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FOR INDUCTIVE TEACHING, DRILLING AND TESTING

BOOK NUMBER TWO

Numbers from 1 to 100

PREPARED UNDER THE DIRECTION OF
JOHN T. PRINCE

BOSTON, U.S.A.
GINN & COMPANY, PUBLISHERS
1902

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NOTE TO TEACHERS.

THE work of this book includes operations with numbers to 100 and is designed for pupils of the second or third school year. Three distinct purposes have been kept in mind in preparing the exercises, (1) to furnish illustrations by which pupils may have a good idea of numbers and of the operations and relations of numbers, (2) to present by easy grades the numerical operations so that they may be understood and performed by the pupils without direct assistance, (3) to present a large number of exercises for drill, and thus avoid the necessity of the teacher's writing out the drill lessons on the black-board. Black-board lessons are objectionable not only on account of a waste of the teacher's time and strength but also on account of the injury done to pupils' eyes in much reading and copying from the black-board.

It may not be necessary for all the exercises to be given to insure thoroughness, but in selecting exercises for practice it would be well to follow the order indicated. Whenever it is found that a process is not understood or is not readily performed the pupils should be taken back to processes which are understood and which can be performed readily and then should be led forward by easy steps until the desired end is reached.

The exercises are not intended to indicate the amount which should be given for a single lesson. They are intended to be used simply as a guide in giving out lessons and in conducting recitations.

For suggestions and directions in using this book, teachers are referred to the Manual for teachers which is designed to accompany all books of the series.

CONTENTS.

SECTION		PAGES
I.	Numbers from 1 to 20 (Review)	1–11
II.	Development of numbers to 100. First steps in Addition and Subtraction	12–31
III.	Addition and Subtraction. Units added to and subtracted from numbers consisting of tens and units	32–46
IV.	Multiplication and Division with multipliers and divisors to 10. Fractional parts of numbers. Reviews and applications in common weights and measures . . .	47–73
V.	Previous work extended in adding, subtracting, multiplying by, and dividing by numbers beyond 10	74–90
VI.	Miscellaneous exercises for application and Review	91–103

SECTION I.

NUMBERS FROM 1 TO 20. (REVIEW.)

EXERCISE 1.

Add at sight:

1.	2	3	4	5	6	7	8	5	6
	3	4	5	6	7	8	9	8	9
2.	9	9	2	4	6	3	8	7	8
	9	2	5	6	6	9	5	7	2
3.	6	3	4	8	5	7	3	6	9
	3	5	4	6	9	4	6	5	7
4.	3	8	3	3	7	4	5	7	2
	9	7	8	7	9	8	5	9	7
5.	2	4	3	2	5	7	6	9	7
	6	9	3	4	8	5	9	4	9
6.	5	3	6	7	5	5	4	7	5
	3	4	5	4	4	2	2	2	2
	4	7	3	3	3	7	9	3	7
	2	2	1	2	6	3	3	6	6

1.	*2.*	*3.*	*4.*
6 + 3 =	11 + 8 =	18 − 9 =	20 − 12 =
8 + 8 =	11 + 6 =	17 − 6 =	19 − 11 =
7 + 6 =	12 + 7 =	15 − 9 =	18 − 12 =
9 + 4 =	13 + 6 =	19 − 7 =	17 − 9 =
7 + 8 =	15 + 4 =	20 − 8 =	12 − 8 =

5.	*6.*	*7.*	*8.*
5 + 7 =	11 + 3 =	17 − 8 =	20 − 14 =
8 + 6 =	12 + 8 =	16 − 7 =	16 − 11 =
9 + 6 =	11 + 9 =	20 − 6 =	14 − 8 =
7 + 9 =	9 + 9 =	18 − 5 =	18 − 10 =
10 + 8 =	9 + 8 =	16 − 9 =	20 − 11 =

EXERCISE 3.

1. Eight cards less six cards are — cards.

2. Nine books and seven books are — books.

3. Fifteen sleds less nine sleds are — sleds.

4. Seven oranges and eight oranges are — oranges.

5. Thirteen nails less ten nails are — nails.

6. Sixteen cents less twelve cents are — cents.

7. Eight clocks and ten clocks are — clocks.

8. Twenty nuts less six nuts are — nuts.

9. Fourteen ships and six ships are — ships.

10. Twenty stoves less eight stoves are — stoves.

1. In one quart there are — pints.

2. In five quarts there are — pints.

3. In six quarts there are — pints.

4. In ten quarts there are — pints.

5. In four quarts there are — pints.

6. In nine quarts and a pint there are — pints.

7. In seven quarts and a pint there are — pints.

8. In one gallon there are — quarts.

9. In five gallons there are — quarts.

10. In three gallons and a quart there are — quarts.

11. In four gallons and two pints there are — quarts.

12. At three cents a pint, two pints, or one quart, of milk will cost — cents.

13. At two cents a pint, two quarts of milk will cost — cents.

14. At four cents a pint, two quarts of milk will cost — cents.

15. If one quart of milk costs five cents, one gallon, or four quarts, will cost — cents.

16. A quart is — times as much as a pint.

17. A gallon is — times as much as a quart. A pint is — — of a quart.

1.	*2.*	*3.*	*4.*
$4 \times 5 =$	$4 \times 2 =$	$9 \times 2 =$	$2 \times 3 =$
$2 \times 9 =$	$3 \times 4 =$	$5 \times 4 =$	$5 \times 3 =$
$3 \times 2 =$	$7 \times 2 =$	$2 \times 5 =$	$2 \times 8 =$
$4 \times 4 =$	$8 \times 2 =$	$4 \times 3 =$	$3 \times 5 =$
$2 \times 7 =$	$3 \times 3 =$	$10 \times 2 =$	$6 \times 3 =$

5.	*6.*	*7.*	*8.*
$20 \div 2 =$	$14 \div 7 =$	$20 \div 4 =$	$15 \div 3 =$
$18 \div 3 =$	$10 \div 2 =$	$16 \div 2 =$	$20 \div 5 =$
$16 \div 4 =$	$12 \div 4 =$	$18 \div 6 =$	$8 \div 4 =$
$12 \div 6 =$	$16 \div 8 =$	$15 \div 5 =$	$6 \div 3 =$
$10 \div 5 =$	$18 \div 2 =$	$12 \div 3 =$	$18 \div 9 =$

9.	*10.*	*11.*	*12.*
$9 \times ? = 18$	$8 \times ? = 16$	$3 \times ? = 9$	$5 \times ? = 10$
$6 \times ? = 18$	$5 \times ? = 20$	$2 \times ? = 18$	$2 \times ? = 14$
$7 \times ? = 14$	$6 \times ? = 12$	$3 \times ? = 9$	$3 \times ? = 18$
$4 \times ? = 16$	$5 \times ? = 15$	$2 \times ? = 20$	$4 \times ? = 20$
$10 \times ? = 20$	$2 \times ? = 12$	$3 \times ? = 12$	$9 \times ? = 9$

13.

$13 \div 2 =$ — and — remainder.
$17 \div 3 =$ — and — remainder.
$19 \div 6 =$ — and — remainder.
$20 \div 8 =$ — and — remainder.
$19 \div 5 =$ — and — remainder.

1. Write the letters that stand for gallon or gallons; quart or quarts; pint or pints; gill or gills.

2. Write the letters that stand for year or years; month or months; week or weeks; day or days.

3. Write the letters that stand for dozen.

4. Write the letters that stand for foot or feet; for inch or inches.

5.	*6.*	*7.*
1 gal.= — qt.	1 yr. = — mo.	1 yd. = — ft.
1 qt. = — pt.	1 mo.= — wk.	1 ft. = — in.
1 pt. = — gi.	1 wk.= — da.	1 doz.= — things

8.	*9.*	*10.*
3 qt. = — pt.	2 wk.= — da.	$\frac{1}{2}$ ft. = — in.
2 gal.= — qt.	3 mo.= — wk.	$\frac{1}{3}$ ft. = — in.
1 gal.= — pt.	$\frac{1}{2}$ yr. = — mo.	$\frac{1}{2}$ doz.= — things
1 qt. = — gi.	$1\frac{1}{2}$ yr. = — mo.	$\frac{1}{4}$ doz.= — things

11.	*12.*	*13.*
1 qt. + 1 pt.=	3 mo.+ 2 wk.=	1 ft. + 4 in. =
3 qt. + 1 pt.=	2 wk.+ 3 da. =	1 ft. + 8 in. =
2 gal.+ 1 qt.=	4 mo.+ 3 wk.=	1 doz.+ 6 things =
4 gal.+ 1 qt.=	1 yr. + 4 mo.=	1 doz.+ 8 things =

1. How many cents will you have to pay for 5 pencils at 2 cents each?

2. Annie bought 8 cents' worth of thread, and gave the store-keeper 10 cents. How much did she receive back?

3. Alfred had 18 marbles, and put them into three piles. How many in each pile?

4. A line is 1 yard and 2 feet long. How many feet long is it?

5. John is 14 years old, and his sister is 20. How much older is the sister?

6. One boy caught 8 fishes, and another boy 12. How many fishes did they both catch?

7. There were 15 roses on a bush, and 12 of them were picked off. How many remained?

8. 1 quart of milk at 3 cents a pint will cost — cents.

9. 1 pint of milk at 8 cents a quart will cost — cents.

10. 1 gal. of oil at 4 cts. a quart will cost what?

11. If from 2 quarts of milk there is taken 1 pint, there will be left — pints.

12. 2 gallons of milk in one pail, and 6 quarts in another, will make — quarts.

13. 9 pints of molasses and 4 quarts will make — pints in all.

1.	2.
a. 1 pint = — gills.	20 gills are — pints.
b. 2 pints = — gills.	16 gills are — pints.
c. 3 pints = — gills.	12 gills are — pints.
d. 4 pints = — gills.	8 gills are — pints.
e. 5 pints = — gills.	4 gills are — pints.

3. If you measure 10 pints of milk into a pail, how many quarts will you have?

4. In $4\frac{1}{2}$ quarts of water how many pints?

5. If 6 pints of buttermilk cost six cents, what will one pint cost?

6. In a pail were 12 gills of berries. How many pints were there?

7. If a pail holds $\frac{1}{2}$ gallon and 1 quart more, how many quarts does it hold?

8. How many pints in 20 gills?

9. How many gills in 4 pints?

10. What will 6 pints of milk cost at 2 cents a pint?

11. If milk costs 1 cent a gill, what is the cost per quart?

12. If 1 gallon of milk costs 12 cents, what is the cost of a quart?

13. If 1 gallon of milk costs 16 cents, what is the cost of a quart and a pint?

1. What three pieces of money, all different, will make ten cents?

2. Which is more, a dime, or a three-cent piece and 2 two-cent pieces.

3. Two dimes are — cents.

4. One dime, a five-cent piece, and a penny are — cents.

5. If John, Mary, Frank, and Bessie each have 5 cents, how much money have they all?

6. A little boy's coat cost 10 dollars, and his rocking-horse $\frac{1}{2}$ as much. How much did his horse cost?

7. Nellie has 3 cents, and Jessie has 5 times as many. How many has Jessie? How many cents have Nellie and Jessie together?

8. Belle bought 3 oranges at 5 cents each. How much did she pay for them?

Add, putting in for the last number in each example that which will make the result 20:

9.	*10.*	*11.*	*12.*	*13.*	*14.*	*15.*	*16.*	*17.*	*18.*
8	5	3	9	3	9	7	7	3	9
2	3	7	2	7	6	5	3	6	3
3	6	2	4	4	3	4	5	7	5
*	*	*	*	*	*	*	*	*	*
20	20	20	20	20	20	20	20	20	20

1. How many legs have 3 cows?

2. What will 8 two-cent stamps cost?

3. How many inches long is a stick a foot and a half long?

4. What is the distance round the outside of a table that is 3 feet long and 2 feet wide?

5. 12 cents will buy how many two-cent stamps?

6. How many quarts in 12 pint cupfuls?

7. If I walk 2 miles a day, how many miles shall I walk in a week?

8. Eight yoke of oxen are how many oxen?

9. 6 pairs of shoes are how many shoes?

10. If my hens lay 4 eggs a day, how many days will it take them to lay a dozen eggs?

11. What coins will make 18 cents?

12. If you buy a dozen eggs and use 8 of them, how many eggs will you have left?

13. How many legs have 3 flies?

14. How many shoes will 2 oxen need?

15. How many pairs of shoes will eight horses wear?

16. What will half a dozen eggs cost at 20 cents a dozen?

17. What will a dozen and a half eggs cost at the rate of a cent apiece?

1. A boy had two dimes, and spent 8 cents. How many cents had he left?

2. Harry bought a dozen peaches, and gave away five peaches. How many had he left?

3. What will 2 quarts of milk cost at 20 cents a gallon? 3 quarts?

4. At 4 cents a pint, what will 2 quarts of milk cost?

5. How many inches are there in one-half of a foot? in one-third of a foot?

6. How many inches in one foot and a half?

7. In one pitcher there are 16 gills of milk. How many pints are there?

8. A mug holds two gills. How many gills will ten mugs hold, and how many pints would that be?

9. At 4 cents a pint, what will 12 gills of milk cost?

10. A little girl picked a gill of berries every day for ten days. How many pints did she have?

11. For 18 cents I can buy — pieces of blotting paper at 2 cents apiece. Tell what you could get for 20 cents.

12. How many gallons of buttermilk will fill a twelve-quart pail?

1. How many days are there in 2 weeks?

2. How many school-days are there in 3 weeks?

3. How many week-days are there in 3 weeks?

4. If a boy earns half a dollar a day, how much will he earn in 2 days? in a week? in 3 weeks?

5. If there are 20 children in a class, and one-fourth of them are absent, how many children are absent? how many are present?

6. A man bought for his boy during one year 2 hats at 1 dollar apiece, 2 pairs of shoes at 2 dollars a pair, 2 jackets at 3 dollars apiece, and 2 pairs of trousers at 4 dollars a pair. What did they all cost?

7. If a gallon of milk costs 20 cents, what will a quart and a pint cost?

8. A little boy picked 4 pints of strawberries one day, and 6 pints the next. How many quarts did he pick?

9. How many gill dipperfuls of berries will it take to fill a two-quart pail?

10. What will 8 apples cost at the rate of 2 apples for three cents?

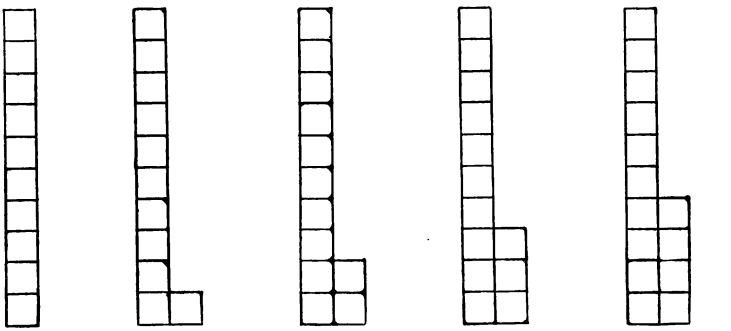
11. How many marbles can I get for 5 cents, at the rate of 4 marbles for a cent?

SECTION II.

EXERCISE 1.

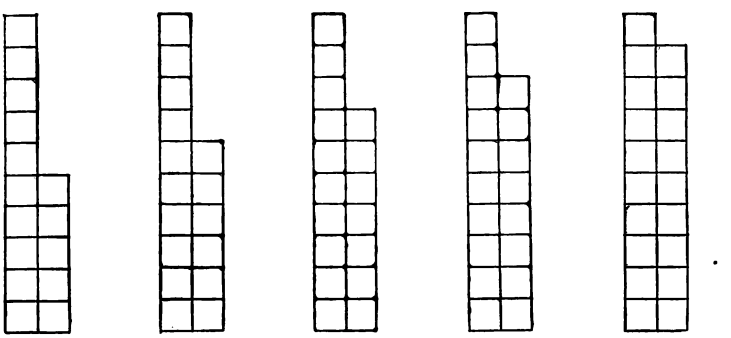
t stands for *ten* or *tens*. *u* stands for *unit* or *units*.

1.



10 = 1*t* = | 10 + 1 = 1*t* + 1*u* = | 10 + 2 = 1*t* + 2*u* = | 10 + 3 = 1*t* + 3*u* = | 10 + 4 = 1*t* + 4*u* =

2.



