CIHM Microfiche Series (Monographs) ICMH Collection de microfiches (monographies)



Canadian institute for Historical Microreproductions / Institut canadien de microreproductions historiques



Technical and Bibliographic Notes / Notes technique et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming are checked below.

L'Institut a microfilmé le meilleur examplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modifications dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers /		Coloured
Couverture de couleur		Coloured pages / Pages de couleur
Covers damaged /		Pages damaged / Pages endommagées
Couverture endommagée		Pages restored and/or laminated /
Covers restored and/or laminated /		Pages restaurées et/ou pelliculées
 Couverture restaurée et/ou pelliculée	V	Pages discoloured, stained or toxed /
Cover title missing / Le titre de couverture manque		Pages decolorées, tachetées ou piquées
Coloured maps / Cartes géographiques en couleur		Pages detached / Pages détachées
Coloured ink (i.e. other than blue or black) /	\checkmark	Showthrough / Transparence
Encre de couleur (i.e. autre que bleue ou noire)		Quality of print varies /
Coloured plates and/or illustrations /		Qualité inégale de l'impression
Planches et/ou illustrations en couleur	_	
		Includes supplementary material /
Bound with other material /		completid du materiel supplementaire
Relié avec d'autres documents		Pages wholly or partially obscured by errata
Only edition available /		slips, tissues, etc., have been retilmed to
Seule édition disponible		ensure the best possible image / Les pages
		touillet d'orrete une polyte etc. ant (4) file (
Tight binding may cause shadows or distortion		à nouveau de tecon à obtenir la mailleure
 along interior margin / La reliure serrée peut		image possible
causer de l'ombre ou de la distorsion le long de		
la marge inteneure.		Opposing pages with varying colouration or
 Blank leaves added during meterntians may appear		discolourations are tilmed twice to ensure the
within the text. Whenever possible, these have		best possible image / Les pages s'opposant
been omitted from filming / Il se peut cue certaines		ayant des colorations variables ou des décol-
pages blanches ajoutées lors d'une restauration		orations sont tilmées deux tois atin d'obtenir la
apparaissent dans le texte, mais, lorsque cela était		meilieur image possible.
possible, ces pages n'ont pas été filmées.		
 Additional comments /		
Commentaires supplémentaires		
and a septementation of		

This item is filmed at the reduction ratio checked below/ Ca document ast filmé au taux de réduction indiqué ci-dessous.



The copy filmed here has been reproduced thanks to the generosity of:

National Library of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and anding on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shell contain the symbol \longrightarrow (meaning "CDN-TINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Meps, pletes, cherts, etc., mey be filmed et different reduction ratios. Those too lerge to be entirely included in one exposure ere filmed beginning in the upper left hend corner, left to right end top to bottom, as meny fremes as required. The following diegrems illustrate the method: L'exempleire filmé fut reproduit grâce à la générosité de:

Bibliothèque nationale du Canada

Les images suivantes ont été reproduites svec la plus grand soin, compte tanu de ls condition st de la nattaté de l'exemplaire filmé, st an conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont le couverture en pepier est Imprimée sont filmés en commençent per le premier plet et en terminent soit psr le dernière page qui comporte une empreinte d'Impression ou d'Illustretion, soit per le second plet, selon le ces. Tous les eutres exempleires origineux sont filmés en commençent per le première page qui comporte une empreinte d'Impression ou d'Illustretion et en terminent par le dernière page qui comporte une teile empreinte.

Un des symboles suivents sppereitre sur le dernière image de chaque microfiche, selon le ces: le symbole → signifie "A SUIVRE", le symbole ♥ signifie "FIN".

Les certes, plenches, tebleeux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grend pour être reproduit en un seul cliché, il est filmé à partir de l'engle supérieur geuche, de geuche à droite. et de heut en bes, en prenent le nombre d'imeges nécesseire. Les diegremmes suivents Illustrent le méthode.





1	2	3
4	5	6

MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)







1653 Eost Main Street Rochester, New York 14609 USA (716) 482 - 0300 - Phone (716) 288 - 5989 - Fax

Primary Exercises

î N

MENTAL Arithmetic

FOR

SIXTH YEAR DEPOSITED NO. 1904

RENOUF PUBLISHING CO. 61 Union Avenue MONTREAL

QA 106 P764

Primary Exercises

IN

MENTAL rithmetic

FOURTH YEAR

RENOUF PUBLISHING CO. 61 Union Avenue MONTREAL QA106 P764

> ENTERED according to Act of Parliament of Canada, in the year Nineteen hundred and seven, by H. J. SILVER, in the office of the Minister of Agriculture.

MENTAL VI.--1.

