The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

# BUSINESS ARITHMETIC

Wednesday, June 20, 1962 — 1:15 to 4:15 p.m., only

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**Fill in the following lines:**

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

Name of teacher ............ .......... . .............. ..... ... .... ........ .. ......... . ........ ... ....

### 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.

[1]                                                                                               [OVER]

# RAPID CALCULATION TEST

*Directions* (*a–d*): Write the correct answer to *each* of the following on the line at the right.    [4]

1 Subtract:

a  $93\frac{1}{4}$
   $79$                                                                 a................

b  78%, when expressed as a fraction in simplest form, is written as
   $\left(\dfrac{39}{50} \; ; \; \dfrac{78}{100} \; ; \; \dfrac{156}{200} \; ; \; \dfrac{78}{1000}\right)$                    b................

c  $\frac{1}{3}$ of 895 is approximately (30; 300; 600; 2,700)                   c................

d  The exact number of days from March 20, 1962, to April 2, 1962,
   is (12; 13; 14; 43)                                                  d................

*Directions* (*e–l*): Complete *each* of the following:    [8]

e  Multiply 2.8793 by 1,000.                                           e................

f  Divide 2,280 by 57.                                                 f................

g  What number is 10% more than 140?                                   g................

h  Change 2 hours 26 minutes to minutes.                              h................

i  What would be the cost of 12 quarts at $.40 per gallon?            i $..............

j  What would be the cost of 3,000 pounds at $24 per ton?             j $..............

k  What would be the cost of 450 units at $6 per C?                   k $..............

l  An architect uses a scale of $\frac{1}{4}$ inch equals 2 feet.  What actual distance
   would be represented by a line $1\frac{1}{4}$ inches long?              l................

*Directions* (*m–p*): Compute the interest on *each* of the following:    [4]

m $320 for 60 days at 3%                                              m $..............

n $920 for 15 days at 6%                                              n $..............

o $5,600 for 30 days at 6%                                            o $..............

p $60 for 129 days at 6%                                              p $..............

q  Complete the following table of piecework produced in a factory:
   [No partial credit.]    [4]

| Workman | Pieces Produced | Pieces Rejected | Pieces Accepted |
|---------|-----------------|-----------------|-----------------|
| Jackson, Arnold | 1,846 (less) | 27 | 1,819 |
| Klein, Robert | 1,921 | 19 | ...... |
| Holland, Rodger | 1,025 | 23 | ...... |
| Totals | .... | .... | ...... |

[2]

# BUSINESS ARITHMETIC
## Wednesday, June 20, 1962

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

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

**The remaining sheets of this question paper should be handed in at the close of the examination.**

## Part II
### Answer all parts of this question.

2 Solve *each* of the following questions on your answer paper; write only your answer in the space provided on the question paper.    [40]

*a* Divide 315.21 by 4.2.

*a*................

*b* Multiply 5.7 by 39.6 and divide the product by 20.

*b*................

*c* A radio set marked at $60 was sold for $52.50.  What percent of discount was given to the customer who bought this set?

*c*................

*d* One side of a room is 145 inches long.  Two cabinets already placed along the wall measure $38\frac{1}{8}$ inches and $50\frac{1}{4}$ inches, respectively.  How many inches of space are left for a third cabinet to be placed along the wall?

*d*................

*e* In 1961, the sales of the Bates Company were $46,000.  If the sales for 1962 are expected to increase by 13%, what are the expected sales for this company for 1962?

*e*................

*f* Mrs. Barnes can purchase a living room suite on the installment plan for a total cost of $507.50 by paying $168.50 down and the balance in 12 equal monthly installments.  What will be the amount of each monthly installment?

*f*................

*g* On March 28, Alston bought a vacuum cleaner for $125, terms $3/10$, $2/15$, $N/30$.  Which method will he follow to determine the cash necessary for payment on April 10?  [Write in the space provided the *number* preceding the correct method.  No work need be shown.]

  (1) $125 $\times$ .03
  (2) $125 — ($125 $\times$ .02)
  (3) $125 — ($125 $\times$ .03)
  (4) $125 $\times$ 1.02

*g*................

*h* What is the interest on a loan of $1,800 for 137 days at 5%?

*h*................

[3]

*i* An agent sold goods for his employer for $3,250. If he charged 6% commission for his work, what amount of money did this agent turn over to his employer as net proceeds from this transaction?

*i*...............

*j* On January 1, 1962, a depositor's bank statement showed a balance of $350 in his account. The checks which he had written but which were outstanding were as follows: $56.29; $3.76; $14.95. What was the amount of the correct available bank balance on that date?