10 + 5 = 1*t* + 5*u* = | 10 + 6 = 1*t* + 6*u* = | 10 + 7 = 1*t* + 7*u* = | 10 + 8 = 1*t* + 8*u* = | 10 + 9 = 1*t* + 9*u* =

3. Draw squares representing 15; 13; 18; 17.

4. Write in figures one ten and seven units; one ten and nine units; one ten and one unit.

	1.	*2.*	*3.*
a.	$10+1=11$	$1\,t+1\,u=11\,u$	$11=1\,t+1\,u$
b.	$10+2=\ ?$	$1\,t+2\,u=\ ?$	$12=\ ?$
c.	$10+3=\ ?$	$1\,t+3\,u=\ ?$	$13=\ ?$
d.	$10+4=\ ?$	$1\,t+4\,u=\ ?$	$14=\ ?$
e.	$10+5=\ ?$	$1\,t+5\,u=\ ?$	$15=\ ?$
f.	$10+6=\ ?$	$1\,t+6\,u=\ ?$	$16=\ ?$
g.	$10+7=\ ?$	$1\,t+7\,u=\ ?$	$17=\ ?$
h.	$10+8=\ ?$	$1\,t+8\,u=\ ?$	$18=\ ?$
i.	$10+9=\ ?$	$1\,t+9\,u=\ ?$	$19=\ ?$

4.	*5.*	*6.*	*7.*
$18=$	$19=$	$16=$	$17=$
$13=$	$14=$	$11=$	$15=$

8. $4\,u+3\,u=7\,u$

9. $8\,u+2\,u=1\,t$

10. $8\,u+4\,u=12\,u=1\,t+2\,u$

11. $9\,u+6\,u=15\,u=1\,t+5\,u$

12. $7\,u+8\,u=\ ?\ =\ ?$

13. $6\,u+8\,u=\ ?\ =\ ?$

14. 2 times $5\,u=10\,u=1\,t.$

15. 3 times $4\,u=12\,u=1\,t+2\,u$

16. 4 times $3\,u=\ ?\ =\ ?$

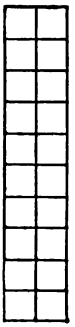
17. 2 times $8\,u=\ ?\ =\ ?$

18. 3 times $6\,u=\ ?\ =\ ?$

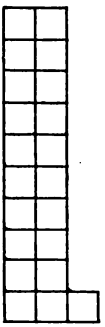
19. 5 times $3\,u=\ ?\ =\ ?$

20. 4 times $4\,u=\ ?\ =\ ?$

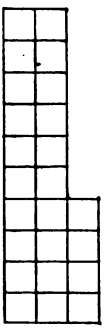
1.



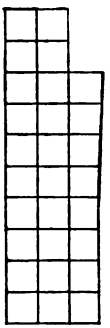
10+10=
$2t=$



10+10+1=
$2t+1u=$

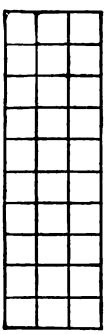


10+10+4=
$2t+4u=$

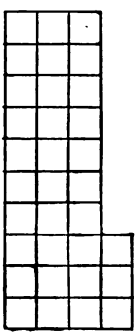


10+10+8=
$2t+8u=$

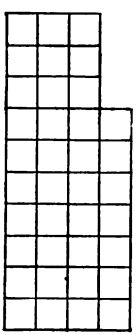
2.



$3t=$



$3t+3u=$

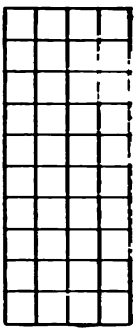


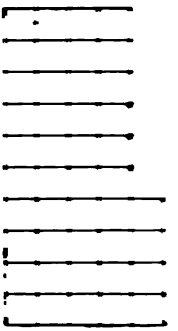
$3t+7u=$

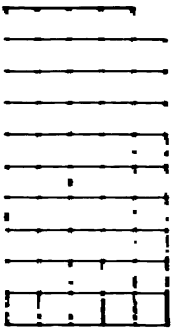
3. Draw squares representing 24, 36, 28, 37.

	4.	*5.*	*6.*
a.	$20+1=21$	$2t+1u=21u$	$21=2t+1u$
b.	$20+6=$?	$2t+6u=26u$	$26=$?
c.	$20+8=$?	$2t+8u=$?	$28=$?
d.	$30+5=$?	$3t+5u=$?	$35=$?
e.	$30+6=$?	$3t+6u=$?	$36=$?

1.





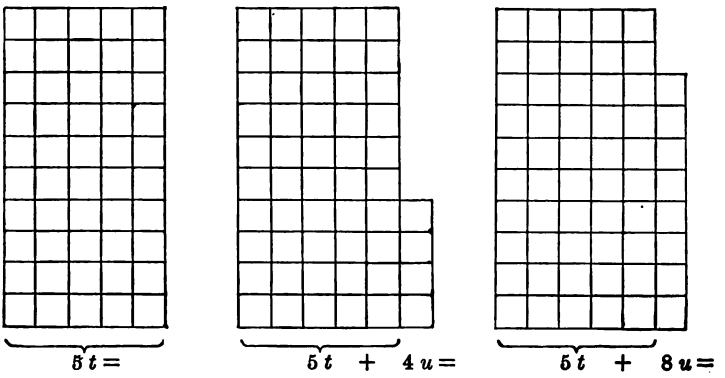


2.	*3.*	*4.*
a. 40+0= ?	4 *t*+0 *u*= ?	40=
b. 40+6= ?	4 *t*+6 *u*= ?	46=
c. 40+8= ?	4 *t*+8 *u*= ?	48=
d. 40+9= ?	4 *t*+9 *u*= ?	49=

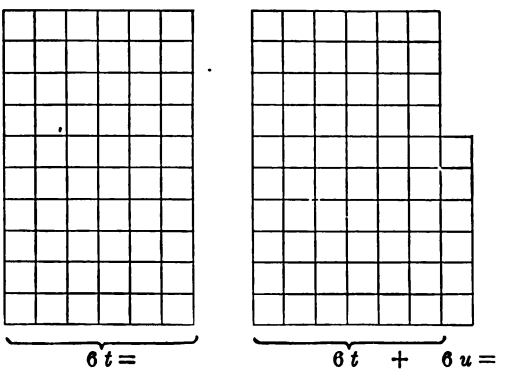
5.	*6.*	*7.*
a. 27=2 *t*+7 *u*	33=3 *t*+3 *u*	27=
b. 34= ?	35= ?	19=
c. 38= ?	29= ?	31=
d. 43= ?	43= ?	43=
e. 44= ?	40= ?	36=

8.	*9.*
a. 4 *u*+2 *u*=6 *u*	14 *u*+2 *u*=16 *u*=1 *t*+6 *u*
b. 9 *u*+1 *u*= ?	19 *u*+1 *u*= ? = ?
c. 7 *u*+2 *u*= ?	27 *u*+2 *u*= ? = ?
d. 4 *u*+6 *u*= ?	24 *u*+6 *u*= ? = ?

1.



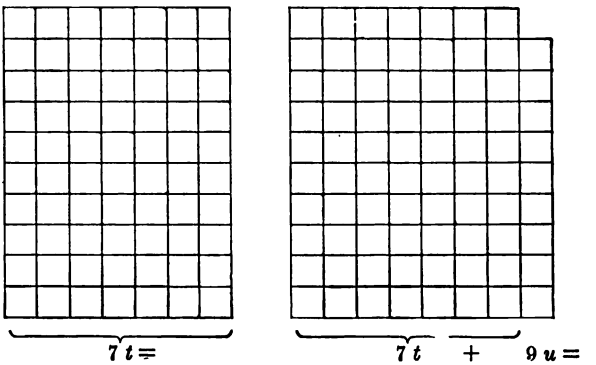
2.



3. Draw squares representing 52, 57, 63, 68.

	4.	*5.*	*6.*
a.	$50+2=52$	$5t+2u=52u$	$52=5t+2u$
b.	$50+7=\ ?$	$5t+7u=\ ?$	$57=\ ?$
c.	$50+9=\ ?$	$5t+9u=\ ?$	$59=\ ?$
d.	$60+3=\ ?$	$6t+3u=\ ?$	$63=\ ?$
e.	$60+6=\ ?$	$6t+6u=\ ?$	$66=\ ?$

1.

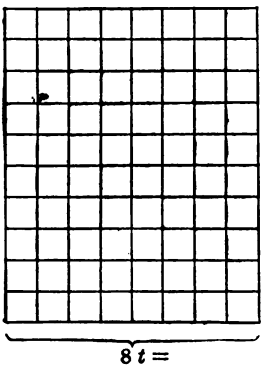


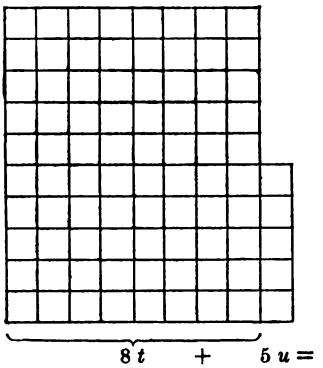
	2.	*3.*	*4.*
a.	$70+2=$?	$7t+2u=$?	$72=$?
b.	$70+7=$?	$7t+7u=$?	$77=$?
c.	$70+8=$?	$7t+8u=$?	$78=$?
d.	$70+9=$?	$7t+9u=$?	$79=$?

	5.	*6.*	*7.*
a.	$51=5t+1u$	$62=6t+2u$	$42=4t+2u$
b.	$63=$?	$75=$?	$58=$?
c.	$48=$?	$69=$?	$65=$?
d.	$56=$?	$73=$?	$50=$?
e.	$72=$?	$60=$?	$77=$?

	8.	*9.*
a.	$6u+3u=9u$	$56u+3u=59u=5t+9u$
b.	$3u+4u=$?	$53u+4u=$? = ?
c.	$2u+7u=$?	$62u+7u=$? = ?
d.	$5u+5u=$?	$65u+5u=$? = ?

1.





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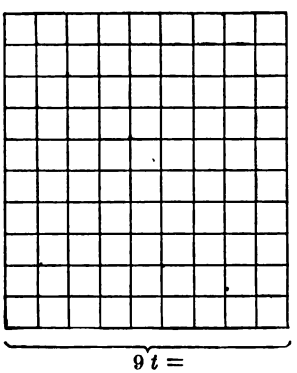
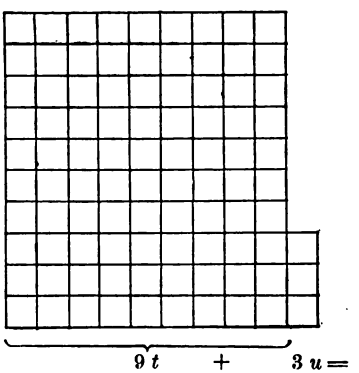




3. Draw squares representing 82, 88, 94, 99.

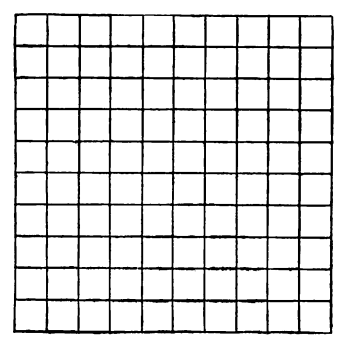
	4.	*5.*	*6.*
a.	$80+3=83$	$8t+3u=83u$	$83=8t+3u$
b.	$80+7=\ ?$	$8t+7u=\ ?$	$87=\ ?$
c.	$80+4=\ ?$	$8t+4u=\ ?$	$84=\ ?$
d.	$80+9=\ ?$	$8t+9u=\ ?$	$89=\ ?$
e.	$90+0=\ ?$	$9t+0u=\ ?$	$90=\ ?$

	1.	2.	3.
a.	$90+6=$?	$9t+6u=$?	$96=$?
b.	$90+4=$?	$9t+4u=$?	$94=$?
c.	$90+8=$?	$9t+8u=$?	$98=$?
d.	$90+7=$?	$9t+7u=$?	$97=$?
e.	$90+9=$?	$9t+9u=$?	$99=$?

	4.	5.	6.
a.	$84=8t+4u$	$73=7t+3u$	$58=5t+8u$
b.	$87=$?	$81=$?	$60=$?
c.	$93=$?	$78=$?	$96=$?
d.	$95=$?	$90=$?	$80=$?

	7.	8.
a.	$4u+3u=7u$	$84u+3u=87u=8t+7u$
b.	$3u+6u=$?	$83u+3u=$? $=$?
c.	$2u+8u=$?	$82u+8u=$? $=$?
d.	$1u+7u=$?	$91u+7u=$? $=$?

9.



1. Count and write numbers from 20 to 40; 40 to 60; 60 to 80; 80 to 100.

2. Count backwards and write numbers from 20 to 1; from 40 to 20; from 60 to 40; from 80 to 60; from 100 to 80.

3. What do the figures stand for in each of the following: 16? (16 = 1 *t* + 6 *u*); 38? 45? 62? 74? 83? 97? 70?

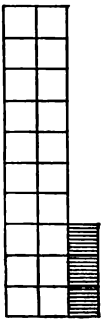
4. Write in figures twenty-four; thirty-seven; forty-one; fifty; seventy-nine; sixty-eight; ninety-five.

5. Separate into tens and units 38; 84; 69; 52; 78; 29; 40; 63; 80.

	6.	*7.*	*8.*
a.	20 + 1 =	80 + 7 =	1 dime = 10 cents.
b.	30 + 2 =	90 + 8 =	1 dime + 4 cts. = — cts.
c.	50 + 4 =	20 + 3 =	4 dimes + 3 cts. = — cts.
d.	40 + 3 =	40 + 5 =	2 dimes + 5 cts. = — cts.
e.	60 + 6 =	70 + 6 =	8 dimes + 6 cts. = — cts.
f.	50 + 1 =	30 + 9 =	7 dimes + 2 cts. = — cts.

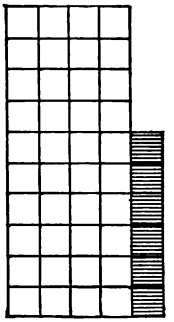
9.	*10.*	*11.*	*12.*	*13.*
44 + 4 =	62 + 5 =	34 + 4 =	64 + 5 =	54 + 5 =
22 + 6 =	24 + 3 =	23 + 6 =	52 + 7 =	72 + 6 =
46 + 3 =	51 + 8 =	62 + 7 =	84 + 5 =	91 + 6 =
73 + 5 =	80 + 6 =	94 + 3 =	73 + 6 =	99 + 1 =

1.



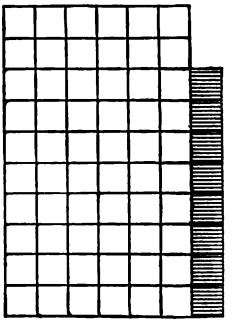
$$\begin{array}{r} 23 \\ -\ 3 \\ \hline \end{array}$$

2.



$$\begin{array}{r} 46 \\ -\ 6 \\ \hline \end{array}$$

3.



$$\begin{array}{r} 68 \\ -\ 8 \\ \hline \end{array}$$

4.

$24 - 4 =$

$36 - 6 =$

5.

$83 - 3 =$

$76 - 6 =$

6.

$38 - 8 =$

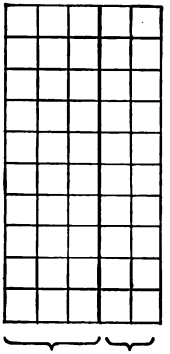
$42 - 2 =$

7.

$27 - 7 =$

$86 - 6 =$

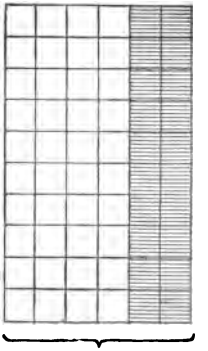
8.



$3\,t + 2\,t =$

$30 + 20 =$

9.