1. What is the cost of 2 doz. melons at \$0.125 each? If .375 lb. of ham cost 6 cts., what will .875 lb. A . . . 2. What must be added to $\frac{1}{12}$ of a day to make 390 3. min.? A You are away from home from 8.30 a.m. to 3.45 4. p.m.; how many hrs. and min. are you away? A grocer puts a 5 lb. package of pepper into pack-. 5. ages of a $\frac{1}{2}$ oz. each; how many $\frac{1}{2}$ oz. packages will he have? What will be the cost of 2 ft. 3 in. of silk at \$2.00 6. a yard? 7. A boy can walk 880 yds. in 15 min.; how far will he walk in $2\frac{1}{2}$ hours? 8. What will it cost to paint a kitchen floor 10 ft. by Α., 18 ft. at 10 cts. a square yard? If 10 articles cost \$33, how many can be bought for Α. 9. \$9 ? How many pieces $3\frac{1}{2}$ inches long can be sawn from A... 10. a board 2 yds. 1 ft. long? A....

MENTAL VI.-2

If 8 yds. of calico can be bought for \$2.00, what 1. must be paid for 28 yds.? A woman bought 13 yds. of goods at 30 cts. a yard. 2. What change did she receive out of a \$5 bill? A.... If 8 pts. of berries cost 32 cts., what will a peck 3. cost? A I divide 25 oranges between 2 boys, giving one 7 4. more than the other. How many did each receive? A What is the cost of 2 gross of pens at 5 cts. a dozen? 5. A If it cost \$60 to carpet a room 24 ft. long and 18 6. ft. wide, what is the carpet worth a yard? 7. A hall is 13 ft. long and 9 ft. wide. What will it cost to paint it at 30 cts. a square yard? A 8. How many strips of carpet 30 inches wide will it. take to cover a floor 12 ft. wide? 9. 1000 bush. of wheat cost \$675. What does one bushel cost? A horse eats 12 quarts of oats a day. How many 10. bushels will he eat during the month of September? A.....

MENTAL VI.-3.

1.	A floor containing 120 sq. ft. is 8 ft. wide. How long is the floor?
2.	How often will a wheel 2 yds. in circumference turn round in going a mile?
3.	How many min. and sec. will it take to count 1000 one-dollar bills, if you count four bills in a second?
4.	A boy bought apples at the rate of 3 for 2 cts., and sold them at the rate of 2 for 3 cts. How much did he make on 30 apples? A
5.	(a) How many corners has a cube?
	(b) How many edges has a cube?
	(c) How many faces has a cube
	(d) How do you find cubic contents?
6.	One cdge of a cubc measures 8 in. (a) How far is it around one face?
· 2	(b) What is the arca of all its faces taken together?
• 1	(c) How many cu. in. of water would a cubical dish of that size hold?
7.	How many cu. in. arc there in a square stick of wood 2 ft. long, that measures 10 in. across one of its faces?
8.	It is 24 in. around a square prism, and it stands 20 in. high. What is its cubic contents?
	A

MENTAL VI.--4.

- 1. The floor of a room containing 12 sq. yds. is 9 ft. wide. How long is it?
- 2. It is 32 in. around a sq. prism, and it stands 16 in. high. How far is it around one of its oblong faces?
- 3. A box is 8 in. long, 6 in. wide, and 4 in. deep inside measurement. How many 1-in. cubes will it hold?
- 4. A box is 3 ft. wide and a foot deep. How long must it be to hold 2 cu. yds.?
- 5. What will a pile of 4 ft. wood, 4 ft. long and 4 ft. high be worth at \$5.50 a cord?
- 6. A boy bought 40 cts. worth of marbles and then sold 8 cts. worth. What part of his marbles did he sell?
- 7. A grocer bought 10 gallons of berries and sold $2\frac{1}{2}$ qts.; what part did he sell?
- 8. A farmer having $7\frac{1}{2}$ bush. of beans, put them into bags holding $2\frac{1}{2}$ bush. each. How many bags?
- 9. A stage, after making $\frac{1}{5}$ of $\frac{2}{5}$ of its trip, had 7 miles to go. How long was its trip?
- 10. If 8 men can do a piece of work in 3¹/₄ days, how long will it take 1 man to do the work?

MENTAL VI.-5.

t.

.6

ıg

3p 111

g

t.

n id

没

to

es

W

1.

How many sq. ft. in a board 10 ft. long and 9 in. wide? Α.. In a 3-in. cube how many cu. in.? 2. How many loads of earth, each 1 cu. yd., must be 3. removed in digging a cellar 21 ft. long, 18 ft. wide, and 6 ft. deep? **A** 4. How long must a box be that is 4 ft. wide and 3 ft. deep to contain 18 cubic ft.? Α. 5. A boat sails 60 mi. in 5 hrs. What part of 240 mi. will she sail in one hr. ? 6. What part will she sail in 9 hrs.? 7. A boy pays 72 cts. for $1\frac{1}{2}$ gallons of hickory nuts. What should be the cost of 11 qts.? 8 There is a pole $\frac{1}{2}$ and $\frac{1}{3}$ under water, and 10 ft. out; how long is the pole? Α.. 9. If 2 apples cost $4\frac{2}{3}$ cts., how much will 5 apples cost ? Α. 10. A man, owning 1 of the stock of a bank, sold 1 of it. What part of his stock did he retain?

