customer's 60-day note dated April 25, bearing interest at the rate of 4%. The face of the note was \$1,500. The bank discount rate was 6%. How much did he receive as net proceeds from the note? [10]

6 The graph below shows the amount of daily sales made by Mary Clark, an employee of the Star Department Store, during the week of December 3, 1956. From the graph answer the following questions:

**MARY CLARK**  
**DAILY SALES**  
December 3-7, 1956



- a On which day did Mary have the greatest amount of sales? [1]
- b On which day did she have the *least* amount of sales? [1]
- c What was the amount of her total sales for the week? [2]
- d What was the amount of her *average* daily sales for the week? [2]
- e Mary receives a weekly salary of \$35 per week. In addition, she is paid a commission of 1% of her total weekly sales. What were her total earnings for the week? [4]

**Part III**

**Answer any four questions from this part. All work must be shown.**

7 A commission merchant bought 360 bushels of apples for Abrams at \$2.50 per bushel. He charged 5% commission on this purchase. Freight, storage and other expenses amounted to \$52. What was the average cost per bushel to Abrams, to the *nearest whole cent*? [6]

8 A buyer for the ABC Company, Cleveland, Ohio, can buy 24 office chairs from a local dealer at \$12.50 each, less 10%. He can buy similar chairs from a Toledo firm at \$12.00 each, less 10% and 5%. However, there is a freight charge from Toledo of 81 cents on each chair. How much would the buyer save by taking advantage of the better offer? [6]

9 John can purchase a refrigerator for \$250 cash or on the installment plan for 10% more. He chooses the installment plan and makes a down payment of \$100. The balance is to be paid in equal monthly installments of \$8.75 each. How many months will it take him to pay for the refrigerator? [6]

10 Three partners — Acker, Keith and Brown — invested \$16,000, \$18,000 and \$20,000 respectively in a retail clothing business. The gross profit for the year was \$64,000 and the expenses were \$42,400. The partners were to share the gains and losses in proportion to their investments. How much of the net profit should Acker receive? [6]

11 The budget for this year for the village of Sunbury requires \$87,500 to meet all expenses. Income from fines, licenses and other sources is expected to amount to \$4,051.19. The taxable property in the village has a total assessed valuation of \$2,156,300. What tax rate per \$1,000 will need to be levied in order to raise the necessary funds? [6]

**Part IV**

**Answer any four questions from this part. All work must be shown.**

12 When Edwards prepared his State income-tax return for the past year, he figured that the amount of his net taxable income, after all deductions had been made, was \$4,942 for the year. This amount was subject to a tax of 2% on the first \$1,000, 3% on the next \$2,000 and 4% on the next \$2,000 or any part thereof. What was the total amount of his State income tax? [4]

13 Andrews insured his house, which was valued at \$24,000, for \$16,000 under a policy which contained an 80% coinsurance clause. A fire loss of \$8,400 occurred. What amount of money should Andrews collect from the insurance company? [4]

14 An automobile that cost \$3,600 is estimated to have a trade-in value of \$900 five years later. What is the average annual amount of depreciation? [4]

15 Arnold, a bankrupt, owed debts totaling \$22,375. The net cash that was available for his creditors was \$8,950. What amount of money would have been paid to a creditor with a claim of \$525? [4]

16 On June 1, 1955, Jack's checkbook showed a balance of \$940.38. His bank statement balance was \$1,360.28. Checks outstanding were for \$26.50; \$210.75; \$77.25. Jack also discovered that he had failed to enter in his checkbook a deposit of \$105.40, which he had made ten days earlier. Prepare a reconciliation statement and indicate the correct available checkbook or bank balance. [4]