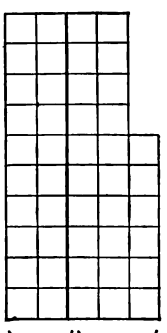


$6\,t - 2\,t =$

$60 - 20 =$

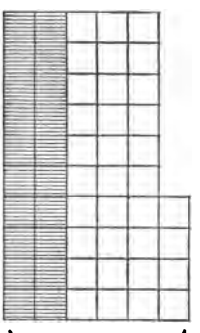
	1.	2.	3.	4.
a.	20 + 10 =	60 + 10 =	70 + 10 =	30 − 20 =
b.	40 + 10 =	40 + 30 =	30 + 50 =	60 − 10 =
c.	80 + 10 =	50 + 20 =	60 + 30 =	40 − 30 =
d.	20 + 20 =	20 + 40 =	70 + 20 =	50 − 20 =
e.	30 + 20 =	40 + 40 =	40 + 50 =	40 − 20 =
f.	20 + 30 =	50 + 30 =	70 + 30 =	70 − 30 =
g.	40 + 20 =	60 + 20 =	20 + 80 =	80 − 40 =
h.	50 + 10 =	30 + 40 =	60 + 40 −	90 − 60 =

5.



20 + 26 =

6.



54 − 20 =

7.	8.	9.	10.
30 + 16 =	42 − 20 =	40 + 25 =	67 − 40 =
40 + 24 =	56 − 30 =	34 + 20 =	85 − 30 =
20 + 35 =	63 − 30 =	56 + 20 =	64 + 20 =
50 + 27 =	47 − 20 =	38 + 30 =	52 + 30 =
40 + 32 =	86 − 30 =	58 − 20 =	88 − 20 =

	1.	2.	3.	4.
a.	20+10+4=	24+10=	38+30=	10+35=
b.	30+20+3=	34+20=	42+20=	30+42=
c.	20+40+6=	24+30=	67+30=	20+64=
d.	60+20+5=	44+20=	53+40=	40+37=
e.	40+40+1=	63+10=	28+40=	80+16=
f.	70+20+5=	56+20=	16+60=	20+53=
g.	80+10+9=	48+30=	35+50=	50+48=
h.	30+40+8=	68+20=	49+50=	60+31=
i.	50+30+7=	47+30=	23+60=	30+58=
j.	60+30+2=	58+40=	54+30=	40+48=

	5.	6.	7.	8.
a.	36−10=	66−50=	44−20=	73−50=
b.	56−20=	86−50=	62−20=	55−40=
c.	86−20=	96−30=	85−30=	72−60=
d.	46−30=	86−40=	94−30=	66−30=
e.	66−30=	76−50=	37−30=	74−40=
f.	76−20=	96−60=	86−30=	82−30=
g.	86−30=	96−40=	73−60=	92−60=
h.	56−40=	86−70=	89−50=	49−30=
i.	66−40=	96−70=	93−40=	72−60=

9. 44 + 20 − 10 + 30 + 10 − 40 − 30 + 50 − 60 =

10. 62 − 30 + 20 − 40 + 50 − 10 + 20 − 40 + 50 =

11. 18 + 50 − 30 + 20 − 30 − 20 + 60 − 40 + 20 =

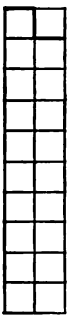
12. 97 − 40 + 20 − 30 − 40 + 60 − 50 + 30 + 40 =

	1.	2.	3.	4.
a.	4+1=	5+2=	2+3=	3+4=
.	14+1=	15+2=	12+3=	23+4=
c.	24+1=	25+2=	22+3=	43+4=
d.	44+1=	55+2=	42+3=	83+4=
e.	8+1=	85+2=	62+3=	53+4=
f.	28+1=	4+2=	82+3=	63+4=
g.	45+1=	24+2=	6+3=	14+4=
h.	36+1=	34+2=	16+3=	24+4=

	5.	6.	7.	8.
a.	4+5=	12+6=	2+7=	1+8=
b.	24+5=	32+6=	42+7=	11+8=
c.	64+5=	62+6=	12+7=	21+8=
d.	84+5=	72+6=	62+7=	41+8=
e.	11+5=	33+6=	11+7=	61+8=
f.	31+5=	63+6=	21+7=	31+8=
g.	41+5=	93+6=	81+7=	71+8=
h.	91+5=	73+6=	31+7=	41+8=
i.	13+5=	11+6=	72+7=	51+8=

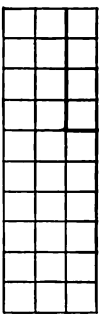
	9.	10.	11.	12.
a.	14−1=	14−3=	18−6=	49−8=
b.	34−1=	24−3=	28−6=	69−8=
c.	44−1=	64−3=	68−6=	78−6=
d.	28−1=	84−3=	98−6=	83−2=
e.	69−1=	17−4=	19−7=	74−3=

1.



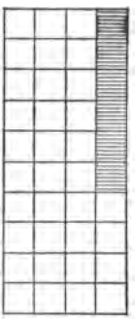
19+1=

2.



26+4=

3.



40−6=

	4.	*5.*	*6.*	*7.*
a.	9+1=	7+3=	4+6=	2+8=
b.	19+1=	47+3=	34+6=	42+8=
c.	29+1=	6+4=	64+6=	62+8=
d.	89+1=	56+4=	3+7=	52+8=
e.	8+2=	76+4=	43+7=	1+9=
f.	28+2=	5+5=	83+7=	61+9=
g.	38+2=	25+5=	93+7=	91+9=

	8.	*9.*	*10.*	*11.*
a.	16+4=	10−2=	10−5=	10−8=
b.	63+7=	40−2=	50−5=	40−8=
c.	35+5=	60−2=	80−5=	100−8=
d.	87+3=	10−3=	10−6=	60−8=
e.	52+8=	30−3=	30−6=	10−9=
f.	48+2=	70−3=	50−6=	40−9=

	1.	*2.*	*3.*
a.	26 + ? = 30	100 − ? = 94	83 + ? = 90
b.	44 + ? = 50	70 − ? = 65	40 − ? = 36
c.	83 + ? = 90	80 − ? = 72	74 + ? = 80
d.	72 + ? = 80	40 − ? = 33	60 − ? = 52
e.	43 + ? = 50	90 − ? = 86	93 + ? = 100
f.	16 + ? = 20	50 − ? = 46	72 + ? = 80
g.	87 + ? = 90	20 − ? = 11	80 − ? = 74
h.	48 + ? = 50	60 − ? = 58	60 − ? = 51
i.	12 + ? = 20	30 − ? = 23	74 + ? = 80
j.	74 + ? = 80	80 − ? = 74	83 + ? = 90

4.

1 hour = 60 minutes.
1 h. + 30 min. = — min.
1 h. + 24 min. = — min.
1 h. + 16 min. = — min.
1 h. − 10 min. = — min.
1 h. − 40 min. = — min.

5.

1 year = 12 months.
1 yr. + 6 mo. = — mo.
1 yr. + 8 mo. = — mo.
1 yr. + 5 mo. = — mo.
1 yr. + 10 mo. = — mo.
1 yr. + 7 mo. = — mo.

6.

1 dollar = 100 cents.
$1 − 20 cts. = — cts.
$1 − 40 cts. = — cts.
$1 − 60 cts. = — cts.
$1 − 80 cts. = — cts.

7.

1 dozen = 12 things.
1 doz. + 6 things = —
1 doz. + 10 things = —
1 doz. + 8 things = —
1 doz. + 3 things = —

1. If your father gives you 28 cents, and you spend 6 cents, how many cents will you have left?

2. If you have 60 cents, how many more must you have to make a dollar?

3. If you have 66 cents, and you spend half a dollar, how many cents will you have left?

4. There are 24 hours in a day. If you sleep 10 hours of the day, how many hours will you be awake?

5. From a flock of 87 sheep 20 were sold. How many sheep were left?

6. A boy bought a book for 17 cents, and some candy for 10 cents. How much money did he spend?

7. Dora's mother gave her 50 cents, and she spent 30 cents. How much money had she left?

8. There were 26 gallons of water in a tub, and 6 gallons were taken out. How many were left?

9. A horse went 30 miles one day and 40 miles the next day. How far did he go in both days?

10. The school-room is 40 ft. long and 20 ft. wide. What is the difference in the two lengths?

1. In one pasture there were 23 cows, and in another 7 cows. In both pastures there were — cows.

2. One pail of milk held 10 pints, another pail 16 pints. They both held — pints.

3. In June there are 30 days, and in July 31 days. How many days in both months?

4. John raised 37 chickens and bought 20 more. How many chickens had he then?

5. In a hall there were 88 chairs, and 30 chairs were carried out. How many were left?

6. 20 cents and 40 cents and 30 cents are — cents.

7. If you spend 8 cents for thread and 20 cents for cloth, how much would you spend?

8. 40 baskets of grapes were picked, and then 9 baskets more. How many in all?

9. A little boy had 60 cents. He spent 20 cents, then 30 cents. He had — cents left.

10. In a barn were 80 chickens. One day 20 were sold; then 20 the next day and 20 the third day. How many chickens were left?

11. How many days are there in the months of April and May?

12. Half a dollar and 20 cts. are — cts.

13. Quarter of a dollar and 40 cts. are — cts.

Copy and add:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
30	60	80	70	50	90	40
4	7	3	9	4	7	3

(8)	(9)	(10)	(11)	(12)	(13)	(14)
20	40	30	60	20	50	80
30	30	50	40	70	40	20

(15)	(16)	(17)	(18)	(19)	(20)	(21)
60	30	20	50	10	40	30
20	40	60	40	70	40	60
5	3	7	8	6	8	6

(22)	(23)	(24)	(25)	(26)	(27)	(28)
72	83	74	37	21	82	74
6	5	5	2	8	6	5

(29)	(30)	(31)	(32)	(33)	(34)	(35)
24	37	84	72	55	64	41
6	3	6	8	5	6	9

(36)	(37)	(38)	(39)	(40)	(41)	(42)
21	34	42	62	74	51	42
16	21	24	16	13	32	57

Copy and subtract:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
28	67	44	39	86	91	58
8	7	4	9	6	1	8

(8)	(9)	(10)	(11)	(12)	(13)	(14)
60	50	70	80	90	100	60
20	30	30	50	40	40	30

(15)	(16)	(17)	(18)	(19)	(20)	(21)
26	42	58	63	84	78	96
20	30	40	40	60	50	60

(22)	(23)	(24)	(25)	(26)	(27)	(28)
46	54	78	88	73	57	69
3	2	6	7	3	6	8

(29)	(30)	(31)	(32)	(33)	(34)	(35)
40	60	50	80	70	30	90
6	8	4	2	9	7	5

(36)	(37)	(38)	(39)	(40)	(41)	(42)
46	59	72	89	78	66	54
13	14	21	27	54	23	32

(1)	(2)	(3)	(4)	(5)	(6)	(7)
32	41	53	48	62	37	41
+20	+6	+30	+10	+ 6	+40	+9

(8)	(9)	(10)	(11)	(12)	(13)	(14)
70	36	77	58	49	68	93
−8	−6	−5	−6	−9	−20	−70

(15)	(16)	(17)	(18)	(19)	(20)	(21)
47	38	58	46	89	75	96
−22	−31	−27	−25	−62	−24	−72

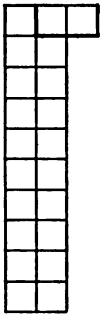
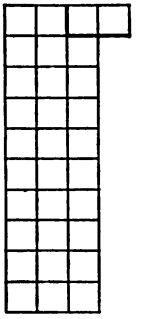
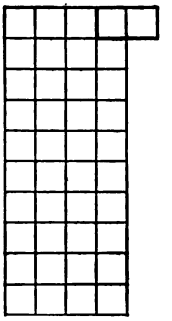
(22)	(23)	(24)	(25)	(26)	(27)	(28)
23	42	36	21	75	81	66
+23	+27	+41	+42	+20	+16	+23

(29)	(30)	(31)	(32)	(33)	(34)	(35)
90	27	64	83	24	65	82
−70	+11	−30	+14	+32	−20	−70

(36)	(37)	(38)	(39)	(40)	(41)	(42)
42	84	75	23	30	87	99
+27	−60	−50	+46	+46	−20	−70

SECTION III.

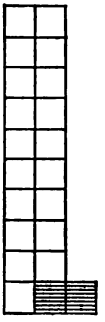
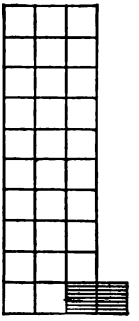
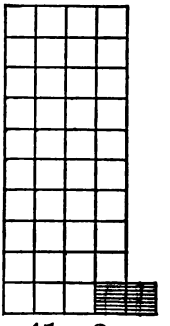
EXERCISE 1.

1. 9+2= 19+2= 29+2= 39+2=

2.

9	19	29	39
+2	+2	+2	+2

3. 11−2= 21−2= 31−2= 41−2=

4.

11	21	31	41
−2	−2	−2	−2

	1.	2.	3.	4.
a.	9+2=	28+2=	11−2=	71−2=
b.	19+2=	37+2−	21−2=	86−2=
c.	29+2=	42+2=	31−2=	70−2=
d.	39+2=	69+2=	41−2=	51−2=
e.	69+2=	73+2=	61−2=	46−2=
f.	89+2=	85+2=	81−2=	69−2=
g.	79+2=	97+2=	51−2=	71−2=
h.	59+2=	68+2=	71−2=	83−2=
i.	49+2=	39+2=	91−2=	91−2=
j.	89+2=	49+2=	41−2=	70−2=

5. Add by 2's from **20 to 100.**

6. Subtract by 2's from **100 to 20.**

7. Add by 2's from **19 to 99.**

8. Subtract by 2's from **99 to 19.**

9. 50−2+1+2+2+1+2−1+2−1−2=

10. 27+2+2−1+2+1+2+2+2+2−2=

11. 21+8+2+4+4+2−2−8−2−3−5−2+2=

12. 71−2−3−2−3−2−4+3+1+2−6+4=

13. 19+10+2+8+20+2−2+10+2−40=

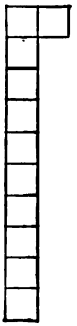
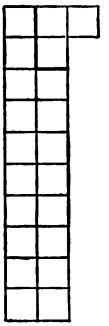
14. 81−20−2+10+2−30−2+20+2+20−2=

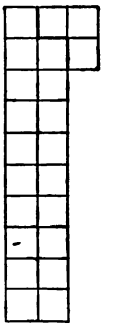
15. 59+30+2−50−2+40+2−20−2−40+2=

16. 29+2+20−2−30+2+50−2−9−2−7−2=

17. 31−2+40+2−30−2−8−2+20+2−30−2=

18. 49+2+9−1+2+30−2−50+2+6+40+2+2=



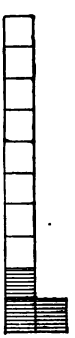
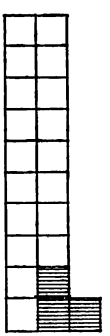
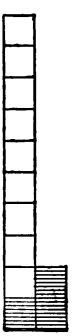
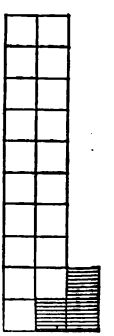
1. 8+3= 18+3= 9+3= 19+3=

2.

8	18	28	9	19	29
+3	+3	+3	+3	+3	+3

3.

38	48	58	39	49	59
+3	+3	+3	+3	+3	+3

4. 11−3= 21−3= 12−3= 22−3=

5.