A

MENTAL VI.-6.

- 1. The top of your desk is 21 in. long and 14 in. wide. What is its surface measure?
- 2. At 40 cts. a square foot, what will be the cost of a piece of land 30 ft. by 50 ft.?
- 3. From a pile of cord-wood containing 7 cords, a man sold 4 loads, each 12 feet long and 4 ft. high. Find how much remained.
- 4. When a bushel and a half of apples are worth \$1.20, what is the value of a peck and a half?
- 5. What part of $5\frac{1}{2}$ acres is $\frac{1}{3}$ of $4\frac{1}{2}$ acres?
- 6. What decimal of bushel and a half is a peck and a half?
- 7. There are 50 yds. in a piece of cotton, and $12\frac{1}{2}$ yds. are sold to a customer. What decimal of the piece remains?
- 8. At the rate of 24 bbls. for \$9, what will 7 barrels of apples cost?
- 9. I bought some grain for \$120, which is $\frac{5}{6}$ of what I sold it for. How much did I gain?
- 10. If 4 men can build a stone wall in 15 dys., how many men could have built it in 12 dys.?

A.........

1

MENTAL VI.-7. The floor of your class-room contains

MO

a	nd it is 24 ft. wide. How long is it?
2. F 30 w	A Find the thickness of a block of stone containing 60 cubic feet, its length being 30 feet, and its width 4 ft.
3. A a ea	A boy can pick 3500 stones off a ploughed field in day; at 20 cts. a thousand, how much will he arn in a week?
4. W	AA. That is the value of $\frac{3}{10}$ of an acre of land at \$1.50 er sq. rd.?
5. If wi	a pole 4 ft. long cast a shadow $4\frac{1}{2}$ ft. long, what ill be the length of the shadow a pole 6 ft. long ill cast?
6. 21	yds. of tape cost 13 cts.; what will 39 yds. cost?
7. W sq.	hat is the cost of 6 sq. yds. of cloth at 5 cts. a. ft.?
8. H. ft.	Aow much must I pay for a piece of oilcloth 41/2 wide and 10 ft. long, at 60 cts. a square yard?
9. W	A hen land is worth \$1. a square rod, what is the st of 2 ¹ / ₄ acres?
10. If a will	A a boy can run $\frac{1}{8}$ of a mile in a minute, how long l it take him to run $\frac{2}{3}$ of a mile? A

de.

1.

... ian ind

f a

rth

.

t a

ds. ece

of

... 1at

••• ow

• •

MENTAL VI.-8.

8 . . .

*

. 1

1.58

1.	What is the difference in area between a square table 5 ft. long and a table 6 ft. long and 4 ft. wide?	
2.	A pile of 4 ft. wood is 16 ft. long and 4 ft. high; what is it worth at \$4.75 a cord?	2
3.	If 7 yds. of cloth cost \$13, what will 9 yds. cost?	9
4.	A What will be the cost of 208 bu. of potatoes at 50 cts. a bushel?	4
5.	If a turkey cost $1\frac{2}{5}$, how many turkeys at that rate can be bought for $8\frac{2}{5}$.	5
6.	If $\frac{1}{5}$ of a box of soap costs 90 cts. what is the cost of $2\frac{1}{2}$ boxes?	6
- 7.	Granite is worth \$3 a cubic ft. What must be paid for a block 2 ft. thick, 3 ft. long, and 2 ft. wide?	7
8.	After spending $\frac{1}{5}$ of my money, and losing $\frac{1}{5}$ of the remainder, I had \$30 left; how much had I at first?	8
° 9.	A How many square tiles, 6 in. on a side, will be re- quired for a hearth 4 ft. by 2 ft.?	9.
10.	What is the cost of 648 articles at \$1.12 ¹ / ₂ each?	10.
	A	

8

MENTAL VI.-9.

- 1. A floor is 21 ft. long and 6 yds. wide; what will be the cost of painting it, at 30 cts. a square yard?
- 2. At \$4.25 a cord, what is the value of a pile of cord wood 16 ft. long and 6 ft. high?
- 3. What will be the cost of 620 yds. of calico at 25 cts. a yd.?
- 4. Find the cost of 15 doz. oranges at 18 cts. a dozen.
- 5. When hay is worth $\$7\frac{1}{2}$ a ton, a man buys $\$2\frac{1}{2}$ worth. What part of a ton does he buy?
- 6. $\frac{1}{2}$ of $\frac{3}{4}$ of a ton of coal costs $\$1\frac{4}{5}$; how much will a ton cost?

