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, June 21, 1932 — 9.15 a. m. to 12.15 p. m.

1-2 a Complete the following sales record: [5]

<table>
<thead>
<tr>
<th>Department</th>
<th>Cash</th>
<th>Charges</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>116</td>
<td>113</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>135</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>89</td>
<td>161</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>106</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>117</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b Underline the correct answer for each of the following: [7]

36 increased by 25% of itself is (45; 48; 54)
1.2 divided by 20 equals (6; .6; .06; 60)
.0325 expressed in per cent is (325%; 3½%; 32½%)
In dividing a number by 100, the result may be obtained by moving the decimal point 
two places to the left; two places to the right; one place to the left
¼ of 1%, expressed as a decimal, is (.125; .0125; .00125; 1.25)
½ divided equals (½; ½; ½)
$30 per ton is equivalent to ($15; $1.50; $.15) per 100 pounds.

c Make the extensions: [4]

428 articles @ $.12½ =
144 articles @ $.03½ =
62½ pounds @ $.24 =
2500 pounds @ $28 per ton =
[Footing not required]

d Find the interest on each of the following: [4]

$324 for 90 days at 6% =
$180 for 23 days at 6% =
$280 for 4 months at 4½% =
$420 for 45 days at 4% =
[Footing not required]
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 What is the single discount that is equivalent to the series 25%, 20% and 20%?

b A dealer marked a rug $68. During a special sale, it was sold for $54.40. What was the rate of discount on the marked price?

c A man saves 20% of his earnings. If he receives $150 a month, in how many years can he pay for a building lot costing $900?

d A dealer sold 2½ gross of pencils at 40¢ per dozen; how much was received for the pencils?

e A man gave a 3-months’ note for $450 with interest at 6%; how much will he be required to pay when the note is due?

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

a What is the rate of income on a 5% bond purchased at 62½? [No brokerage]

b If a tax rate is $22.50 on $1000, what is the rate, expressed in mills, on $1?

c A salesman is paid $18 a week and 2% commission on all sales. If his sales for one week amount to $387, what is his total income for the week?
10 A merchant bought 5 dozen folding stepladders at $21.60 a
dozens, less 10% and 5%. By paying cash he received an addi-
tional discount of 1%. The merchant paid $4.58 for cartage. At
what price should each stepladder be marked in order that the
merchant may make a profit of 25% on the cost? [10]

11 R. B. Smith wishes to build a bin to contain 768 bushels of
grain. It is possible to have the bin 8 feet wide and 15 feet long.
If 1 1/4 cubic feet are required for 1 bushel, what must be the height
of the bin in feet? [10]

12 Explain briefly each of the following statements or give a
definite reason for it: [10]
a It is sometimes more desirable to compute the rate of
profit on the selling price than on the cost price.
b Catalog prices are often subject to a series of discounts,
such as 20%, 10%, 5%.
c The premium rate for insurance on brick buildings is
usually less than that on frame or wooden buildings.
d A salesman is sometimes paid a commission on sales
instead of a regular salary.
e When a business man borrows money, he is generally
required to furnish some security or collateral.