11	21	31	12	22	32
−3	−3	−3	−3	−3	−3

	1.	2.	3.	4.
a.	8+3=	9+3=	78+3=	12−3=
b.	18+3=	19+3=	39+3=	22−3=
c.	28+3=	39+3=	64+3=	42−3=
d.	48+3=	59+3=	71+3=	32−3=
e.	68+3=	89+3=	49+3=	62−3=
f.	38+3=	49+3=	28+3=	72−3=
g.	78+3=	79+3=	68+3=	52−3=
h.	58+3=	29+3=	75+3=	82−3=
i.	88+3=	69+3=	59+3=	32−3=
j.	68+3=	89+3=	78+3=	92−3=

	5.	6.	7.	8.
a.	11−3=	42−3=	64−3=	49+3=
b.	31−3=	71−3=	31−3=	38+3=
c.	21−3=	62−3=	88+3=	71−3=
d.	61−3=	81−3=	71−2=	59+3=
e.	81−3=	41−3=	62−3=	82−3=
f.	71−3=	32−3=	81−2=	61−2=
g.	41−3=	61−3=	42−3=	49+3=
h.	61−3=	52−3=	29+2=	78+3=
i.	51−3=	82−3=	89+3=	51−3=
j.	91−3=	92−3=	79+2=	62−3=

9. Add by 3's from 3 to 99.

10. Subtract by 3's from 99 to 3.

11. Add by 3's from 1 to 100.

	1.	2.	3.	4.
a.	7 + 4 =	9 + 4 =	27 + 4 =	69 + 4 =
b.	17 + 4 =	19 + 4 =	39 + 4 =	47 + 4 =
c.	27 + 4 =	29 + 4 =	67 + 4 =	37 + 4 =
d.	47 + 4 =	59 + 4 =	87 + 4 =	89 + 4 =
e.	67 + 4 =	79 + 4 =	49 + 4 =	77 + 4 =
f.	57 + 4 =	39 + 4 =	77 + 4 =	37 + 4 =
g.	87 + 4 =	89 + 4 =	29 + 4 =	89 + 4 =
h.	37 + 4 =	49 + 4 =	89 + 4 =	57 + 4 =
i.	77 + 4 =	69 + 4 =	57 + 4 =	49 + 4 =

	5.	6.	7.	8.
a.	8 + 4 =	37 + 4 =	30 − 4 =	42 − 4 =
b.	18 + 4 =	79 + 4 =	60 − 4 =	63 − 4 =
c.	28 + 4 =	48 + 4 =	70 − 4 =	31 − 4 =
d.	48 + 4 =	39 + 4 =	21 − 4 =	71 − 4 =
e.	38 + 4 =	67 + 4 =	71 − 4 =	62 − 4 =
f.	78 + 4 =	89 + 4 =	61 − 4 =	82 − 4 =
g.	58 + 4 =	48 + 4 =	31 − 4 =	42 − 4 =
h.	88 + 4 =	49 + 4 =	27 − 4 =	73 − 4 =
i.	68 + 4 =	38 + 4 =	63 − 4 =	52 − 4 =

	9.	10.	11.	12.
a.	49 + 4 =	28 + 3 =	79 − 4 =	68 + 3 =
b.	52 − 4 =	69 + 4 =	82 − 3 =	41 − 4 =
c.	38 + 4 =	39 + 3 =	61 − 3 =	57 + 4 =
d.	71 − 3 =	72 − 4 =	29 + 4 =	81 − 4 =

Copy and add:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
48	68	38	47	27	87	57
4	4	4	4	4	4	4

(8)	(9)	(10)	(11)	(12)	(13)	(14)
39	69	79	49	56	36	76
4	4	4	4	4	4	4

Copy and subtract:

(15)	(16)	(17)	(18)	(19)	(20)	(21)
11	31	51	61	41	91	81
4	4	4	4	4	4	4

(22)	(23)	(24)	(25)	(26)	(27)	(28)
13	33	63	53	83	93	73
4	4	4	4	4	4	4

(29)	(30)	(31)	(32)	(33)	(34)	(35)
12	43	32	62	52	92	72
4	4	4	4	4	4	4

36. Add by 4's from 4 to 100.

37. Add by 4's from 1 to 97.

38. Add by 4's from 2 to 98.

39. Subtract by 4's from 99 to 3.

40. Subtract by 4's from 98 to 2.

	1.	2.	3.	4.
a.	6 + 5 =	7 + 5 =	8 + 5 =	48 + 5 =
b.	16 + 5 =	27 + 5 =	28 + 5 =	68 + 5 =
c.	56 + 5 =	37 + 5 =	48 + 5 =	17 + 5 =
d.	36 + 5 =	67 + 5 =	68 + 5 =	36 + 5 =
e.	76 + 5 =	57 + 5 =	88 + 5 =	47 + 5 =
f.	36 + 5 =	47 + 5 =	18 + 5 =	16 + 5 =
g.	66 + 5 =	87 + 5 =	38 + 5 =	58 + 5 =
h.	46 + 5 =	77 + 5 =	48 + 5 =	38 + 5 =
i.	86 + 5 =	17 + 5 =	58 + 5 =	27 + 5 =
j.	26 + 5 =	37 + 5 =	78 + 5 =	67 + 5 =

	5.	6.	7.	8.
a.	9 + 5 =	71 − 5 =	42 − 5 =	43 − 5 =
b.	89 + 5 =	81 − 5 =	62 − 5 =	53 − 5 =
c.	79 + 5 =	41 − 5 =	72 − 5 =	73 − 5 =
d.	19 + 5 =	61 − 5 =	32 − 5 =	93 − 5 =
e.	49 + 5 =	31 − 5 =	92 − 5 =	23 − 5 =
f.	69 + 5 =	11 − 5 =	12 − 5 =	84 − 5 =
g.	39 + 5 =	21 − 5 =	52 − 5 =	74 − 5 =
h.	59 + 5 =	51 − 5 =	22 − 5 =	34 − 5 =
i.	29 + 5 =	91 − 5 =	82 − 5 =	24 − 5 =

9. Add 3 to 23, 26, 38, 49, 37, 59, 68, 73, 88.
10. Add 4 to 27, 38, 56, 69, 76, 88, 69, 57, 39.
11. Add 5 to 9, 49, 7, 37, 6, 86, 8, 68, 88.
12. Add 5 to 28, 46, 37, 88, 64, 79, 67, 49, 76.

1. Add by 5's from 1 to 96.
2. Add by 5's from 2 to 97.
3. Add by 5's from 4 to 99.
4. Subtract by 5's from 100 to 5.
5. Subtract by 5's from 96 to 1.
6. Subtract by 5's from 97 to 2.

	7.	*8.*	*9.*	*10.*
a.	$31-5=$	$24+5=$	$44-5=$	$24-5=$
b.	$26+5=$	$37-4=$	$39-5=$	$40-5=$
c.	$37+5=$	$28-4=$	$44-3=$	$100-5=$
d.	$42-5=$	$39+5=$	$62-4=$	$90-5=$
e.	$36-5=$	$28+5=$	$18-3=$	$85-5=$
f.	$16+5=$	$39-3=$	$27-4=$	$45-5=$
g.	$24+5=$	$46-3=$	$32-5=$	$32-4=$

11. Add upward, downward, to the right, and to the left:

	h.	*i.*	*j.*	*k.*	*l.*	*m.*	*n.*	*o.*	*p.*	*q.*	*r.*	*s.*	*t.*
a.	2	1	3	4	3	5	1	3	2	5	4	3	2
b.	3	5	4	1	5	3	4	5	2	4	3	5	1
c.	5	3	1	3	2	5	4	3	2	5	4	4	5
d.	4	5	2	4	3	4	3	1	5	2	4	4	1
e.	4	2	3	1	4	2	1	5	2	5	3	5	4
f.	2	4	1	5	3	3	4	2	5	2	1	4	5
g.	3	5	5	1	3	4	4	4	3	3	5	2	2

	1.	2.	3.	4.
a.	5 + 6 =	6 + 6 =	31 − 6 =	22 − 6 =
b.	15 + 6 =	46 + 6 =	21 − 6 =	82 − 6 =
c.	55 + 6 =	56 + 6 =	11 − 6 =	52 − 6 =
d.	35 + 6 =	86 + 6 =	81 − 6 =	72 − 6 =
e.	45 + 6 =	76 + 6 =	71 − 6 =	32 − 6 =
f.	25 + 6 =	16 + 6 =	51 − 6 =	42 − 6 =
g.	65 + 6 =	26 + 6 =	41 − 6 =	62 − 6 =
h.	75 + 6 =	66 + 6 =	61 − 6 =	12 − 6 =
i.	85 + 6 =	36 + 6 =	21 − 6 =	22 − 6 =

	5.	6.	7.	8.
a.	7 + 6 =	8 + 6 =	43 − 6 =	54 − 6 =
b.	27 + 6 =	19 + 6 =	33 − 6 =	65 − 6 =
c.	57 + 6 =	29 + 6 =	53 − 6 =	74 − 6 =
d.	47 + 6 =	18 + 6 =	83 − 6 =	85 − 6 =
e.	37 + 6 =	38 + 6 =	93 − 6 =	45 − 6 =
f.	67 + 6 =	49 + 6 =	63 − 6 =	34 − 6 =
g.	17 + 6 =	58 + 6 =	23 − 6 =	45 − 6 =
h.	87 + 6 =	69 + 6 =	13 − 6 =	74 − 6 =
i.	77 + 6 =	78 + 6 =	73 − 6 =	84 − 6 =

9. 89 − 4 − 2 − 6 − 3 − 5 − 2 − 4 − 3 − 5 − 6 − 1 − 5 =

10. 91 − 4 − 3 − 6 − 4 − 3 − 5 − 6 − 1 − 5 − 3 − 2 − 6 =

11. 93 − 6 − 4 − 2 − 1 − 3 − 6 − 5 − 4 − 3 − 4 − 5 − 2 =

12. 92 − 5 − 3 − 6 − 3 − 2 − 4 − 6 − 1 − 3 − 5 − 4 − 6 =

13. 95 − 6 − 2 − 3 − 6 − 5 − 4 − 2 − 3 − 6 − 1 − 4 − 3 =

	1.	*2.*	*3.*	*4.*
a.	4+7=	5+7=	82−7=	21−7=
b.	14+7=	25+7=	42−7=	31−7=
c.	34+7=	35+7=	32−7=	51−7=
d.	24+7=	65+7=	92−7=	61−7=
e.	44+7=	85+7=	62−7=	81−7=
f.	74+7=	45+7=	52−7=	91−7=
g.	64+7=	35+7=	72−7=	41+7=
h.	54+7=	75+7=	22−7=	71−7=
i.	84+7=	55+7=	12−7=	11−7=

	5.	*6.*	*7.*	*8.*
a.	6+7=	17+7=	8+7=	29+7=
b.	26+7=	37+7=	18+7=	39+7=
c.	36+7=	47+7=	38+7=	49+7=
d.	16+7=	27+7=	68+7=	89+7=
e.	86+7=	57+7=	58+7=	39+7=
f.	76+7=	67+7=	88+7=	59+7=
g.	46+7=	87+7=	28+7=	69+7=
h.	66+7=	77+7=	78+7=	79+7=

9. 28+5−7+3+2−6+4+7−3+7−3+6+7−6=

10. 31−6+1−7+4−6+3−7+6−2+5−7+6−4=

11. 56+7−4+2−6+7−3+5−6+7−6+2−3+7=

12. 63−6+4−3+4−7+5−2+3−4−6−7+6−2=

13. 60−4+5−3+7−6+4−5+7−6+5−2−6−7=

14. 51+3+7−4+6−5+3−7+2+6−5+4−7+6=

	1.	2.	3.	4.
a.	7 + 8 =	8 + 8 =	9 + 8 =	15 + 8 =
b.	27 + 8 =	18 + 8 =	39 + 8 =	27 + 8 =
c.	37 + 8 =	48 + 8 =	49 + 8 =	39 + 8 =
d.	57 + 8 =	38 + 8 =	59 + 8 =	46 + 8 =
e.	67 + 8 =	28 + 8 =	69 + 8 =	55 + 8 =
f.	17 + 8 =	58 + 8 =	79 + 8 =	38 + 8 =
g.	87 + 8 =	88 + 8 =	29 + 8 =	54 + 8 =
h.	47 + 8 =	78 + 8 =	89 + 8 =	23 + 8 =
i.	57 + 8 =	68 + 8 =	19 + 8 =	78 + 8 =

	5.	6.	7.	8.
a.	35 − 8 =	66 − 8 =	37 − 8 =	37 − 8 =
b.	55 − 8 =	56 − 8 =	47 − 8 =	46 − 8 =
c.	45 − 8 =	86 − 8 =	57 − 8 =	82 − 8 =
d.	25 − 8 =	26 − 8 =	97 − 8 =	93 − 8 =
e.	75 − 8 =	76 − 8 =	87 − 8 =	24 − 8 =
f.	85 − 8 =	46 − 8 =	67 − 8 =	36 − 8 =
g.	65 − 8 =	36 − 8 =	17 − 8 =	45 − 8 =
h.	15 − 8 =	96 − 8 =	27 − 8 =	86 − 8 =
i.	95 − 8 =	16 − 8 =	77 − 8 =	54 − 8 =
j.	25 − 8 =	36 − 8 =	37 − 8 =	77 − 8 =

9. Count by 8's from 0 to 80.
10. Count by 8's from 80 to 0.
11. Count by 8's from 2 to 82.
12. Count by 8's from 82 to 2.

	1.	2.	3.	4.
a.	3+8=	4+8=	5+8=	6+8=
b.	13+8=	24+8=	35+8=	86+8=
c.	23+8=	34+8=	45+8=	16+8=
d.	33+8=	64+8=	85+8=	26+8=
e.	43+8=	84+8=	75+8=	36+8=
f.	53+8=	14+8=	65+8=	46+8=
g.	63+8=	54+8=	25+8=	56+8=

	5.	6.	7.	8.
a.	91−8=	72−8=	83−8=	54−8=
b.	51−8=	82−8=	43−8=	64−8=
c.	41−8=	22−8=	63−8=	74−8=
d.	11−8=	32−8=	33−8=	84−8=
e.	71−8=	62−8=	23−8=	94−8=
f.	21−8=	92−8=	73−8=	24−8=
g.	31−8=	12−8=	93−8=	34−8=
h.	81−8=	52−8=	13−8=	44−8=

	9.	10.	11.	12.
a.	61−8=	30−8=	12+8=	13+8=
b.	72−8=	24−8=	36+8=	25+8=
c.	54−8=	31−8=	42+8=	36+8=
d.	33−8=	52−8=	56+8=	45+8=
e.	92−8=	33−8=	24+8=	33+8=
f.	80−8=	22−8=	31+8=	20+8=
g.	43−8=	64−8=	50+8=	14+8=

	1.	2.	3.	4.
a.	2+9=	3+9=	4+9=	5+9=
b.	22+9=	33+9=	74+9=	25+9=
c.	52+9=	43+9=	64+9=	35+9=
d.	62+9=	73+9=	34+9=	85+9=
e.	12+9=	53+9=	54+9=	45+9=
f.	32+9=	83+9=	24+9=	75+9=
g.	42+9=	23+9=	84+9=	55+9=
h.	72+9=	63+9=	94+9=	65+9=
i.	82+9=	13+9=	14+9=	15+9=

	5.	6.	7.	8.
a.	6+9=	7+9=	8+9=	9+9=
b.	36+9=	47+9=	38+9=	19+9=
c.	46+9=	87+9=	58+9=	39+9=
d.	86+9=	37+9=	48+9=	59+9=
e.	26+9=	27+9=	68+9=	79+9=
f.	56+9=	67+9=	28+9=	29+9=
g.	16+9=	17+9=	78+9=	49+9=
h.	76+9=	57+9=	18+9=	69+9=
i.	66+9=	77+9=	88+9=	89+9=

9. Add by 9's from 9 to 99.
10. Add by 9's from 8 to 98.
11. Add by 9's from 7 to 97.
12. Add by 9's from 6 to 96.
13. Add by 9's from 5 to 95.