A.........

A.....

- 7. A farmer sells 15 hens at 40 cts. each, and takes in exchange coffee worth 30 cts. a pound; how many pounds does he get?
- 8. If 8 men dig a cellar in 54 days, how long will it take 7 men?
- 9. George won 40 marbles, then lost $\frac{3}{4}$ of what he had won, and had 25. How many had he at first?
- 10. A man can do a piece of work in 20 min; how many hours would it take him to do 24 times as much?

MENTAL VI.-10.

Ó

1.	How many yds of carpet 27 in. wide will it take to carpet a floor 18 ft. 9 in. long and 9 ft. wide?
2.	A A block of wood 6 ft. long contains 18 cu. ft., and is 9 in. thick. How wide is it?
3.	At \$2.20 a yard, what will 55 yards of tweed cost?
4.	A pole a rod in length is $5\frac{1}{2}$ ft. in the mud. What fractional part of the rod is in the air?
5.	A At \$160 an acre, what must I pay for a piece of land 10 rods by 12?
6.	How long must a box be that is 2 ft. wide and 3 ft. deep to contain 38 cu. ft.?
7.	If § of an orange cost 3 of a cent, what will 5 oranges cost?
8.	3 ¹ / ₄ barrels of apples cost \$5; what will ¹ / ₂ barrel cost?
9.	In a certain feed box there are oats enough for 4 horses for 10 days. If the farmer buys 6 more horses, how long will the oats last?
10.	A merchant buys sugar for 8 cts. a pound and sells it for 12 cts a pound. What fraction repre- sents his gain?
	A

MENTAL VI.-11

	1.	A square prism standing 18 in. high measures 12 in. across one of its faces. How many cu. ft. does it contain?
	2.	How many times will $4\frac{2}{3}$ gallons of oil fill a lamp that holds $\frac{1}{2}$ of $\frac{2}{3}$ of 1 gallon?
	3.	What decimal represents the gain of \$2 on every \$4!
	4.	The length of a workman's day is increased from 8 to 9 hrs. What fraction represents the increase?
	5.	A Butter was 20 cts. a lb. in August and sold for 25 cts. in December. What decimal represents the in- crease in price?
,	6.	A dry acticle weighing 40 lbs. weighs 50 lbs. when soaked in water. What fraction represents the in- crease in weight?
	7.	Mary had 12 cts, and gave Peter 3 cts. What deci- mal part of her money had she left?
	8.	8 canoe paddles cost \$10; what will 12 cost?
	9.	A girl walks $1\frac{1}{2}$ miles in $\frac{3}{4}$ of an hour. How far can she walk in $5\frac{1}{2}$ hours?
-	10.	At the same rate, how long would it take her to walk 6 miles?
	:	A

e to

and

st?

... hat

· · · of

d 3

... I 5

rrel

• 4 ore

and

ore-

. .

MENTAL VI. -12.

1.	in. How many cu. ft. in it?
2.	A What part of a yard and a quarter is 1 ft. 3 in.?
3.	A In a certain pasture there is feed for 20 cows for $4\frac{1}{2}$ days. How long would the same field keep 6 cows?
. 4.	A boy started to play marbles with 2 doz. marbles, and had 13 doz. when he finished. What fractional part of his marbles did he lose?
5.	A In a certain class-room there are 50 pupils, and 20 of them are boys. What decimal part of the class is boys?
6.	What decimal of the class is girls?
7.	A What per cent. of the class is boys?
8.	A What per cent. of the class is girls?
-9.	A If $\frac{2}{3}$ of a doz. oranges cost 16 cts., how much will $3\frac{1}{2}$ doz. cost?
10.	A If 6 men can do a piece of work in 5 dys., how much of the work can 3 men do in 8 dys.?
	A

MENTAL VI.-13.

1. A block of wood 6 ft. long measures 12 in. across two cf its faces, and 18 in. across the other two faces. How many cu. ft. does it contain?

2. What decimal of a day and a half is 9 hrs.?

- 3. If a train goes fof a mile in a min., how long will it take to go 25 miles?
- 4. If 1 apple cost 3 of a cent, what will 3 of an apple cost ?
- 5. What will 40 table-cloths cost at \$1.75 each?
- 6. After spending $\frac{1}{6}$ of my money and losing $\frac{1}{6}$ of it, I have \$38 left; how much had I at first?
- 7. A horse and carriage cost \$160; the carriage cost ‡ of the whole amount. What did the horse cost?

- - - - - - - - -

- 8. How many yds. in .625 of a mile.
- 9. A doctor gave \$20 for collecting bills to the amount of \$80. What fractional part of his bills did he pay for collecting?
- 10. Hats are bought for \$4 apiece and sold for \$5. What decimal represents the gain?

