The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Wednesday, June 17, 1959 — 1 :15 to 4 :15 p.m., only

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.

RAPID CALCULATION TEST

1 *a* Make the following extensions: [5]

    120 bushels at 33⅓ cents per bushel   = $

    160 yards at $1.25 per yard   = $

    16 cubic yards at 75 cents per cubic yard = $

    80 quarts at 30 cents per gallon   = $

    450 pounds at $6.00 per cwt.   = $

b Compute the interest: [5]

    $700 for 90 days at 6%   = $

    $2500 for 12 days at 3% = $

    $2400 for 30 days at 5% = $

    $1800 for 1 year at 4%   = $

    $500 for 4 months at 6% = $

c Underline the correct answer in *each* of the following: [6]

    The exact number of days from Sept. 15 to Nov. 6 is (51; 52; 53; 54).

    25% expressed as a fraction in lowest terms is ($\frac{50}{200}$; $\frac{25}{100}$; $\frac{5}{20}$; $\frac{1}{4}$).

    $5.7849 expressed to the *nearest whole cent* is ($6.00; $5.785; $5.78; $5.79).

    If an article listed at $40 sells for $30, the percent of discount is (20%; 25%; 33⅓%; 75%).

    20% of $995 is approximately ($200; $250; $1200; $2000).

    2 yards 1 foot 9 inches equals how many inches? (108; 94; 93; 43)

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

District	Smith	Jones	Totals
First	248	379	
Second	225	185	
Third	252	286	
Totals			

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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.   [10]

   a In 1949 Alexander's monthly telephone bill averaged $5.50. In 1959 it averaged $7.70. What was the percent of increase?

   b Whitman, who does piecework in a factory, has been producing an average of 480 units per day. By using a more efficient method of working, he is able to increase his output 20%. How many units per day does Whitman now produce on the average by using the new method?

   c Bloom purchased a desk listed for $95 with discounts of 20% and 5%. How much did Bloom pay for this desk?

   d A piece of equipment cost $4250 when new. After 10 years of use it had a trade-in value of $1160. What was the amount of the average annual depreciation on this piece of equipment?

   e For how much should an article that cost $21 be sold in order for the merchant to make a profit of 30% based on the selling price?

3 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 108.3; 57.277; 284.21; 31.09

   b Subtract 211.59 from 508.3

   c Divide 1492.484 by 211.4

   d Multiply 42.6 by 2.07

   e Add $11\frac{1}{6}$; $6\frac{2}{3}$; $20\frac{5}{12}$

   f Subtract $11\frac{1}{8}$ from 40

   g Divide $1\frac{1}{4}$ by $1\frac{2}{3}$

   h Multiply $12\frac{2}{3}$ by $9\frac{3}{4}$

   i Subtract 7 yards 2 feet 8 inches from 11 yards 1 foot 6 inches

   j Express .725 as a fraction in its lowest terms

4 Baker employed a commission merchant to sell 750 bushels of pears for him. The merchant sold 280 bushels at $4.25 per bushel, 320 bushels at $3.90 per bushel and the remainder at $3.75 per bushel. He charged Baker 10% commission. Freight and other expenses amounted to $31.50. What *average price per bushel* to the *nearest whole cent* was remitted to Baker by the commission merchant as net proceeds for the entire transaction?   [10]

5 Berman can buy certain furniture for his store from the Quality Furniture Co. of New York City for $3200, less 25% and 10%. In addition, Berman must pay freight and installation charges of $125. The Acme Equipment Co., a local firm, offers him similar furniture for $3600 less 15%, 10% and 5%, with no extra charge for delivery and installation. How much money would Mr. Berman save by taking the better of these two offers?   [10]

[3]

6

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$1200.00          Rochester, N. Y., Feb. 20, 1959

Three months after date  I  promise to pay to

the order of .................... Albert Smith
                          00
Twelve hundred and ————— ............. Dollars
                         100
Payable at Citizens Bank

Value received with interest at 5%.

No. 48                    (Signed) Ernest Drake
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On March 25, 1959, Mr. Smith discounted the above note at the local bank. The rate of discount was 6%. From the information given, answer the following questions:

a What is the due date of the above note?　[1]

b What is the maturity value of this note?　[2]

c How many days are in the term of discount?　[3]

d How much will the local bank receive as bank discount for discounting the note?　[3]

e What amount of money does Mr. Smith receive as net proceeds from discounting the note? [1]

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

7 Johnson purchased a new automobile for $2640. He was allowed a trade-in allowance of $860 on his old car. The carrying charge was 8% of the unpaid balance at the time of purchase. Johnson agreed to pay the unpaid balance and carrying charge in 18 equal monthly installments. How much money did Johnson pay as each installment? [6]

8 Zimmer purchased a machine shop for $48,500 cash. He immediately rented it to a tenant for $475 a month. During the first year he owned the property, Zimmer had the following expenses:

Real Estate Taxes.................. $964.50

Repairs and Upkeep............... 372.40

Insurance and Misc. Exp. 180.75

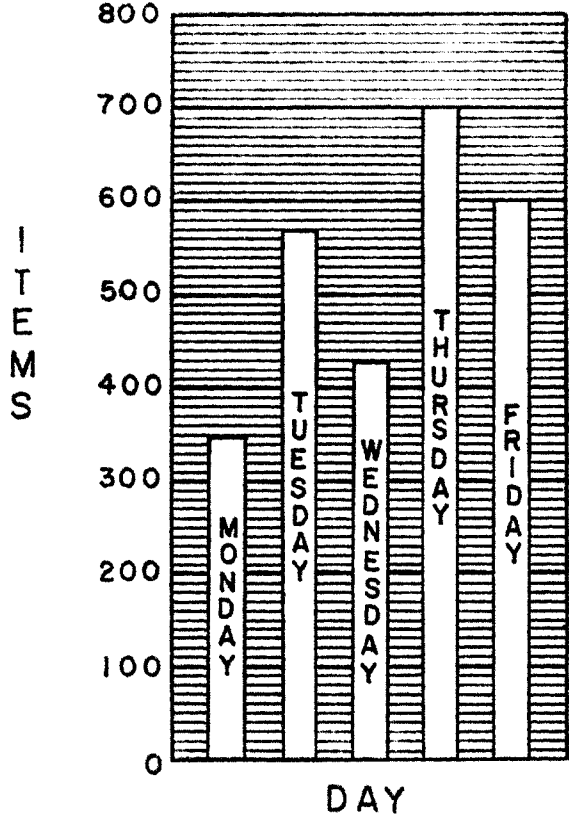Depreciation 970.00

Find, to the *nearest tenth of a percent*, the rate of net income Zimmer made on his investment during the first year of ownership. [6]

9 On June 1, 1959, James Drake's bank statement showed a balance of $312.50. His checkbook balance was $354.63. Outstanding checks were $98.12 and $80.50. A deposit of $218.25, which had been properly recorded in the checkbook, had been received by the bank too late to be entered on the bank statement. When Drake received the statement and canceled checks, he also found a service charge slip for $2.50. Prepare a reconciliation statement and indicate the correct available checkbook or bank balance. [6]

[4]

[OVER]

10 During the week of June 1-5, the American Manufacturing Company produced the following items as shown on the bar graph below. Using the information given, answer the following questions:

American Manufacturing Company
Items Produced
June 1-5, 1959

a On what day was the smallest number of items produced? [1]

b On what day was the greatest number of items produced? [1]

c What was the daily *average* number of items produced by the company during the week? [2]

d If the cost to produce each item is $31.50, what was the total cost of the items produced on Thursday? [2]

11 Albright, a salesman, receives a monthly salary of $300 and is also paid commissions of varying rates on different sales. His total earnings, including both salary and commissions, were $7870 during 1958. If Albright's sales for the year were $61,000, what average percent of commission did he earn? [6]

[5] [OVER]

Part IV

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

12 Adams insured his business property for $20,000 at an annual rate of 27 cents per $100. If a three-year policy costs $2\frac{1}{2}$ times as much as a one-year policy, how much money would Adams have saved by buying a three-year policy instead of three separate one-year policies?   [4]

13 Bassit and Spencer were partners in a wholesale business. During the year 1958 the total sales amounted to $285,640. The cost of goods sold was $247,847. Operating expenses were $20,450. Bassit received 60% of the net profit as his share for the year. How much money did he receive?   [4]

14 Eton paid $28.56 for a new automobile tire. This price included a 2% retail sales tax based on the original marked price.

a What was the original marked price of this tire?   [2]

b Prove your answer.   [2]

15 On January 2, 1958, Elderd deposited $1200 in a savings bank which paid 3% interest per year. The interest was added to his account every six months. How much money did Elderd have in the bank on January 2, 1959, if he made no additional deposits or withdrawals during the year?   [4]

16 Denton's automobile speedometer reading was 17,886 miles at the start of a vacation trip, and 18,212 miles when he reached his destination. If the actual time spent in driving was 6 hours 30 minutes, what was the average speed per hour for the trip, to the *nearest tenth of a mile*?   [4]

FOR TEACHERS ONLY

BA

INSTRUCTIONS FOR RATING
BUSINESS ARITHMETIC
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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 check marks to indicate pupil errors.

Part I — Rapid Calculation Test

1 Allow a total of 20 credits as indicated: [Allow no partial credit.]

a $ 40   [1]
  $200   [1]
  $ 12   [1]
  $ 6   [1]
  $ 27   [1]

b $10.50   [1]
  $ 2.50   [1]
  $10.00   [1]
  $72.00   [1]
  $10.00   [1]

c 52 days   [1]
      $\frac{1}{4}$ [1]
  $5.78   [1]
   25%   [1]
  $200   [1]
  93 inches   [1]

d

	Smith	Jones	Total	
			627	[4]
			410	
			538	
Totals	725	+ 850	= 1575	

Part II

2 Allow a total of 10 credits, two credits for each correct answer. [Allow no partial credit.]

a 40%
b 576 pieces
c $72.20 Net
d $309
e $30

[OVER]

3 Allow a total of 10 credits, one credit for each correct answer. [Allow no partial credit.]

a 480.877

b 296.71

c   7.06

d   88.182

e 38$\frac{1}{4}$

j 28$\frac{7}{8}$

g $\frac{3}{4}$

h 123$\frac{1}{2}$

i 3 yd. 1 ft. 10 in.

j $\frac{29}{40}$

4 $3.56   [10]*

5 $331.30   Saved (Quality Furniture Company)   [10]*

6 a May 20   [1]

b $1215   [2]

c 56 days   [3]

d $11.34   [3]

e $1203.66   [1]

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

7 $106.80*

8 6.6%*

9 Reconciliation will depend upon method used.
$352.13 is correct available checkbook or bank balance.*

10 a Monday   [1]

b Thursday   [1]

c 530   [2]

d $22,050   [2]

11 7%*

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

12 $27*

13 $10,405.80   Bassit*

14 a $28   [2]

b $28 + 2% of $28 = $28.56   [2]

15 $1236.27*

16 50.2 miles*

*Unless otherwise directed, in parts II, 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.*]