	1.	2.	3.	4.
a.	11−9=	12−9=	13−9=	14−9=
b.	31−9=	82−9=	73−9=	24−9=
c.	51−9=	52−9=	43−9=	34−9=
d.	61−9=	62−9=	53−9=	64−9=
e.	21−9=	42−9=	63−8=	74−9=
f.	81−9=	22−9=	23−9=	84−9=
g.	41−9=	72−9=	83−9=	54−9=

	5.	6.	7.	8.
a.	15−9=	16−9=	17−9=	18−9=
b.	35−9=	26−9=	27−9=	38−9=
c.	55−9=	86−9=	87−9=	58−9=
d.	45−9=	96−9=	57−9=	68−9=
e.	25−9=	36−9=	67−9=	48−9=
f.	85−9=	46−9=	77−9=	78−9=
g.	95−9=	56−9=	97−9=	98−9=

9. Add upward, downward, to the right, to the left:

	h.	*i.*	*j.*	*k.*	*l.*	*m.*	*n.*	*o.*	*p.*	*q.*	*r.*	*s.*	*t.*
a.	9	4	5	8	3	5	7	4	2	6	8	5	2
b.	3	1	9	5	8	8	2	7	4	8	6	3	9
c.	5	6	2	7	1	3	9	6	5	4	5	4	3
d.	2	8	1	3	4	9	7	5	8	6	2	7	9
e.	7	3	8	8	9	4	9	7	1	2	6	4	5
f.	8	9	7	3	2	8	4	1	7	6	5	3	6

Add by columns and by lines:

	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	*j.*	*k.*	*l.*	*m.*
n.	8	3	5	2	9	6	1	7	4	7	4	8	3 =
o.	3	9	2	4	3	8	8	6	9	1	7	7	5 =
p.	5	8	4	1	9	7	6	9	2	5	6	8	3 =
q.	4	9	3	6	4	1	8	5	5	3	7	9	2 =
r.	7	4	6	5	2	6	5	9	3	4	8	3	7 =
s.	8	5	2	6	9	3	6	4	8	7	7	1	9 =
t.	6	1	4	9	5	8	7	3	6	6	2	7	5 =

Subtract, giving remainders only:

100 − 6 − 3 − 8 − 4 − 7 − 9 − 6 − 3 − 5 − 7 − 8 − 3 − 6 =

100 − 7 − 1 − 8 − 2 − 9 − 8 − 3 − 6 − 7 − 6 − 5 − 5 − 4 =

100 − 8 − 5 − 2 − 8 − 3 − 8 − 9 − 1 − 4 − 7 − 7 − 5 − 6 =

100 − 9 − 3 − 6 − 7 − 4 − 7 − 8 − 2 − 9 − 6 − 8 − 1 − 5 =

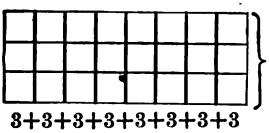
100 − 5 − 1 − 8 − 3 − 9 − 2 − 7 − 9 − 4 − 7 − 6 − 8 − 5 =

Add at sight:

5	4	7	6	4	2	7	9	4	7	8	3	9
3	3	6	2	1	7	2	6	8	8	7	8	5
4	6	1	8	9	4	8	7	6	9	6	5	7
2	4	8	3	6	8	3	2	9	6	8	9	5
5	2	4	7	3	3	9	8	6	5	9	9	6
2	6	2	5	8	9	7	4	2	3	6	6	8
1	1	7	4	7	5	2	9	7	8	5	8	4
4	2	3	4	2	1	4	3	7	4	7	4	8

SECTION IV.

EXERCISE 1.



1. How many times 3 is 3+3? 3+3+3?

2. Express in the form of multiplication and give answers to the following problems:

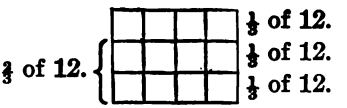
2+2+2+2= 3+3+3+3+3+3=

3+3+3+3= 3+3+3+3+3+3+3+3=

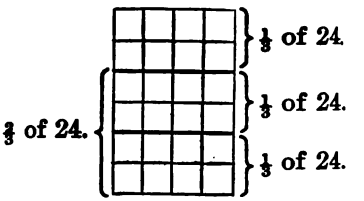
3. Make the table of 3's in multiplication, beginning with 3×1 to 3×10.

4.	*5.*	*6.*	*7.*
1 two =	1 three =	2× 4=	3× 1=
2 twos=	2 threes=	2× 2=	3× 5=
3 twos=	3 threes=	2× 5=	3× 4=
4 twos=	4 threes=	2× 3=	3× 6=
5 twos=	5 threes=	2× 8=	3× 8=
6 twos=	6 threes=	2× 1=	3× 7=
7 twos=	7 threes=	2× 7=	3× 9=
8 twos=	8 threes=	2× 6=	3×10=
9 twos=	9 threes=	2× 9=	3× 7=
10 twos=	10 threes=	2×10=	3× 9=

1.



2.

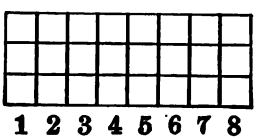


3. Show by squares $\frac{1}{3}$ of 15; $\frac{2}{3}$ of 15; $\frac{1}{3}$ of 18; $\frac{2}{3}$ of 18.

4. Show by squares $\frac{1}{3}$ of 21; $\frac{2}{3}$ of 21; $\frac{1}{3}$ of 30; $\frac{2}{3}$ of 30.

5. What is $\frac{1}{3}$ of 18? of 27? of 24? of 21?

6. What is $\frac{2}{3}$ of 18? of 21? of 24? of 27?



7. 3 squares in 24 squares — times.

8. 3 squares in 27 squares — times.

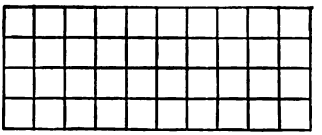
9. 3 squares in 18 squares — times.

10. 3 squares in 28 squares — times and — remainder.

11. 3 squares in 30 squares — times.

12. 3 squares in 21 squares — times.

13. 3 squares in 23 squares — times and — remainder.



4+4+4+4+4+4+4+4+4+4=4×10

1. How many times 4 is 4 + 4 + 4?

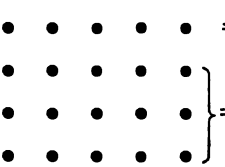
2. Express in the form of multiplication and give answers to the following problems:

4+4+4+4= 4+4+4+4+4+4=
4+4+4+4+4+4+4+4=

3. 4×4= 4×6= 4×8=

4. Add 4 together 3 times; 5 times; 7 times; 9 times; 10 times.

5.	*6.*	*7.*	*8.*
1 four =	4× 1=	4× 6=	4× 7=
2 fours =	4× 3=	4× 8=	4× 8=
3 fours =	4× 5=	4× 7=	4× 6=
4 fours =	4× 6=	4× 3=	4× 9=
5 fours =	4× 8=	4× 5=	4× 4=
6 fours =	4×10=	4× 9=	4× 7=
7 fours =	4× 7=	4×10=	4× 9=
8 fours =	4× 9=	4× 8=	4× 8=
9 fours =	4× 6=	4× 7=	4×10=
10 fours =	4× 7=	4× 6=	4× 6=



1. $\frac{3}{4}$ of 20 dots are — dots.

Show by squares or dots:

2. $\frac{1}{4}$ of 8; $\frac{2}{4}$ of 8; $\frac{3}{4}$ of 8.

3. $\frac{1}{5}$ of 30; $\frac{2}{5}$ of 30; $\frac{3}{5}$ of 30; $\frac{4}{5}$ of 30.

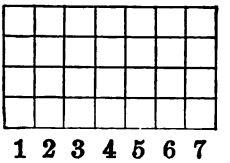
4. $\frac{1}{3}$ of 24; $\frac{1}{4}$ of 24; $\frac{3}{4}$ of 24; $\frac{5}{6}$ of 24.

5. $\frac{2}{3}$ of 18; $\frac{5}{6}$ of 18; $\frac{4}{9}$ of 18; $\frac{7}{9}$ of 18.

Show by squares or dots that —

6. $\frac{2}{4}$ of a number = $\frac{1}{2}$ of that number.

7. $\frac{2}{6}$ of a number = $\frac{1}{3}$ of that number.



8. 4 squares in 28 squares — times.

9. 4 squares in 24 squares — times.

10. 4 squares in 20 squares — times.

11. 4 squares in 16 squares — times.

12. 4 squares in — squares 3 times.

13. 4 squares in 8 squares — times.

1.	*2.*	*3.*	*4.*
$4 \div 4 =$	$24 \div 4 =$	$12 \div 4 =$	$40 \div 4 =$
$8 \div 4 =$	$28 \div 4 =$	$20 \div 4 =$	$24 \div 4 =$
$12 \div 4 =$	$32 \div 4 =$	$16 \div 4 =$	$32 \div 4 =$
$16 \div 4 =$	$36 \div 4 =$	$32 \div 4 =$	$12 \div 4 =$
$20 \div 4 =$	$40 \div 4 =$	$8 \div 4 =$	$36 \div 4 =$

5. Add by 4's from 4 to 40.

6. Multiply each of the following numbers by 4: 2; 7; 5; 6; 4; 8; 3; 10; 9.

7. Multiply the same numbers by 2; by 3.

8. What is $\frac{1}{4}$ of 32? of 16? of 24? of 40?

9. What is $\frac{3}{4}$ of 12? of 16? of 20? of 24?

10. What is $\frac{3}{4}$ of 28? of 32? of 36? of 40?

11.	*12.*	*13.*	*14.*
$20 \div 4 =$	$13 \div 4 =$	$18 \div 4 =$	$30 \div 4 =$
$28 \div 4 =$	$17 \div 4 =$	$31 \div 4 =$	$27 \div 4 =$
$36 \div 4 =$	$21 \div 4 =$	$39 \div 4 =$	$35 \div 4 =$
$32 \div 4 =$	$26 \div 4 =$	$41 \div 4 =$	$37 \div 4 =$
$40 \div 4 =$	$30 \div 4 =$	$33 \div 4 =$	$39 \div 4 =$

15.	*16.*	*17.*
$\frac{2}{3}$ of $30 + 4 =$	$\frac{3}{4}$ of $36 + 4 =$	$\frac{1}{2}$ of $18 + 4 =$
$\frac{1}{4}$ of $40 - 3 =$	$\frac{3}{4}$ of $40 - 3 =$	$\frac{2}{3}$ of $27 + 3 =$
$\frac{3}{4}$ of $12 + 4 =$	$\frac{2}{3}$ of $30 - 4 =$	$\frac{3}{4}$ of $28 - 3 =$
$\frac{3}{4}$ of $24 - 3 =$	$\frac{3}{4}$ of $32 + 3 =$	$\frac{3}{4}$ of $36 + 3 =$
$\frac{3}{4}$ of $20 + 4 =$	$\frac{3}{4}$ of $28 - 4 =$	$\frac{3}{4}$ of $32 - 4 =$

1. Place 12 dots in 3 equal rows. How many are there in 1 row? in 2 rows? $\frac{2}{3}$ of 12?

2. Place 24 dots in 4 equal rows. How many are there in 3 rows? $\frac{3}{4}$ of 24?

3. $\frac{1}{2}$ of 8; 16; 20; 18; 16.

4. $\frac{1}{3}$ of 12; 18; 24; 30; 21.

5. $\frac{1}{4}$ of 8; 16; 20; 24; 32; 40.

6. $\frac{2}{3}$ of 6; 12; 18; 24; 30; 36.

7. $\frac{3}{4}$ of 8; 16; 20; 24; 32; 40.

8. My hens lay 4 eggs a day. In how many days will they lay 2 dozen? 3 dozen?

9. I have 4 rows of trees, 5 in each row, and 2 trees besides. How many trees have I in all?

10. There are 12 months in a year. How many months in 4 yrs.? in 3 yrs.? in $2\frac{1}{2}$ yrs.?

11. How many months in $\frac{1}{2}$ of a year? in $\frac{2}{3}$ of a year? in $\frac{3}{4}$ of a year?

12. How many months are there in 2 yrs. 7 mo.?

13. How many inches in 3 ft.? in 4 ft.?

14. There are 3 feet in a yard. How many ft. in 4 yds.? in 6 yards?

15. How many feet in 8 yds. 2 ft.?

16. There are 4 gills in a pint. How many gills in a quart? in a gallon?

17. In 8 pints there are 4 quarts.

1. If John can walk 6 miles in 2 hours, he can walk — miles in 1 hour. In 4 hours he can walk — miles.

2. At the rate of 2 for 3 cents, what will half a dozen pencils cost?

3. If I can buy 8 marbles for a cent, I can buy — marbles for 4 cents; and for 16 marbles I should have to pay — cents.

4. From the 3d to the 31st of July there are — days or — weeks.

5. From the 4th to the 22d of June how many weeks and days?

6. Fannie is 12 years old; her brother is 19 years. How much older is he?

7. If I paid 2 cents for 1 marble, for 12 marbles I should have to pay — cents.

8. At the rate of 2 for a cent, what will one dozen pencils cost?

9. Our school-room is 30 feet long. How many yards long is it?

10. The table is 3 yards and 2 feet long. How many feet is it?

11. If you walked 24 feet, how many yards would you walk?

12. Arthur had 35 cents, and he spent all but 15. How many cents did he spend?

1. A little girl picked 15 cherries, and ate $\frac{2}{3}$ of them. How many did she eat?

2. If you had 18 cents, and spent $\frac{2}{3}$ of them for candy, how much would you spend?

3. In one box there are $\frac{2}{3}$ of a dozen eggs, in another box $\frac{3}{4}$ of a dozen. How many more eggs in one box than the other?

4. $\frac{2}{3}$ of 21 children were playing out in the yard, and 12 more children came. How many children in all?

5. If you earned 3 cents per day for a week, how many cents would you earn?

6. In one barn were 24 tons of hay, in another barn 36 tons. There were — tons more in the second barn.

7. If 32 marbles were divided equally among 4 boys, each one would receive — marbles.

8. One box of soap weighed 24 pounds, and another box weighed $\frac{1}{3}$ as much. How much did the small box weigh?

9. At 4 cents apiece, how many pencils can you buy for a dime and a nickel, and how many cents will you have left?

10. Mary had a dozen paper dolls, and her mother made her $\frac{1}{3}$ of a dozen more. She gave away 6 of them. How many had she left?

1. Show by squares or lines: 3 times 5; 4 times 5; 6 times 5; 8 times 5; 10 times 5.

2. Add by 5's from 5 to 50.

	3.	*4.*	*5.*	*6.*
a.	1 five =	5 × 1 =	5 × 4 =	5 × 6 =
b.	2 fives =	5 × 3 =	5 × 3 =	5 × 4 =
c.	3 fives =	5 × 4 =	5 × 6 =	5 × 2 =
d.	4 fives =	5 × 6 =	5 × 8 =	5 × 7 =
e.	5 fives =	5 × 7 =	5 × 2 =	5 × 3 =
f.	6 fives =	5 × 8 =	5 × 10 =	5 × 1 =
g.	7 fives =	5 × 9 =	5 × 9 =	5 × 10 =
h.	8 fives =	5 × 10 =	5 × 5 =	5 × 5 =
i.	9 fives =	5 × 2 =	5 × 7 =	5 × 8 =
j.	10 fives =	5 × 5 =	5 × 1 =	5 × 9 =

	7.	*8.*	*9.*
a.	5 × 3 + 4 =	2 × 9 − 4 =	2 × 7 + 3 =
b.	2 × 10 + 3 =	5 × 3 − 2 =	2 × 8 − 4 =
c.	3 × 4 + 5 =	2 × 7 − 5 =	5 × 5 − 4 =
d.	2 × 7 + 3 =	3 × 9 − 2 =	3 × 9 − 2 =
e.	2 × 9 + 4 =	4 × 8 − 5 =	5 × 8 + 4 =
f.	5 × 3 + 2 =	3 × 6 − 4 =	3 × 10 + 5 =
g.	4 × 4 + 3 =	5 × 10 − 2 =	2 × 10 − 5 =
h.	5 × 4 + 2 =	4 × 10 − 5 =	3 × 6 − 4 =
i.	3 × 7 + 4 =	3 × 10 − 3 =	5 × 9 + 4 =
j.	4 × 8 + 3 =	4 × 9 − 3 =	4 × 7 − 3 =

Show by drawing how many times—

1. 5 squares are contained in 10 squares.
2. 5 lines are contained in 20 lines.
3. 5 circles are contained in 30 circles.
4. 5 apples are contained in 15 apples.
5. 5 flags are contained in 25 flags.
6. 5 is contained in 5 — time. $5 \div 5 = ?$
7. 5 is contained in 10 — times. $10 \div 5 = ?$
8. 5 is contained in 15 — times. $15 \div 5 = ?$
9. 5 is contained in 20 — times. $20 \div 5 = ?$
10. 5 is contained in 25 — times. $25 \div 5 = ?$
11. 5 is contained in 30 — times. $30 \div 5 = ?$
12. 5 is contained in 35 — times. $35 \div 5 = ?$
13. Show by drawing, $\frac{1}{5}$ of 40; $\frac{1}{5}$ of 50; $\frac{1}{5}$ of 45.
14. Show by drawing, $\frac{2}{5}$ of 15; $\frac{2}{5}$ of 25; $\frac{2}{5}$ of 35.