12

for

les,

nal

20 ass

. .

vill

ow

6

MENTAL VI.-14.

What is the value of a stick of mahogany 6 x 12 in. 1. and 10ft. long at \$2.40 per cu. ft.? If a man can walk $\frac{4}{5}$ of a mile in $\frac{1}{5}$ of an hour, how 2. long will it take him to walk 12 miles!? 3. In a trade a man gains 50 per cent. on his capital. What part of the capital equals his gain? A woman bought a shawl for \$8, and sold it at a 4. gain of 25 per cent. How much did she gain? 5. A grocer sold 20 per cent of 50 barrels of flour; how.many barrels remained ? 6. A dress is bought for \$4 and sold for \$6; what was the gain per cent.? A man's wages were \$2 a day; they were reduced 7. 10%. What are his wages now? 8. A grocer sold corn at a profit of 12 cts. a bushel. If the selling price was 72 cts. a bushel, what was his gain per cent? 9. How shall I mark goods that cost \$16 so as to gain 121 per cent.? 10. Find the per cent. gain on eggs bought at 12 cts. a doz., and sold for 14 cts.? Α....

MENTAL VI.-15.

1

in.

••• 0W

al.

. . a

. . r;

at

id

1.

. n

• A

•

×\$

1	1.	Give the dimensions in inches of a box large enough to hold 10 bricks?
	2.	Goods bought for \$64 are sold at a gain of 121 per cent. What is the gain?
	3.	A cow that cost \$40 in the spring was sold for \$35. What is the loss per cent.?
	4.	A When a profit of 25 cts. a bushel is made by selling corn at \$1.25 a bushel, what is the gain per cent.
	5.	A Flour that cost \$4 a barrel is sold at a gain of 10 ¹ / ₂ per cent. What is the selling price per barrel?
	6.	A Find the cost of 75 baskets at $12\frac{1}{2}$ cts. each.
	7.	A If $\frac{2}{3}$ of an apple cost $\frac{3}{4}$ of a cent. what will $\frac{1}{2}$ of an apple cost?
	8.	A boat and its sail cost \$120. The sail $305t_{10}$ of the whole amount. What did the boat cost?
•	9.	A In a certain school there are 850 pupils on the roll, and on Monday 6% of them are absent. How many are present?
	10.	A If 25 articles cost \$8 ¹ / ₃ , how many ricles can be bought for \$17?
		A

MENTAL VI.-16.

and and a	· · · · · · · · · · · · · · · · · · ·
1.	MENTAL VI.—16. There is a hole 2 ft. square and 8 in. deep in a wall. How many brieks must be laid in it end-wise to com- pletely fill it?
2.	A Goods bought for \$96 are sold at a gain of 33 ¹ / ₂ per cent. What is the gain?
3.	A boat hat cost \$50 in June was sold in October at a loss of 30 per cent. What was it sold for?
4.	A farmer raising 300 bu. of wheat sold 663% of it, and fed the rest to his stock. How much did he feed?
5.	Find the cost of 64 hammoeks at \$1.75 each.
6.	If $\frac{3}{4}$ of a eargo is worth \$2,400, what is $\frac{3}{3}$ of the cargo worth?
7.	A man invested $\frac{2}{5}$ of his money in land; what per cent of his money did he retain?
8.	A If a family consume ³ / ₄ of a barrel of flour in a month, how long will 3 ³ / ₄ barrels last them?
9.	A A farmer having 400 sheep loses 20% of them and sells 25% of the remainder. How many does he sell?
10.	How many has he left?
•	A

.

MENTAL VI.-51.

A woman went to market with \$45 in her purse and 1. spent \$15. What per cent. of her money did she spend ? A farmer bought a covr for \$40 and sold her at a 2. loss of 10%; what did he receive for her? A 3. Frank bought silk at 60 cents a yard and sold it at a gain of 20%; what did he get for it? A girl carrying 5 doz. eggs to the store falls and 4. breaks 6 of them; what per cent. did she break? How many square inches in the surface of a cubical-5. block whose edges are 4 inches long? What is the cubic contents of the above block in **6**. inches? Α.. How many rotations will a wheel 10 ft. in eircum-7. ference make in going a mile? A merchant buys flour at \$5 a barrel, and sells it so 8. as to gain 20%. What did he gain on one barrel? 9. If in a school of 216 pupils 663% are boys, how many boys are there in the school? I sold 121% of a flock of 320 sheep at \$5 a head. 10. What did I receive for them? Α.....

all. m-

per

at

it, he

he

. .

. .

)er

• • a

nd

he

MENTAL VI.-52.

