

**BUSINESS ARITHMETIC**

Tuesday, June 15, 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, June 15, 1937 — 9.15 a. m. to 12.15 p. m.

1-2 a Complete the following summary of sales: [4]

	Dept. A	Dept. B	Total
Monday	79	123	
Tuesday	148	79	
Wednesday	137	115	
Thursday	163	129	
Friday	87	98	
Saturday	56	69	
<b>Total</b>			

b The number of articles that can be bought for: [4]

- \$60 at  $33\frac{1}{3}\phi$  each =
- \$36 at  $12\frac{1}{2}\phi$  each =
- \$24 at  $16\frac{2}{3}\phi$  each =
- \$30 at  $75\phi$  each =

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

- \$1500 for 6 days at 3% =
- \$300 for 56 days at 6% =
- \$600 for 15 days at 5% =
- \$420 for 3 months at 2% =

d Find the selling price of *each* of the following: [4]

<i>Cost</i>	<i>Rate of gain on cost</i>	<i>Selling price</i>
\$22	25%	.....
\$48	$37\frac{1}{2}\%$	.....
\$84	$16\frac{2}{3}\%$	.....
\$50	8%	.....

e Complete *each* of the following: [4]

- The exact number of days from March 9, 1937 to May 29, 1937 is .....
- 36 is  $33\frac{1}{3}\%$  greater than .....
- 3.3 divided by 15 is .....
- $\frac{1}{3}\%$  of \$600 is .....

**BUSINESS ARITHMETIC**

Tuesday, June 15, 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 By selling his car for \$800, Dean lost \$200. What per cent of the cost of the car did he lose?
- b On starting a trip in his car, Mr Henry noted that his speedometer read 11,497 miles; at destination it read 11,932 miles. He was on the road 15 hours. What was his average speed per hour?
- c A plot of ground is  $82' \times 35'$ . What are the dimensions of the architect's drawing, if he uses a scale of  $\frac{1}{4}'' = 1'$ ?
- d Find the single discount which is equal to a series of discounts of 20%, 10% and 5%.
- e A grocer buys corn at \$1.14 per dozen cans. If he sells it at the rate of 3 cans for 42 cents, what is his profit per can?

4 Write in a column on your answer paper the letters *a* to *j* and after each write the letter *T* if the corresponding statement is true or the letter *N* if it is not true. [10]

- a Moving the decimal point two places to the right multiplies a number by 100.
- b Changing a decimal fraction to a common fraction changes its value.
- c Preferred stock always receives a higher rate of dividend than the common stock.
- d Twenty-four is 20% less than 30.
- e Profit is always figured on the cost price.

- f In selling on commission, the commission is computed on the gross sales less the selling expenses.
- g The list price and the selling price are always the same.
- h Outstanding checks will cause the balance on the bank statement to be less than the checkbook balance.
- i Bank discount is simple interest collected in advance.
- j The rate of profit on 4% bonds bought at 125 is 3.2%.

5 On June 1, 1936, Brown, Johnson and Wood entered into partnership. Brown invested \$4800, Evans \$5600 and Wood \$7600. The partners agreed to share profits in proportion to their respective investments. At the end of the year, the gross profits on sales amounted to \$7779.50. The expenses for the year amounted to \$2019.50.

- a Find the firm's net profit for the year. [1]
- b Find Brown's share of the net profit. [3]
- c Find Johnson's share of the net profit. [3]
- d Find Wood's share of the net profit. [3]

6 On May 11, Hare & Company had a checkbook balance of \$335.19. They wished to pay Crane & Company for goods purchased May 1 for \$1250, less 20% and 10%, terms 2/10, n/30. To raise additional funds for the bank account, they discounted G. Good's two-months, non-interest-bearing note for \$600, dated April 15. They then mailed their check to Crane & Company.

- a For how much did Hare & Company write their check in payment of the bill? [2]
- b What was the balance in the checkbook after the check was issued? [8]

7 A fruit dealer bought 15 boxes of grapefruit (80 to a box) at \$2.25 a box. He had to throw out 10 dozen that had spoiled. He sold the remainder at 4 for 15 cents. What was the per cent of profit on the selling price? [10]

8 George Howe buys a house as an investment for \$7500. His annual expenses and upkeep are as follows: taxes \$75.25, insurance \$18.15, repairs \$115.10. What rent per month must he receive to realize  $4\frac{1}{2}\%$  on his investment? [10]

9 A haberdasher buys hats at \$40 per dozen, less 25% and 20%. He desires to make a profit of 25% on the cost and offer a discount of  $16\frac{2}{3}\%$  during a special sale. At what price must each hat be marked? [10]

BUSINESS ARITHMETIC — *concluded*

10 A manufacturing company pays its employees time and a half for overtime. Regular factory hours are 8 hours a day from Monday to Friday inclusive. During the week of June 7, Bert Boyd was employed as follows: Monday 9 hours, Tuesday 8 hours, Wednesday  $6\frac{1}{2}$  hours, Thursday  $9\frac{1}{2}$  hours, Friday  $8\frac{1}{2}$  hours.

*a* If Boyd's wage rate was \$1.20 an hour, what was the amount of his wages for the week? [6]

*b* If Boyd spent 25% of his wages for rent and 20% for food, how much did he have left? [4]

11 The taxable property in a village is assessed at \$17,263,000. The total amount necessary to meet the expenses of the village government for the coming year is \$524,600. It is estimated that \$2500 will be received from special licenses and \$75,300 will be received from the state for school purposes.

*a* Find the tax rate. [Carry the decimal to five places.] [6]

*b* Express the rate as tax per \$1000. [2]

*c* What tax should Mr Robinson pay if his property is valued at \$7500 and is assessed at 80% of its value? [2]

12 You wish to borrow \$100. If you borrow \$100 from a bank and pay \$25 each month on the principal, the total interest and bank charges will be \$4. A loan company will loan you \$100, charging 3% each month on the unpaid balance.

*a* If you borrow \$100 from the loan company and pay \$25 each month on the principal, what will be the total interest cost for the four months? [In your solution show the interest to be paid each month.] [8]

*b* Which concern charges the larger amount? How much larger? [2]