15.	*16.*	*17.*	*18.*
$40 \div 5 =$	$19 \div 5 =$	$\frac{1}{3}$ of $30 =$	$\frac{1}{4}$ of $24 =$
$35 \div 5 =$	$26 \div 5 =$	$\frac{2}{3}$ of $30 =$	$\frac{2}{4}$ of $24 =$
$25 \div 5 =$	$17 \div 5 =$	$\frac{1}{3}$ of $36 =$	$\frac{1}{4}$ of $40 =$
$30 \div 5 =$	$36 \div 5 =$	$\frac{2}{3}$ of $36 =$	$\frac{2}{4}$ of $40 =$
$20 \div 5 =$	$42 \div 5 =$	$\frac{1}{3}$ of $21 =$	$\frac{1}{4}$ of $28 =$
$15 \div 5 =$	$37 \div 5 =$	$\frac{2}{3}$ of $21 =$	$\frac{2}{4}$ of $28 =$
$50 \div 5 =$	$48 \div 5 =$	$\frac{1}{3}$ of $24 =$	$\frac{1}{4}$ of $32 =$
$45 \div 5 =$	$16 \div 5 =$	$\frac{2}{3}$ of $24 =$	$\frac{2}{4}$ of $32 =$
$10 \div 5 =$	$21 \div 5 =$	$\frac{2}{5}$ of $40 =$	$\frac{3}{5}$ of $35 =$

1. How many lead pencils at 2 cents each can I buy for 12 cents?

I can buy — lead pencils for 12 cents at 2 cents apiece.

2. How many books at 5 cents apiece can I buy for 23 cents, and how many cents shall I have left?

I can buy — five-cent books for 23 cents, and I shall have — cents left.

Show by drawing the following:

3. How many apples at 2 cents each can be bought for 24 cents?

4. How many oranges at 3 cents apiece can you buy for 30 cents?

5. How many nuts at 1 cent each can you buy for 40 cents?

6. How many hats at 4 dollars each can I buy for 22 dollars, and how many dollars shall I have left?

1. Show by squares or marks how many 2 sixes are; 3 sixes; 4 sixes; 5 sixes; 6 sixes; 7 sixes; 8 sixes; 9 sixes; 10 sixes.

2. Add by sixes from 6 to 60.

3. Make the table of sixes from 6×1; to 6×10.

4. Multiply 6 by 2; by 4; by 3; by 5; by 7; by 6; by 8; by 9; by 10.

	5.	*6.*	*7.*	*8.*
a.	1 six =	$2\times\ 8=$	$2\times10=$	$2\times?=20$
b.	2 sixes =	$3\times\ 9=$	$6\times\ 9=$	$2\times?=16$
c.	3 sixes =	$4\times\ 6=$	$5\times\ 7=$	$2\times?=12$
d.	4 sixes =	$2\times\ 8=$	$3\times\ 8=$	$2\times?=24$
e.	5 sixes =	$3\times\ 7=$	$4\times10=$	$2\times?=18$
f.	6 sixes =	$4\times\ 8=$	$6\times10=$	$3\times?=30$
g.	7 sixes =	$3\times\ 6=$	$5\times\ 4=$	$3\times?=15$
h.	8 sixes =	$6\times\ 6=$	$2\times12=$	$3\times?=18$
i.	9 sixes =	$5\times10=$	$3\times\ 4=$	$3\times?=27$
j.	10 sixes =	$4\times\ 9=$	$6\times\ 8=$	$3\times?=21$

9. What will 3 books cost at 6 cents apiece?

10. What will 10 slates cost at 6 cents apiece?

11. What will 8 oranges cost at 6 cents apiece?

12. What will 4 spools of thread cost at 6 cents apiece?

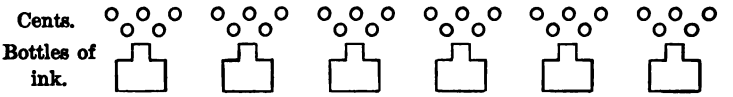
13. What will 5 tops cost at 6 cents apiece?

Show by drawing how many times—

1. 6 squares are contained in 12 squares.
2. 6 squares are contained in 24 squares.
3. 6 dots are contained in 18 dots.
4. 6 marks are contained in 36 marks.
5. 6 marks are contained in 30 marks.
6. 6 books are contained in 42 books,
7. 6 pencils are contained in 54 pencils.
8. 6 tops are contained in 60 tops.
9. Show by drawing: $\frac{1}{6}$ of 24; $\frac{1}{6}$ of 48; $\frac{2}{6}$ of 30; $\frac{1}{3}$ of 30; $\frac{5}{6}$ of 36; $\frac{3}{6}$ of 42; $\frac{1}{2}$ of 42.
10. 6 is contained in 8 — time and — over.
11. 6 is contained in 15 — times and — over.
12. 6 is contained in 20 — times and — over.
13. 6 is contained in 32 — times and — over.

	14.	*15.*	*16.*
a.	$6 \div 6 =$	$\frac{1}{6}$ of $60 =$	$60 \div 6 + 4 =$
b.	$12 \div 6 =$	$\frac{1}{3}$ of $30 =$	$24 \div 3 + 2 =$
c.	$24 \div 6 =$	$\frac{1}{4}$ of $40 =$	$27 \div 3 + 5 =$
d.	$18 \div 6 =$	$\frac{3}{5}$ of $20 =$	$36 \div 6 + 4 =$
e.	$30 \div 6 =$	$\frac{1}{2}$ of $30 =$	$30 \div 5 + 7 =$
f.	$60 \div 6 =$	$\frac{5}{6}$ of $12 =$	$40 \div 5 + 3 =$
g.	$36 \div 6 =$	$\frac{2}{6}$ of $18 =$	$36 \div 4 + 7 =$
h.	$48 \div 6 =$	$\frac{3}{6}$ of $24 =$	$48 \div 6 + 6 =$
i.	$42 \div 6 =$	$\frac{5}{6}$ of $30 =$	$42 \div 6 + 5 =$

1. How much will 6 bottles of ink cost at 5 cents a bottle?



6 bottles of ink at 5 cents a bottle will cost — cents.

In the same way do the following:

2. 9 pounds of sugar at 5 cents a pound will cost — cents.

3. 9 pencils at 2 cents each will cost — cents.

4. 10 picture-books at 6 cents apiece will cost — cents.

5. 7 quarts of milk at 5 cents each will cost — cents.

6. 8 two-cent postage stamps will cost — cents.

7. 6 five-cent postage stamps will cost — cents.

8. 6 papers of tacks at 6 cents a paper will cost — cents.

9. 8 spools of thread at 6 cents a spool will cost — cents.

10. 9 yards of braid at 3 cents a yard will cost — cents.

11. 7 boxes of matches at 6 cents a box will cost — cents.

1. Add by 7's from 7 to 70.

2. Show by squares or marks:

2 times 7 are —
3 times 7 are —
4 times 7 are —
5 times 7 are —
6 times 7 are —
7 times 7 are —
8 times 7 are —
9 times 7 are —
10 times 7 are —

3.	*4.*	*5.*	*6.*
$7 \times 1 =$	$7 \times 6 =$	$7 \times 2 =$	$7 \times 6 =$
$7 \times 2 =$	$7 \times 7 =$	$7 \times 4 =$	$7 \times 9 =$
$7 \times 3 =$	$7 \times 8 =$	$7 \times 3 =$	$7 \times 8 =$
$7 \times 4 =$	$7 \times 9 =$	$7 \times 5 =$	$7 \times 1 =$
$7 \times 5 =$	$7 \times 10 =$	$7 \times 7 =$	$7 \times 10 =$

7. Multiply 3 by 8, 6, 9, 7, 5, 4, 3.
8. Multiply 6 by 4, 8, 3, 9, 6, 7, 5.
9. Multiply 4 by 7, 4, 8, 5, 3, 6, 9.
10. Multiply 7 by 6, 3, 9, 5, 4, 8, 7.
11. Divide 35, 45, 25, 40, 30 by 5.
12. Divide 24, 36, 48, 42, 54 by 6.

13.	*14.*	*15.*
$\frac{2}{3}$ of 15 =	$\frac{2}{3}$ of 21 =	$\frac{2}{3}$ of 18 =
$\frac{2}{3}$ of 30 =	$\frac{2}{3}$ of 24 =	$\frac{2}{3}$ of 27 =
$\frac{2}{3}$ of 12 =	$\frac{2}{3}$ of 36 =	$\frac{2}{3}$ of 33 =

Show by drawing how many times —

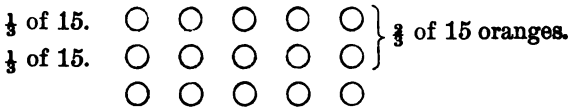
1. 7 squares are contained in 14 squares.
2. 7 circles are contained in 28 circles.
3. 7 candles are contained in 21 candles.
4. 7 * are contained in 35 *
5. 7 * are contained in 49 *
6. 7 * are contained in 42 *
7. 7 * are contained in 70 *
8. 7 * are contained in 63 *

9.	10.
a. $56 \div 7 =$	There are — sevens and — in 29.
b. $42 \div 7 =$	There are — sevens and — in 46.
c. $35 \div 7 =$	There are — sevens and — in 59.
d. $49 \div 7 =$	There are — sevens and — in 39.
e. $28 \div 7 =$	There are — sevens and — in 61.
f. $70 \div 7 =$	There are — sevens and — in 59.
g. $63 \div 7 =$	There are — sevens and — in 68.

11.	12.	13.
$\frac{1}{7}$ of $14 =$	$42 \div 7 + 6 =$	$26 \div 7 =$
$\frac{2}{7}$ of $21 =$	$28 \div 7 + 9 =$	$48 \div 7 =$
$\frac{3}{7}$ of $28 =$	$49 \div 7 + 5 =$	$32 \div 7 =$
$\frac{4}{7}$ of $35 =$	$35 \div 7 + 10 =$	$54 \div 7 =$
$\frac{5}{7}$ of $42 =$	$63 \div 7 + 7 =$	$61 \div 7 =$
$\frac{6}{7}$ of $49 =$	$56 \div 7 + 6 =$	$38 \div 7 =$

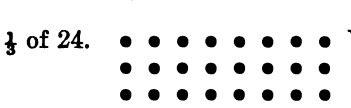
* Whatever the pupil desires to draw.

1. $\frac{2}{3}$ of 15 oranges are — oranges.



In the same way do the following:

2. $\frac{2}{3}$ of 21 apples are — apples.
3. $\frac{2}{5}$ of 40 stars are — stars.
4. $\frac{4}{6}$ of 24 birds are — birds.
5. $\frac{2}{3}$ of 30 chairs are — chairs.
6. $\frac{4}{5}$ of 50 peaches are — peaches.
7. $\frac{3}{6}$ of 42 balls are — balls.
8. If 24 marbles were divided equally among 3 boys, how many would each receive?



In the same way do the following:

9. If 42 cookies were divided equally among 7 boys, how many would each receive?
10. If 35 horses were divided among 7 pastures, how many would there be in each pasture?
11. If 56 oranges were put equally into 7 baskets, how many in each basket?
12. If 70 children were evenly in 7 classes, how many in each class?

1. Show by squares or marks:

2 times 8 are —
3 times 8 are —
4 times 8 are —
5 times 8 are —
6 times 8 are —
7 times 8 are —
8 times 8 are —
9 times 8 are —
10 times 8 are —

2. Add by 8's from 8 to 80.

Show by drawing how many times

3. 8 apples are contained in 32 apples.
4. 8 marbles are contained in 24 marbles.
5. 8 * are contained in 40 *
6. 8 * are contained in 56 *
7. 8 * are contained in 48 *

	8.	*9.*	*10.*	*11.*
a.	$8 \times 2 =$	$16 \div 8 =$	$8 \times 3 =$	$30 \div 8 =$
b.	$8 \times 3 =$	$32 \div 8 =$	$8 \times 10 =$	$36 \div 8 =$
c.	$8 \times 4 =$	$24 \div 8 =$	$8 \times 5 =$	$50 \div 8 =$
d.	$8 \times 5 =$	$40 \div 8 =$	$8 \times 9 =$	$78 \div 8 =$
e.	$8 \times 6 =$	$64 \div 8 =$	$8 \times 6 =$	$43 \div 8 =$
f.	$8 \times 7 =$	$48 \div 8 =$	$8 \times 4 =$	$19 \div 8 =$
g.	$8 \times 8 =$	$56 \div 8 =$	$8 \times 7 =$	$29 \div 8 =$
h.	$8 \times 9 =$	$72 \div 8 =$	$8 \times 2 =$	$68 \div 8 =$
i.	$8 \times 10 =$	$80 \div 8 =$	$8 \times 8 =$	$82 \div 8 =$

* Whatever the pupil desires to draw.

1. When meat is 8 cents a pound, how many pounds can I buy for 40 cents?

For o o o o o o o o I get 1 pound.
For o o o o o o o o I get 1 pound.
For o o o o o o o o I get 1 pound.
For o o o o o o o o I get 1 pound.
For o o o o o o o o I get 1 pound.
For 40 cents I get – pounds.

In the same way do the following:

2. When flour is 8 dollars a barrel, 48 dollars will pay for — barrels.

3. If coats cost 8 dollars each, for 24 dollars you can buy — coats.

4. When slates are 8 cents apiece, for 72 cents you can buy — slates.

5. If sugar is 8 cents a pound, 80 cents will pay for — pounds.

6. If paper is 8 cents a quire, for 40 cents you can get — quires.

7. When berries are 8 cents per quart, then 64 cents will buy — quarts.

8. If clocks cost 8 dollars each, with 32 dollars — clocks can be bought.

9. With 56 dollars to buy railroad tickets at 8 dollars each, — tickets can be bought.

10. What is $\frac{1}{8}$ of 56? $\frac{5}{8}$ of 56? $\frac{7}{8}$ of 56?

1. Show by squares or marks:

2 times 9 are —
3 times 9 are —
4 times 9 are —
5 times 9 are —
6 times 9 are —
7 times 9 are —
8 times 9 are —
9 times 9 are —
10 times 9 are —

	2.	*3.*	*4.*	*5.*
a.	$9 \times 3 =$	$9 \div 9 =$	$36 \div 9 =$	$19 \div 9 =$
b.	$9 \times 4 =$	$18 \div 9 =$	$54 \div 9 =$	$38 \div 9 =$
c.	$9 \times 7 =$	$27 \div 9 =$	$27 \div 9 =$	$42 \div 9 =$
d.	$9 \times 6 =$	$36 \div 9 =$	$45 \div 9 =$	$76 \div 9 =$
e.	$9 \times 8 =$	$45 \div 9 =$	$63 \div 9 =$	$23 \div 9 =$
f.	$9 \times 5 =$	$54 \div 9 =$	$18 \div 9 =$	$57 \div 9 =$
g.	$9 \times 10 =$	$63 \div 9 =$	$81 \div 9 =$	$69 \div 9 =$
h.	$9 \times 9 =$	$72 \div 9 =$	$90 \div 9 =$	$96 \div 9 =$
i.	$9 \times 2 =$	$81 \div 9 =$	$72 \div 9 =$	$84 \div 9 =$

6. Multiply each of the following numbers by 9: 6; 8; 3; 7; 9; 1; 5; 10; 4; 2.

7. 9 in 19 — times and — remainder.

8. In the same way state how many times 9 is contained in 22; 30; 26; 34; 40; 52; 37; 58; 64; 55; 46; 66; 78; 73; 84; 80.

9. Multiply each number in Ex. 6 by 3; by 4; by 5; by 6; by 7; by 8.

Copy and complete, adding by—

1's	2's	3's	4's	5's	6's	7's	8's	9's	10's
1	2	3	4	5	6	7	8	9	10
2	4	6	8	10					
3	6	9	12						
4	8	12							
5	10								
6	12								
7	14								
8									
9									
10									

The above, when completed, forms the multiplication table.

Complete the following table, and make other tables having different figures in first row.