111

14

5 F 31

1.	A grain dealer bought 200 bushels of wheat for \$160, and sold it at a gain of 20% on the cost. What did he sell it for a bushel?
2.	A boy had 40 marbles, and gave away 15 of them. What per cent. of his marbles did he give away?
. 3.	I lost 163% of my money. What % of it had I left?
4 .	What part of 4 feet square is 4 square feet?
5.	Bought a piece of silk for \$40, and sold it at 75% profit. For what was it sold?
6.	\$25 is 20% of my money; how much have I?
7.	What per cent. is gained on goods sold at double the cost?
8.	If 6 men do a piece of work in 9 days, in how many days would 2 men do it?
9.	What per cent. do I lose by buying hats for \$5 and selling them for \$4 apiece?
10.	How many cords of wood in a pile 16 ft. long, 4 ft. high, and 4 ft. wide?

MENTAL VI.-53.

- 1. If from every bushel he grinds, a miller takes out 4 quarts, what per cent. of the grain does he take?
- 2. A watch which cost \$60 was sold for \$45. The loss is what fraction of the cost?
- 3. What was the loss per cent.?

0

4

- 4. What per cent. of 5 feet square is 5 square feet?
- 5. How much is lost by selling goods that cost \$15 at 20% below cost?
- 6. A grocer bought 6 barrels of flour for \$30 and sold it at an advance of 25%; how much did he get per barrel?
- 7. A farmer gained \$6 on a horse, which was 3% of his value; what was the value of the horse?
- 8. What per cent. do I gain by buying hats for \$4 and selling them for \$5 apiece?
- 9. How much will 9 eggs_cost at 15 cts. a dozen?
- 10. ¹/₃ of the length of a pole is in the air, ¹/₄ in the water, and 10 ft. in the ground; what is the length of the pole?

A:....

A

MENTAL VI.-54.

and the state and

0

J- M-

1.	A planter set out 200 peach trees, and 40 died. What per cent. of them died?
2.	In a box of 5 doz. oranges there are 6 oranges that are not good. What per cent. of the whole number are good?
3.	A horse was sold at \$40 more than cost, which was at a gain of 50%; what was the cost of the horse?
	A
4.	At a gain of '5 per cent. what part of the cost equals the gain?
	A
5.	A merchant sold 25% of 50 barrels of flour. How many barrels remained?
6.	James bought a horse for \$150, and sold it for $\frac{2}{3}$ of the cost; required the loss per cent.
7.	Mary sold her shawl for \$15, which was a gain of 25%; what was the cost of the shawl?
L	A
8.	How many strips of carpet 30 in. wide will it take to cover a floor 15 ft. wide?
9.	If $\frac{3}{9}$ of a yard of silk cost \$2, what will 2 yards cost?
10.	Find the exact number of days from June 3rd to September 1st?
	A

MENTAL VI.—55.

A man who worked for \$24 a week had his salary 1. diminished by $12\frac{1}{2}\%$; what was it after the deduction? A..... $\mathbf{2}$. Potatoes which cost 80 cts. a bushel should be sold for how much to gain 25%? At what price per bushel must they be sold to lose 3. 40%? A merehant sells damaged eloth at \$2 a yard and 4. thereby loses 20%. What was the cost of the cloth? 5. Jones gains 50% on his capital; what part of the capital equals the gain? 6. A groeer bought 10 barrels of flour for \$50 and sold them at a loss of 20%; what did he receive for each barrel? Α.. 7. By selling a hat for \$8 a milliner lost 20 per cent. What was the value of the hat? A 8. Jones earned \$500 a ear, and spent 25% of it for books; how much had he remaining? At 25 cents a square foot, what is the cost of a piece 9. of ground 20 feet front and 30 ft. deep? If I spend $\frac{5}{6}$ of my money and have \$3.50 left; 10. how much had I before I spent any?

A.....

MENTAL VI.-56.

1. A farmer having 300 bushels of grain, sold 663% of it and fed the rest to his stock; how much did he feed? \$40 is 25% more than how many dollars? 2. A horse trots 220 yds. in 40 seconds; how long will 3. he take to trot a mile? How many square tiles, 4 inches each side, will be 4. required for a hearth 4 ft. by 2 ft.? Find the interest on \$200 for 1 year at 6%? 5. If 4 men can do a piece of work in $2\frac{1}{2}$ days; how 6. long will it take 20 men to do the same work? Find the exact number of days from March 10th to 7. May 11th? A market woman bought apples at 10 cts. a score, 8. and sold them at 2 cents apiece; what was the gain per cent? By selling eggs at 16 cts. a dozen I gain $33\frac{1}{3}\%$; what 9. was the cost? What is the interest on \$200 for 3 months at 6%? 10. A....

MENTAL VI.-57.