*j*...............

*k* A merchant borrowed money at his bank, giving the bank his $850, 90-day promissory note. What sum of money did he receive as net proceeds if the bank discounted the note at 6%?

*k*...............

*l* The electric meter of the Acme Company read 16,512 kilowatt-hours on a certain date. A month later, the meter read 17,386 kilowatt-hours. This electricity cost an average of 6 cents per kilowatt-hour. What would be the amount of the electric bill for this company?

*l*...............

*m* How much money must be invested in securities paying an annual return of 6%, in order to receive an income of $1,200 per year?

*m*...............

*n* A homeowner whose house and lot have a total assessed value of $7,600 must pay a property tax of $27.50 per $1,000 of assessed valuation. What amount of money will he pay as taxes on this property?

*n*...............

*o* What is the amount of the FICA tax deducted from the wages of an employee who earned $144 during the first week in January, 1962? [The tax rate is $3\frac{1}{8}\%$.]

*o*...............

*p* A salesman drove his automobile 9,840 miles in one year. If he averaged 16 miles to the gallon and paid $.30 per gallon (tax included) for gasoline, how much did he spend for gasoline, including tax, that year?

*p*...............

*q* On January 2, 1961, Adams deposited $400 in a savings bank that pays 4% interest compounded semiannually. How much would Adams have in his account on January 2, 1962, if no additional deposits or withdrawals were made?

*q*...............

*r* A three-month promissory note dated March 21 was discounted at the bank on May 6. What was the number of days for which the bank charged discount?

*r*...............

*s* A $1,000 bond earns interest at the annual rate of 5%, payable quarterly. What is the amount of interest earned on 6 of these bonds *each quarter?*

*s*...............

*t* An agent earned $76 by selling goods for $950. What percent of commission did he earn?
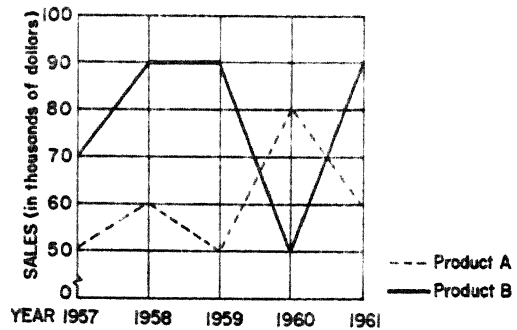
*t*...............

[4]

## Part III

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

3 Arthur, Perry and Forbes invested $6,000, $10,000 and $20,000, respectively, in a partnership business. They agreed that each partner was to receive 6% interest on his investment and that the remaining net profit was to be divided equally. The net profit for the year was $10,260. How much money did *each* partner receive as his total share of the net profit? [6]

4 As an investment, Levane bought a house for $13,500 cash. He rented the house for $125 per month. During a recent year, Levane's expenses on the house amounted to: taxes $260; repairs $124.25; depreciation 2%; insurance $66.50; miscellaneous expenses $104.25. What was his rate, expressed as a percent, of net income on this investment for that year? [6]

5 The sales record for two products, *A* and *B*, manufactured by the Foster Products Corporation for the years 1957–1961, is shown on the graph. List the letters *a–c* on your answer paper. After *each* letter write the figure, chosen from those in parentheses, that is the correct answer to that question. [Answers only are required.]

### FOSTER PRODUCTS CORPORATON
### SALES RECORD OF PRODUCTS
### A AND B
#### 1957–1961



*a* The annual sales of product *B* in 1961 were how much more than the annual sales of product *B* for 1957? ($2,000; $20,000; $30,000; $40,000) [2]

*b* The *average annual* sales of product *A* during the 5-year period covered by the graph amounted to ($60,000; $78,000; $300,000; $390,000) [2]

*c* The rate of decrease in sales of product *A* between the years 1960 and 1961 was (25%; 33⅓%; 75%; 80%) [2]

6 A portion of the weekly payroll of the Atlas Manufacturing Company is shown below. Time and one-half is allowed for all hours beyond 40 hours each week. [Use regular answer paper for your work; do *not* fill in the table.]

| Employee | Total Hours | Hourly Rate | Total Wages | FICA Tax | Federal With-holding Tax | N.Y.S. With-holding Tax | Other Deduc-tions | Total Deduc-tions | Net Pay |
|---|---|---|---|---|---|---|---|---|---|
| Mary Day | 40 | $1.20 | $ | $1.50 | $4.10 | $ None | $1.24 | $ | $ |
| Helen Foster | 44 | $1.40 | $ | $2.01 | $7.10 | $.40 | $1.30 | $ | $ |