·	3	5	7	4	2	10	8	6	9
4	12				8				
7									
3									
8									
10						100			
5									
2	6			8					
9									
6									

	1.	2.	3.
a.	$5 + ? = 14$	$12 - ? = 8$	$? - 9 = 7$
b.	$16 - 8 = ?$	$6 \times 9 = ?$	$4 + ? = 12$
c.	$? + 6 = 15$	$? \div 5 = 7$	$? \times 9 = 63$
d.	$8 \times 8 = ?$	$7 + ? = 13$	$49 \div 7 = ?$
e.	$? \div 7 = 6$	$14 - 5 = ?$	$13 - ? = 9$
f.	$? \times 5 = 45$	$5 + ? = 12$	$? \times 9 = 54$
g.	$14 - 9 = ?$	$? \times 8 = 32$	$32 \div 4 = ?$
h.	$48 \div ? = 8$	$12 - 5 = ?$	$9 + ? = 20$
i.	$? - 9 = 6$	$27 \div ? = 9$	$? \times 6 = 42$
j.	$36 \div 4 = ?$	$6 + ? = 14$	$15 - 8 = ?$
k.	$81 \div ? = 9$	$76 + 8 = ?$	$85 - ? = 77$

	4.	5.	6.
a.	$25 + ? = 33$	$9 + ? = 17$	$30 + 20 = ?$
b.	$36 \div ? = 6$	$30 \div 6 = ?$	$35 + 8 = ?$
c.	$? \div 8 = 9$	$8 \times ? = 72$	$72 \div 8 = ?$
d.	$16 - 7 = ?$	$17 - 8 = ?$	$40 \div ? = 5$
e.	$? \times 6 = 54$	$4 + ? = 30$	$7 \times ? = 56$
f.	$14 - ? = 8$	$54 \div 9 = ?$	$50 - 40 = ?$
g.	$7 + 9 = ?$	$? \div 8 = 5$	$7 \times 4 = ?$
h.	$? \times 6 = 48$	$8 + ? = 16$	$? \div 6 = 9$
i.	$4 + 15 = ?$	$7 \times 5 = ?$	$4 \times ? = 32$
j.	$18 - 9 = ?$	$6 + ? = 20$	$80 \div 8 = ?$
k.	$? \times 8 = 40$	$7 \times 4 = ?$	$58 + ? = 66$
l.	$23 - ? = 12$	$20 + 12 = ?$	$63 \div ? = 7$

	1.	2.	3.
a.	3's in 42 =	6's in 54 =	9's in 36 =
b.	7's in 35 =	2's in 30 =	4's in 24 =
c.	8's in 40 =	9's in 18 =	7's in 42 =
d.	9's in 45 =	4's in 36 =	8's in 48 =
e.	6's in 42 =	8's in 32 =	4's in 28 =
f.	7's in 63 =	5's in 45 =	8's in 64 =
g.	8's in 24 =	2's in 20 =	6's in 30 =
h.	2's in 22 =	3's in 33 =	5's in 60 =

	4.	5.	6.	7.
a.	40 − 8 =	54 − 6 =	38 − 9 =	32 − 11 =
b.	64 − 8 =	62 − 6 =	42 − 9 =	40 − 11 =
c.	17 − 8 =	33 − 6 =	15 − 9 =	38 − 11 =
d.	29 − 8 =	70 − 6 =	19 − 9 =	54 − 11 =
e.	36 − 8 =	84 − 6 =	36 − 9 =	62 − 11 =
f.	42 − 8 =	36 − 6 =	51 − 9 =	80 − 11 =
g.	19 − 8 =	52 − 6 =	18 − 9 =	91 − 11 =

Change the numbers to be taken away and again subtract from the same numbers.

8. Divide 12 by 4, multiply by 3, add 4, subtract $\frac{1}{3}$ of 9, divide by 5, add $\frac{1}{2}$ of 12, and divide by 4.

9. 8) 72, 36, 45, 32, 56, 64, 48.

10. 7) 56, 28, 49, 63, 35, 21, 42.

1. Divide 35 by all the even numbers between 10 and 20, and give the results.

2. Divide 28 by all the odd numbers between 5 and 15, and give the results.

3. How many skates in 12 pairs?

4. Subtract by 4's from 60 to 20.

5. Subtract by 9's from 81 to 18.

6. One black-board is $5\frac{1}{2}$ feet long, a second is $12\frac{1}{2}$ feet long. How many *yards* long are both boards?

7. 18 inches is how much more than a foot?

8. What will 9 rulers cost at 8 cents each?

9. Annie had 75 cents and spent a half dollar. How much money had she left?

10. Bertie had 50 cents and spent all but $\frac{1}{10}$ of it. How much money had he left?

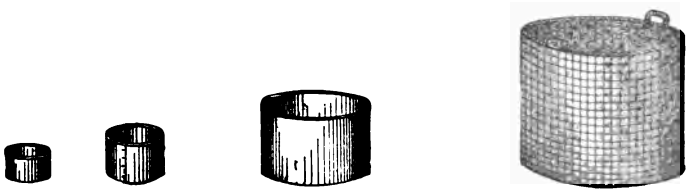
11. If a keg holds 32 quarts of water how many gallons will it hold?

12. What will 10 blank-books cost at 9 cents apiece?

13. How many times will 36 oranges fill a fruit dish which holds 9 oranges?

14. If a man walks 4 miles an hour how many hours will he be in walking 28 miles?

15. Make problems for: $\frac{1}{6}$ of 24; 8×6; $50 - (8 \times 3)$; $100 - (7 \times 9)$.



PINT QUART. PECK. BUSHEL.

2 pints (pt.) = 1 quart (qt.)
8 quarts = 1 peck (pk.)
4 pecks = 1 bushel (bu.)

1. There are — quarts in $\frac{1}{2}$ peck.

2. In 1 peck 2 quarts there are — quarts.

3. In $\frac{1}{2}$ bushel there are — quarts.

4. In 1 bushel 3 pecks there are — pecks.

5. In 1 bushel there are — quarts.

6. In 1 bushel 4 quarts there are — quarts.

7. In 4 quarts 1 pint there are — pints.

8. 1 pint is what part of a quart?

9. What part of a peck is 1 quart? 3 quarts? 4 quarts? 5 quarts?

10. What part of a bushel is 1 peck? 2 pecks? 3 pecks?

11. At 80 cents a bushel, what will 1 peck of corn cost? 3 pk.? 5 pk.?

12. At 8 cents a quart, what will 2 qt. 1 pt. of berries cost?

1. 1 pk. and 2 qt. of berries will cost how much at the rate of 9¢ a quart?

2. 2 pk. 4 qt. of apples will cost how much at 40¢ a peck?

3. If grain sells at 32¢ a peck, how much must be paid for 3 quarts? How much for $\frac{1}{2}$ bu.? How much for 2 pk. and 2 qt.?

4. At 4¢ a pint, what will a peck of berries cost? $\frac{1}{2}$ qt.? 1 pk. 2 qt.?

5. At a dollar a bushel, how many pecks of grain can I buy for 75¢?

6. What will 3 qt. of milk cost at 24¢ a gallon?

7. A five-gallon can of oil costs 50¢. What must I pay for $1\frac{1}{2}$ gal. at the same rate?

8. How many quart cans will it take to hold $5\frac{1}{2}$ gal. of milk?

9. How long will 2 bu. 3 pk. of potatoes last a family if they eat a peck every week?

10. It takes $2\frac{1}{2}$ bu. of potatoes to fill a barrel. How many bushels will it take to fill 6 barrels?

11. At 6¢ a pint, what will 4 quarts and a pint of cranberries cost?

12. If a horse eats a peck of oats a day, how many bushels will he eat in four weeks?

1. There are 16 ounces (oz.) in 1 pound (lb.). How many oz. in $\frac{1}{2}$ lb.? in $\frac{1}{4}$ lb.? in $\frac{3}{4}$ lb.? in $1\frac{1}{2}$ lb.? in $\frac{1}{8}$ lb.? in $\frac{5}{8}$ lb.?

2. What part of a pound is 8 oz.? 4 oz.? 12 oz.? 2 oz.? 6 oz.? 10 oz.?

3. What will 8 oz. cheese cost at 12¢ a pound?

4. What will 1 lb. 4 oz. of butter cost at 32¢ a pound?

5. At 8¢ a pound, what will 3 lb. 8 oz. of sugar cost? 1 lb. 4 oz.? 4 lb. 2 oz.? 2 lb. 1 oz.?

6. I bought 6 lb. 4 oz. of meat at 12¢ a pound, and paid for it in eggs at 25¢ a dozen. How many eggs did I give?

7. At 12¢ a doz., what will 20 eggs cost?

8. At 24¢ a doz., what will 30 eggs cost?

9. At 20¢ a doz., what will 12 eggs cost? 24 eggs? 18 eggs? 30 eggs?

10. What part of a dozen are 4 eggs? 6 eggs? 8 eggs? 3 eggs? 9 eggs? 2 eggs? 10 eggs?

11. How many cups, each holding a gill, can be filled from a teapot holding a gallon?

12. John starts to school at half-past eight in the morning, and returns home at half-past four in the afternoon. How many hours is he away?

SECTION V.

EXERCISE 1.

	1.	2.	3.	4.
a.	14 + 10 =	87 − 10 =	59 + 20 =	12 + 60 =
b.	18 + 10 =	39 − 20 =	58 − 20 =	65 − 40 =
c.	24 + 10 =	47 − 20 =	67 + 30 =	83 − 50 =
d.	38 + 10 =	62 − 30 =	72 − 40 =	34 + 40 =
e.	68 + 20 =	43 − 30 =	83 − 50 =	51 + 30 =
f.	43 + 30 =	87 − 50 =	78 − 40 =	27 + 50 =
g.	55 + 40 =	69 − 40 =	81 − 60 =	89 − 60 =
h.	27 + 60 =	94 − 60 =	37 + 40 =	67 − 50 =

	5.	6.	7.
a.	16 + 10 + 1 =	58 + 20 + 2 =	25 + 30 + 5 =
b.	25 + 10 + 1 =	35 + 30 + 5 =	68 + 20 + 2 =
c.	23 + 20 + 6 =	76 + 20 + 4 =	46 + 40 + 4 =
d.	35 + 30 + 3 =	24 + 60 + 6 =	84 + 10 + 6 =
e.	41 + 30 + 8 =	67 + 20 + 3 =	79 + 20 + 1 =
f.	24 + 40 + 3 =	73 + 20 + 7 =	31 + 40 + 9 =
g.	36 + 50 + 2 =	82 + 10 + 8 =	67 + 20 + 3 =

8. 28 + 40 − 30 + 50 − 20 − 20 − 20 + 30 + 10 − 20 =

9. 86 − 20 − 30 + 50 − 60 − 20 + 40 + 20 − 30 − 20 =

10. 42 − 30 + 60 − 30 − 30 + 50 + 30 − 40 − 30 + 20 =

11. 13 + 50 + 30 − 40 + 20 − 30 − 30 + 60 − 20 − 40 =

	1.	2.	3.	4.
a.	24+16=	36+14=	24+46=	42+38=
b.	33+17=	72+28=	72+28=	65+25=
c.	27+13=	55+35=	46+34=	24+36=
d.	42+18=	88+12=	39+51=	51+39=
e.	82+18=	43+47=	88+12=	48+22=
f.	73+17=	59+21=	75+15=	34+66=
g.	46+14=	86+14=	41+39=	89+11=
h.	55+15=	64+26=	64+26=	26+54=
i.	38+12=	57+33=	37+33=	63+27=

	5.	6.	7.
a.	24+20+8=	73+10+9=	27+30+6=
b.	36+20+6=	25+50+7=	69+20+8=
c.	45+30+9=	68+30+3=	36+50+6=
d.	74+20+7=	34+50+8=	44+30+8=
e.	77+40+6=	47+40+7=	57+20+8=
f.	59+30+4=	84+10+6=	65+20+6=
g.	36+50+5=	36+40+7=	23+60+8=
h.	83+10+9=	69+20+6=	47+30+5=
i.	65+20+8=	52+30+9=	28+50+3=

8. 47+13+24−50+16+36−60+24+38−50=

9. 39+21+32−60+28+11−40+29+37−70=

10. 17+33+25−40+55−60+24+16+13−60=

11. 89−60+21+28−30+22+26−60−20+54=

12. 15+20+20+15−40+33−20+47+11−60=

1.	*2.*	*3.*	*4.*
25+18=	81+19=	34+18=	72+16=
36+15=	55+18=	66+16=	36+13=
58+18=	34+17=	83+19=	64+18=
37+15=	78+13=	47+14=	27+16=
63+19=	43+18=	65+16=	41+18=

5.	*6.*	*7.*	*8.*
42+19=	27+19=	72+19=	59+12=
73+18=	63+14=	38+14=	56+17=
36+15=	76+18=	51+18=	35+19=
28+13=	49+12=	48+12=	68+15=
54+18=	54+17=	29+13=	43+19=

9.	*10.*	*11.*	*12.*
29+11=	37+42=	72+28=	26+38=
65+22=	53+32=	37+34=	63+28=
49+21=	74+22=	54+27=	57+26=
77+22=	48+21=	16+45=	35+46=
38+31=	22+26=	69+24=	72+18=

13.	*14.*	*15.*	*16.*
54+25=	56+33=	28+35=	44+48=
77+21=	89+11=	73+18=	83+16=
58+31=	65+23=	45+16=	68+24=
66+33=	41+34=	65+26=	19+23=
83+16=	65+24=	81+18=	51+19=

1.	*2.*	*3.*	*4.*
14+68=	57+14=	38+36=	27+54=
47+15=	23+18=	65+29=	69+32=
61+29=	65+19=	35+46=	56+27=
83+16=	17+17=	59+21=	78+13=
26+65=	78+16=	27+34=	36+48=

5.	*6.*	*7.*	*8.*
52+39=	76+15=	43+28=	67+28=
59+34=	32+17=	52+39=	14+69=
35+27=	74+18=	32+29=	45+26=
48+16=	43+18=	18+78=	83+17=
74+17=	49+15=	16+35=	25+38=

9.	*10.*	*11.*	*12.*
28+56=	66+27=	38+25=	59+34=
86+13=	28+33=	27+38=	27+65=
63+28=	55+37=	48+13=	48+27=
47+36=	39+56=	55+27=	34+58=
21+39=	64+28=	23+69=	48+28=

13.	*14.*	*15.*	*16.*
32+29=	16+27=	47+28=	19+32=
56+34=	55+45=	72+19=	65+25=
65+27=	47+37=	37+18=	27+38=
19+56=	64+36=	52+39=	76+16=
35+48=	43+18=	65+26=	39+48=

	1.	2.	3.	4.
a.	46−10=	36−20=	95−50=	96−40=
b.	39−10=	62−20=	57−50=	53−30=
c.	89−10=	97−20=	72−50=	78−60=
d.	74−10=	43−30=	46−30=	95−70=
e.	56−10=	85−30=	81−60=	79−50=
f.	32−10=	100−30=	76−40=	82−30=
g.	67−20=	58−30=	69−30=	67−30=
h.	43−20=	84−40=	63−40=	64−40=
i.	85−20=	79−40=	38−20=	86−60=

	5.	6.	7.
a.	46−10−2=	100−10−8=	36−10−3=
b.	39−10−6=	67−10−2=	64−10−2=
c.	56−10−3=	47−10−3=	87−10−6=
d.	74−10−4=	98−10−6=	49−10−7=
e.	68−10−7=	36−10−2=	63−10−1=
f.	85−10−4=	86−10−3=	98−10−6=
g.	57−10−4=	89−10−7=	58−10−3=
h.	78−10−3=	55−10−3=	85−10−4=
i.	96−10−5=	78−10−6=	77−10−5=

8.	9.	10.	11.
46−12=	85−14=	100−18=	86−13=
39−16=	57−14=	67−12=	89−17=
56−13=	78−13=	47−13=	55−13=
74−14=	96−15=	98−16=	78−16=

	1.	2.	3.	4.
a.	46−13=	58−13=	29−13=	95−14=
b.	59−14=	74−11=	66−16=	53−12=
c.	99−16=	47−13=	64−13=	37−15=
d.	100−12=	69−18=	37−14=	82−11=
e.	85−12=	35−12=	92−11=	85−14=
f.	36−14=	86−15=	79−18=	66−13=
g.	58−12=	68−16=	48−16=	79−16=
h.	63−11=	97−13=	77−15=	44−11=
i.	74−12=	59−15=	87−17=	68−17=

	5.	6.	7.
a.	32−10−8=	47−10−8=	38−10−7=
b.	73−10−7=	61−10−6=	76−10−5=
c.	65−10−6=	76−10−8=	58−10−8=
d.	44−10−8=	92−10−3=	97−10−6=
e.	84−10−7=	55−10−8=	49−10−4=
f.	72−10−6=	85−10−7=	87−10−5=
g.	56−10−8=	58−10−3=	79−10−6=
h.	95−10−8=	64−10−5=	65−10−4=
i.	73−10−6=	83−10−8=	96−10−3=