1. A man was hired to work 80 days, and lost 20% of his time; how many days did he work? Bought a cow for \$35, which was $12\frac{1}{2}\%$ less than 2. her real value. What was her real value? A..... At 3 cents a foot find the cost of picture moulding 3. to go around a room 15 ft. long and 12 ft. wide? A................. What is the interest on \$50 for 1 year at 8%? 4. A.... In a camp there are provisions for a party of 6 for 5. 10 days. If one man leaves, how long will the provisions last? A..... If ²/₄ of a yard of eloth costs \$3³/₅; what will 5 yds. 6. eost? A 7. A carpet which cost \$12 was sold for \$9; what was the loss per cent.? If you put $\frac{1}{2}$ of your money in your purse, $\frac{1}{3}$ in your 8. desk, and \$20 in the bank; how much money have you? Α. A lawyer received \$60, which was 3% of the sum 9. collected. How much did he collect? How long will it take \$200 to gain \$25 at 5%? 10.

MENTAL VI.-58.

- 1. 32 gallons of oil were drawn from a cask containing 96 gallons. What per cent. of the whole remained in the cask?
- 2. Tom has 20 marbles and Fred. has 50. Tom's marbles are what per cent. of Fred's?
- 3. A floor containing 12 sq. yds. is 9 ft. wide; how long is it?
- 4. What is the interest on \$50 for 6 months at 8%?
- 5. A boy lost $\frac{3}{10}$ of his money and had 35 cts. left; how much money had he at first?
- 6. A drover sold 80 cows from a herd of 400 cattle. What was the per cent. of cattle sold?
- 7. If wages advance from \$1.60 to \$1.80 a day, what is the per cent. of increase?
- 8. By selling potatoes at 20 cts. a bushel I gained 20%. What was the cost?
- 9. How much money can I borrow at 6% if I pay an annual interest of \$420?

10. In what time will a principal double itself at 5%?

A.....

MENTAL VI.-59.

1.	A grocer sells sugar for 10% more this year than last. If he sells for \$11 a barrel this year, what was last year's price?
2.	How many 1-in. cubes can be put into a box 4 in. high, 5 in. wide, and 9 in. long, inside measurement?
3.	A How many square inches of paper will it take to cover the inside bottom of the above box?
•	Δ
4.	How many sq. in. in the surface of the interior sides and ends of this box?
5.	Find the simple interest on \$200 for 2 years at 51%.
•	A
6.	If $\frac{1}{5}$ of a yard of cloth cost 56 cts., what will 3 yds.
•	A
7.	A lot of chickens was sold for \$24, and 25% was gained. For how much should they have been sold to gain 20%?
8.	A stationer lost 20% by selling paper at 20 cts. a quire. What did the paper cost a ream?
	A
9.	What is the simple interest on \$60 for 18 months at 4% ?
10.	At what rate per cent. will \$500 gain \$60 in 2 years?
	A

MENTAL VI.-60.

1. A man sold a cow for \$20, which was 20% less than she cost; what did she cost? By selling eggs at 18 cts. a dozen, I lose 25%. What 2. would be the selling price to gain 25%? What is the interest on \$600 for 1 yr. 6 ms. at 8%? 3. What principal will gain \$60 at 5% in 2 yrs.? 4. A In what time will \$100, at 7 per cent., give \$14 5. interest? At what per cent. will \$200, in 3 years, give \$36 6. interest? 7. I sold a watch for \$60, thereby gaining 20%; what per cent. would I have gained by selling it for \$75? 8. What will 4,250 ft. of lumber cost at \$20 per M.? A........... 9. How many cubic feet of earth were removed to make a well 40 ft. deep and 4 ft. square? If 2 men do a piece of work in $6\frac{1}{2}$ days, how long 10. would it take 3 men? A..............

MENTAL VI.-61.

	.1.	I pay \$12 per week for board this year, which is 20% less than I paid last year; what did I pay last year?
	2.	By selling his dog for \$6 less than it cost, Fred. lost 15 per cent.; required the cost of the dog?
	3.	A Find the interest on \$200 for 1 yr. 3 mos. at 6%?
	* 4.	A What principal will gain \$12 in 6 mos. at 6%?
	5.	A In what time will \$100, at 6 per cent., give \$21 interest?
	6.	At what rate will \$40, in 5 years, give \$20 interest?
	7.	A boy sold his knife for 40 cents, which was 20% less than cost; at what price must he have sold it to gain 20%?
	8.	I bought oranges at 20 cts. a dozen, and sold them at a gain of 20%. For what did I sell them apiece?
		A
	9.	If I had sold them for 3 cts. apiece, what should I have gained per cent.?
1	LO.	How many cords of wood in a pile of wood 28 ft. long, 4 ft. wide, and 4 ft. high?
		A

MENTAL VI.-62.