*a* What is the amount of Mary Day's net pay for the week? [3]

*b* What is the amount of Helen Foster's net pay for the week? [3]

**Turn the page and continue.**

[5] [OVER]

7 Robert Clark, treasurer, in submitting information on the proceeds of a movie shown for the benefit of his high school athletic association, reported that 197 adult tickets at $.45 each and 344 children's tickets at $.25 each were sold. The expenses for the performance were as follows: $15.00 for rental of a 90-minute movie; $2.50 *each* for two cartoon reels; $14.00 for the services of the projectionist. What net profit did the athletic association receive from this benefit performance?     [6]

### Part IV

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

8 A school purchased typewriters at a cost of $160 each. The estimated trade-in value of each typewriter is $30 at the end of four years. What is the total average annual depreciation on 15 typewriters?     [4]

9 In a certain community, a house can be insured against fire loss at an annual cost of 35 cents per $100. A 3-year policy can be purchased at 2.7 times the annual cost. What would be the cost of a 3-year policy for $10,000 on this house?     [4]

10 Answer questions *a* and *b* relating to the Hampton Company invoice below:

THE HAMPTON COMPANY          Number 38165
Hardware and Machinery
Whitestown, New York

October 19, 1961

Sold to: The Farmers' Store
        Dairysburg, New York

TERMS: $^2/_{15}$, $^1/_{30}$, $^N/_{60}$

1 electric heavy duty saw HDS684 @ $105          Less 20% and 10%

*a* What was the cost of this saw to the Farmers' Store after trade discounts of 20% and 10% had been deducted?     [2]
*b* What was the final date on which the invoice had to be paid in order to take advantage of the 1% cash discount?     [2]

11 The Foster Department Store bought chairs for $18 each and placed a retail price tag of $31.50 on each chair. The salesmen in the furniture department receive a commission of 10% of the selling price of each item sold. What amount of profit is made by the store on the sale of one chair after the commission is paid to the salesman?     [4]

12 Travers bought a lot for $2,500 and built a house costing $15,500 on the lot. His property taxes for the year were $450.
*a* Travers' yearly property taxes were what percent of the total cost of his house and lot?     [2]
*b* If the above house and lot was assessed at 40% of the total cost, what was the assessed value of this property?     [2]

[6]

# FOR TEACHERS ONLY

## BA

### INSTRUCTIONS FOR RATING
### BUSINESS ARITHMETIC

**Wednesday,** June 20, 1962 — 1:15 to 4:15 p.m., only

Use only *red* ink or pencil in rating Regents papers. Do not attempt to *correct* the pupil's work by making insertions or changes of any kind. Use checkmarks to indicate pupil errors.

### Part I — Rapid Calculation Test

1 Allow a total of 20 credits, one credit for each of the following: [Allow no partial credit.]

| | | | |
|---|---|---|---|
| a $14\frac{1}{4}$ | f 40 | l 10 | q 1819 |
| b $\dfrac{39}{50}$ | g 154 | m $1.60 | 1902 |
| | h 146 | n $2.30 | 1002 |
| | i $1.20 | o $28 | 4792  69  4723 |
| c 300 | j $36 | p $1.29 | |
| d 13 | k $27 | | |
| e 2879.3 | | | |

### Part II

2 Allow a total of 40 credits, two credits for each of the following: [Answers only are required. Allow no partial credit.]

| | | | |
|---|---|---|---|
| a 75.05 | f $28.25 | k $837.25 | p $184.50 |
| b 11.286 | g 2 | l $52.44 | q $416.16 |
| c $12\frac{1}{2}\%$ | h $34.25 | m $20,000 | r 46 days |
| d $56\frac{5}{8}$ inches | i $3,055 | n $209 | s $75 |
| e $51,980 | j $275 | o $4.50 | t 8% |

### Part III
Allow 6 credits for each of four correct answers.

3 Arthur $3,060*
  Perry  $3,300*
  Forbes $3,900*

4 5%*

5 a $20,000
  b $60,000
  c 25%

6 a $41.16
  b $53.59

7 $140.65*

### Part IV
Allow 4 credits for each of four correct answers.

8 $487.50*

9 $94.50*

10 a $75.60
  b November 18, 1961

11 $10.35*

12 a $2\frac{1}{2}\%$
  b $7,200

*Unless otherwise directed, in parts III and IV of this examination partial credit may be allowed on questions to which *four* or more credits are assigned. [See pamphlet entitled *Suggestions on the Conducting of Examinations and the Rating of Regents Examination Papers in Business Subjects.*]