- 1. Tea that cost 80 cts. is sold to gain 20%. What is the selling price?
- 2. After paying 30% of his debts, a merchant found that \$210 would pay the remainder; what did he owe at first?
- 3. In a school of 70 pupils 42 are boys; what percentage of the pupils are girls?
- 4. A man bought a horse for \$200 and sold it for \$13 more. His gain was what per cent. of the cost?
- 5. If a merchant buys paper at \$1.50 a ream and sells it at 10 cents a quire, what is his gain per cent.?
 - A....
- 6. I have \$35, which is 5% of what my brother has. How much has my brother?
- 7. If a bushel and a half of beans cost 75 cts., what will 8 qts. cost?
- 8. What was the loss per cent. of selling milk for $4\frac{1}{2}$ cts. a quart that cost 5 cts.?
- 9. How long will it take 12 men to do what 8 men can do in $4\frac{1}{2}$ days?
- 10. At what rate will any sum double itself in 20 years at simple interest?

A.....

A. .

MENTAL VI.-63.

1.	What per cent. is gained on an article bought at \$4.50 and sold for \$6?
2.	How must goods that cost \$16 be marked so as to gain $12\frac{1}{2}\%$?
3.	A merchant bought cranberries at \$4.80 a bushel; for how much a bushel must he sell them to gain 30 cents a peck?
4.	If one boy can do a piece of work in 3 days, and another in 5 days, how much can both do in one day?
_	A
5.	At \$2.00 a rod, what will it cost to enclose with a fence a lot of land $5\frac{1}{2}$ rods square?
6.	How long will it take for \$400 to gain \$120 at $2\frac{1}{2}\%$?
7.	A What number diminished by 20% is 60?
	Λ
8.	At what rate per cent. will \$500 gain \$60 in 2 years?
	A
9.	A poor woman paid 15 cts. for a basket of coal weighing 25 lbs. At the same rate what would she pay for a ton?
10.	A fruit dealer buys oranges at 15 cts. a dozen, and
ية الم 19 ¹²	sells them at the rate of 2 for 3 cts. What is his gain
	or loss per cent. ?

No.

3

1......

MEN/TAL VI.-64.

1.	Find the per cent. gained on oil bought at 12 cts. and sold at 14 cts. a gallon.
2.	What number increased by 20% of itself, equals 48!
3.	A In what time will any sum double itself at 8% simple interest?
4 .	How long will it take \$80 to amount to \$100 at 5%?
5.	Find the interest on \$200 for 1 yr. 3 mos. at 8%?
6.	A There is flour enough in camp for 4 persons for 12 months. How long will it last 7 persons?
7.	A horse was sold at a loss of \$50, which was 10% of the cost; what was the cost?
8.	A If $\frac{5}{6}$ of a pound of prunes cost 10 ets., what will $\frac{2}{6}$ of a pound cost?
9.	Jones lost 60% on a watch by selling it for \$40; what should he have sold it for to gain 60%?
10.	A A farmer sold corn for 20 cts. a bushel less than cost, which was at a loss of 40%; what was the cost?
	A

MENTAL VI.-65.

1.	What per cent. is gained by selling coal at \$6 a ton that cost \$5 a ton?
2.	What number diminished by 30% of itself equals 28?
3.	In what time will any sum double itself at 4% simple interest?
4.	Find the simple interest of \$400 at 5% for 2 yrs. 9 mos.?
5.	At what per cent. will \$40, in 5 years, give \$20 simple interest?
6.	A What principal will, in 8 years, at 6 per cent., give \$24 interest?
7.	A farmer sold # of his cows and then had 25 cows remaining; how many had he at first?
	A
8.	How many yds. of fencing will it take to enclose a lot of land 100 ft. square?
9.	How many gallons of ice-cream will be sufficient for 60 people, reckoning 1 quart for 4 people?
10	A If a cubic foot of water weighs 1,000 lbs., how many pounds of water in a cistern 10 ft. long, 4 ft. wide, the water standing 18 inches deep?

272

A.....

MENTAL VI.—66.

3.1

11

1.	By selling papers at 5 cts. each, a boy gains $66\frac{2}{3}\%$; what did they cost him? A
2.	In what time will \$100, at 6%, give \$21?
	A
3.	What principal will in 6 years, at 5 per cent., give \$60 interest?
	A
· 4 .	What is the simple interest of \$600 for 2 years, 3 months, at 8 per cent.?
5.	Mary gave $\frac{1}{2}$ of her money for silk and $\frac{1}{3}$ for satin, and had \$10 left; how much had she at first?
	Λ .
6.	ference have to make in going 1 of a mile?
	Α
H7	To have gets 8 greats of gets a day how long will
4.	6 bushels last him? A
. 8	How many square inches in the surface of a block
: 0.	10 inches long, 10 inches wide, and 4 inches thick?
	A
9.	What is the area in sq. ft. of the walls of a room 12 ft. long, 8 ft. wide, and 8 ft. high?
	Α
10.	How many yds. of carpet 5 of a yd. wide will be required to cover a floor containing 15 sq. yds.?
	A