8.	9.	10	11.
32−18=	72−16=	47−18=	85−17=
73−17=	56−18=	61−16=	58−13=
65−16=	95−18=	76−18=	64−15=
44−18=	73−16=	92−13=	83−18=

	1.	2.	3.	4.
a.	37 − 14 =	94 − 15 =	26 − 16 =	31 − 15 =
b.	52 − 13 =	42 − 19 =	90 − 11 =	63 − 17 =
c.	48 − 15 =	75 − 16 =	45 − 15 =	84 − 12 =
d.	73 − 18 =	83 − 18 =	84 − 18 =	45 − 17 =
e.	52 − 14 =	38 − 19 =	37 − 12 =	73 − 16 =
f.	94 − 15 =	61 − 13 =	73 − 14 =	97 − 18 =
g.	66 − 17 =	76 − 18 =	88 − 17 =	52 − 13 =
h.	55 − 16 =	54 − 16 =	52 − 13 =	100 − 17 =
i.	83 − 18 =	85 − 17 =	79 − 19 =	43 − 18 =

	5.	6.	7.
a.	50 − 20 − 4 =	92 − 40 − 6 =	55 − 30 − 6 =
b.	56 − 30 − 8 =	77 − 50 − 8 =	78 − 50 − 4 =
c.	72 − 30 − 4 =	81 − 60 − 5 =	65 − 40 − 8 =
d.	64 − 20 − 5 =	66 − 50 − 8 =	51 − 30 − 7 =
e.	39 − 10 − 8 =	70 − 40 − 6 =	93 − 40 − 8 =
f.	85 − 30 − 7 =	85 − 30 − 8 =	74 − 30 − 8 =
g.	43 − 20 − 5 =	69 − 50 − 8 =	80 − 40 − 4 =
h.	97 − 40 − 9 =	94 − 70 − 7 =	50 − 30 − 7 =
i.	64 − 40 − 8 =	58 − 40 − 9 =	45 − 20 − 8 =

8.	9.	10.	11.
50 − 24 =	85 − 37 =	92 − 46 =	85 − 38 =
56 − 38 =	43 − 25 =	77 − 58 =	69 − 58 =
72 − 34 =	97 − 49 =	81 − 65 =	94 − 77 =
64 − 25 =	64 − 48 =	66 − 58 =	58 − 49 =

	1.	2.	3.	4.
a.	32−28=	75−39=	37−29=	100−56=
b.	46−18=	56−37=	85−55=	96−65=
c.	53−25=	94−46=	48−39=	54−37=
d.	65−27=	47−28=	94−66=	49−27=
e.	83−24=	82−44=	59−32=	63−44=
f.	95−28=	36−19=	83−77=	42−36=
g.	74−26=	55−47=	66−23=	71−42=
h.	44−29=	63−46=	72−58=	86−29=
i.	66−27=	74−48=	78−34=	73−34=

	5.	6.	7.	8.
a.	94−27=	29+34=	74+38=	17+48=
b.	78−36=	74−27=	32−18=	56+24=
c.	85−45=	38+43=	81−47=	28−37=
d.	69−27=	83−27=	56−27=	45−28=
e.	76−47=	47+35=	49+43=	51−23=
f.	43−26=	92−48=	23+28=	64+27=
g.	65−26=	56+38=	71−34=	39+46=
h.	82−43=	51−27=	85−14=	81−27=
i.	54−26=	65+26=	46+48=	96−18=

Subtract from 100 the following numbers:

(*9*)	(*10*)	(*11*)	(*12*)	(*13*)	(*14*)	(*15*)	(*16*)	(*17*)
18	24	34	42	58	38	85	43	38
17	28	32	43	63	83	64	25	76
16	23	38	46	47	74	35	87	44

	1.	2.	3.	4.
a.	54 + 26 =	27 + 45 =	46 + 18 =	46 − 11 =
b.	65 + 27 =	78 + 17 =	54 − 19 =	78 − 17 =
c.	81 − 14 =	36 − 19 =	71 − 16 =	36 + 19 =
d.	36 + 35 =	65 + 26 =	25 + 13 =	65 − 26 =
e.	93 − 55 =	43 + 38 =	42 + 12 =	43 − 38 =
f.	79 + 17 =	84 − 17 =	23 + 46 =	84 + 17 =
g.	42 − 33 =	52 − 25 =	32 − 16 =	93 − 26 =
h.	28 + 46 =	93 − 48 =	27 + 38 =	81 − 27 =
i.	53 − 19 =	81 − 38 =	49 − 26 =	36 + 49 =

	5.	6.	7.	8.
a.	39 + 14 =	34 − 17 =	40 − 24 =	45 + 16 =
b.	42 + 13 =	28 + 14 =	30 − 15 =	71 + 19 =
c.	27 − 19 =	36 + 17 =	40 − 18 =	56 + 12 =
d.	56 − 18 =	45 + 18 =	50 − 25 =	38 + 14 =
e.	35 − 14 =	36 − 19 =	60 − 16 =	28 + 18 =
f.	27 + 64 =	29 − 18 =	70 − 28 =	91 − 16 =
g.	33 + 28 =	37 − 28 =	40 − 27 =	27 + 52 =
h.	43 − 15 =	42 + 24 =	60 − 42 =	34 + 18 =
i.	68 − 25 =	33 + 17 =	30 − 19 =	56 − 19 =

9. From 100 take 46; 37; 69; 28; 51; 47.

10. Add to itself each number from 10 to 30. (10 + 10, 11 + 11, etc.)

11. Make problems for 100 − 36; 8 × 7; 4 × 9; 50 + (3 × 4); 50 − (6 × 7); 100 − (9 × 8).

Copy and add:

(1)	(2)	(3)	(4)	(5)	(6)	(7)
24	31	43	36	25	31	27
22	26	24	40	42	46	30

(8)	(9)	(10)	(11)	(12)	(13)	(14)
48	20	34	45	53	27	48
30	76	40	30	20	33	32

(15)	(16)	(17)	(18)	(19)	(20)	(21)
24	34	45	53	27	48	24
66	46	35	27	36	34	68

(22)	(23)	(24)	(25)	(26)	(27)	(28)
34	45	53	36	45	24	53
48	37	29	48	28	55	28

(29)	(30)	(31)	(32)	(33)	(34)	(35)
39	28	17	35	48	24	56
36	47	46	37	45	68	35

(36)	(37)	(38)	(39)	(40)	(41)	(42)
39	46	39	17	28	55	64
54	37	24	65	44	37	28

Copy and add:

(1)	(2)	(3)	(4)	(5)	(6)
13	22	31	43	12	24
24	43	24	12	41	31
42	24	32	34	36	44

(7)	(8)	(9)	(10)	(11)	(12)
22	34	41	30	22	25
36	21	28	47	34	42
32	25	31	23	24	23

(13)	(14)	(15)	(16)	(17)	(18)
59	48	25	56	37	14
18	26	44	27	32	24
23	14	23	14	25	52

(19)	(20)	(21)	(22)	(23)	(24)
27	42	36	53	19	26
34	36	27	18	27	35
24	16	26	27	52	27

(25)	(26)	(27)	(28)	(29)	(30)
43	26	40	38	27	33
27	43	24	27	36	42
14	25	14	28	26	15

Drill Table A.*

	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	*k.*
l.	1	11	21	31	41	51	61	71	81	91
m.	2	12	22	32	42	52	62	72	82	92
n.	3	13	23	33	43	53	63	73	83	93
o.	4	14	24	34	44	54	64	74	84	94
p.	5	15	25	35	45	55	65	75	85	95
q.	6	16	26	36	46	56	66	76	86	96
r.	7	17	27	37	47	57	67	77	87	97
s.	8	18	28	38	48	58	68	78	88	98
t.	9	19	29	39	49	59	69	79	89	99
u.	10	20	30	40	50	60	70	80	90	100

Drill Table B.*

	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	*k.*
l.	1	11	41	21	61	31	71	51	81	91
m.	6	16	46	26	66	36	76	56	86	96
n.	3	13	43	23	63	33	73	53	83	93
o.	8	18	48	28	68	38	78	58	88	98
p.	5	15	45	25	65	35	75	55	85	95
q.	2	12	42	22	62	32	72	52	82	92
r.	7	17	47	27	67	37	77	57	87	97
s.	4	14	44	24	64	34	74	54	84	94
t.	9	19	49	29	69	39	79	59	89	99
u.	10	20	50	30	70	40	80	60	90	100

Tables A and B.

1. $n + 9 =$

2. $n + 19 =$

3. $p + 8 =$

4. $p + 18 =$

5. $r + 15 =$

6. $t + 7 =$

7. $q - 8 =$

8. $q - 18 =$

9. $o - 17 =$

10. $m - 9 =$

11. $a \times 7 =$

12. $8 \times a =$

13. $a \times 6 =$

14. $9 \times a =$

15. $f \div 9 =$

16. $g \div 7 =$

17. $h \div 9 =$

18. $e \div 4 =$

19. $i \div 9 =$

20. $g \div 8 =$

* The further use of these drill tables is shown in the Manual for Teachers.

Drill Table C.

	a.	*b.*	*c.*	*d.*	*e.*	*f.*	*g.*	*h.*	*i.*	*k.*
l.	1	12	26	34	47	53	67	76	84	96
m.	2	19	22	31	43	52	70	73	87	93
n.	5	16	28	39	41	55	63	79	83	94
o.	8	17	21	33	44	59	62	75	86	97
p.	3	15	27	36	49	51	68	72	90	92
q.	7	20	24	32	46	58	61	80	82	99
r.	4	13	29	38	42	54	66	71	88	95
s.	9	18	23	40	45	57	64	77	85	91
t.	6	11	30	35	50	56	65	74	89	98
u.	10	14	25	37	48	60	69	78	81	100

To the numbers from —

1. *a* to *h* add 12, 13, 14, 15, 16, 17, 18, 19.
2. *a* to *g* " 22, 23, 24, 25, 26, 27, 28, 29.
3. *a* to *f* " 32, 33, 34, 35, 36, 37, 38, 39.
4. *a* to *e* " 42, 43, 44, 45, 46, 47, 48, 49.
5. *a* to *d* " 52, 53, 54, 55, 56, 57, 58, 59.
6. *a* to *c* " 62, 63, 64, 65, 66, 67, 68, 69.

From the numbers —

7. *c* to *k* subtract 11, 12, 13, 14, 15, 16, 17, 18, 19.
8. *d* to *k* " 21, 22, 23, 24, 25, 26, 27, 28, 29.
9. *e* to *k* " 31, 32, 33, 34, 35, 36, 37, 38, 39.
10. *f* to *k* " 41, 42, 43, 44, 45, 46, 47, 48, 49.
11. *g* to *k* " 51, 52, 53, 54, 55, 56, 57, 58, 59.
12. *h* to *k* " 61, 62, 63, 64, 65, 66, 67, 68, 69.

	1.	2.	3.
a.	$11+11+11=$	$11\times3=$	$11\times4=$
b.	$12+12+12=$	$12\times3=$	$12\times4=$
c.	$13+13+13=$	$13\times3=$	$13\times4=$
d.	$14+14+14=$	$14\times3=$	$14\times4=$
e.	$15+15+15=$	$15\times3=$	$15\times4=$
f.	$16+16+16=$	$16\times3=$	$16\times4=$
g.	$17+17+17=$	$17\times3=$	$17\times4=$
h.	$18+18+18=$	$18\times3=$	$18\times4=$
i.	$19+19+19=$	$19\times3=$	$19\times4=$

	4.	5.	6.	7.
a.	$33\div3=$	$44\div4=$	$11\times5=$	$55\div5=$
b.	$36\div3=$	$48\div4=$	$12\times5=$	$60\div5=$
c.	$39\div3=$	$52\div4=$	$13\times5=$	$65\div5=$
d.	$42\div3=$	$56\div4=$	$14\times5=$	$70\div5=$
e.	$45\div3=$	$60\div4=$	$15\times5=$	$75\div5=$
f.	$48\div3=$	$64\div4=$	$16\times5=$	$80\div5=$
g.	$51\div3=$	$68\div4=$	$17\times5=$	$85\div5=$
h.	$54\div3=$	$72\div4=$	$18\times5=$	$90\div5=$
i.	$57\div3=$	$76\div4=$	$19\times5=$	$95\div5=$

8.	9.	10.	11.
$13\times4=$	$48\div4=$	$14\times5=$	$70\div5=$
$16\times4=$	$64\div4=$	$17\times5=$	$80\div5=$
$18\times4=$	$72\div4=$	$18\times5=$	$75\div5=$
$15\times4=$	$80\div4=$	$13\times5=$	$95\div5=$

1.	*2.*	*3.*	*4.*
$11 \times 6 =$	$11 \times 7 =$	$11 \times 9 =$	$14 \times 4 =$
$12 \times 6 =$	$12 \times 7 =$	$11 \times 8 =$	$15 \times 5 =$
$13 \times 6 =$	$13 \times 7 =$	$12 \times 7 =$	$13 \times 7 =$
$14 \times 6 =$	$11 \times 8 =$	$13 \times 6 =$	$14 \times 3 =$
$15 \times 6 =$	$12 \times 8 =$	$12 \times 6 =$	$15 \times 6 =$
$16 \times 6 =$	$11 \times 9 =$	$13 \times 5 =$	$14 \times 5 =$

5.	*6.*	*7.*	*8.*
$12 \times 5 =$	$12 \times 8 =$	$16 \times 3 =$	$14 \times 3 =$
$13 \times 6 =$	$13 \times 7 =$	$16 \times 5 =$	$13 \times 3 =$
$11 \times 8 =$	$14 \times 7 =$	$16 \times 4 =$	$15 \times 5 =$
$14 \times 7 =$	$15 \times 6 =$	$15 \times 5 =$	$16 \times 5 =$
$15 \times 6 =$	$16 \times 6 =$	$15 \times 4 =$	$13 \times 5 =$

9.	*10.*	*11.*	*12.*
$12 \times 8 =$	$18 \times 5 =$	$16 \times 5 =$	$13 \times 7 =$
$14 \times 5 =$	$15 \times 3 =$	$18 \times 4 =$	$14 \times 5 =$
$16 \times 4 =$	$19 \times 5 =$	$15 \times 4 =$	$12 \times 7 =$
$15 \times 5 =$	$14 \times 6 =$	$14 \times 7 =$	$11 \times 9 =$
$17 \times 4 =$	$13 \times 6 =$	$12 \times 6 =$	$15 \times 5 =$

13.	*14.*	*15.*	*16.*
$96 \div 12 =$	$78 \div 13 =$	$42 \div 14 =$	$32 \div 16 =$
$88 \div 11 =$	$39 \div 13 =$	$70 \div 14 =$	$64 \div 16 =$
$52 \div 13 =$	$70 \div 14 =$	$98 \div 14 =$	$80 \div 16 =$
$65 \div 13 =$	$56 \div 14 =$	$75 \div 15 =$	$96 \div 16 =$
$91 \div 13 =$	$84 \div 14 =$	$45 \div 15 =$	$48 \div 16 =$

1.	*2.*	*3.*	*4.*
$34 \div 17 =$	$54 \div 18 =$	$76 \div 19 =$	$45 \div 15 =$
$68 \div 17 =$	$90 \div 18 =$	$80 \div 20 =$	$75 \div 15 =$
$51 \div 17 =$	$72 \div 18 =$	$38 \div 19 =$	$51 \div 17 =$
$85 \div 17 =$	$57 \div 19 =$	$68 \div 17 =$	$65 \div 13 =$
$36 \div 18 =$	$95 \div 19 =$	$72 \div 18 =$	$60 \div 15 =$

5.	*6.*	*7.*	*8.*
$64 \div 16 =$	$76 \div 19 =$	$72 \div 18 =$	$48 \div 16 =$
$68 \div 17 =$	$52 \div 13 =$	$78 \div 13 =$	$70 \div 14 =$
$72 \div 18 =$	$45 \div 15 =$	$65 \div 13 =$	$84 \div 12 =$
$75 \div 15 =$	$54 \div 18 =$	$68 \div 17 =$	$52 \div 13 =$
$80 \div 16 =$	$78 \div 13 =$	$84 \div 14 =$	$57 \div 19 =$

9.	*10.*	*11.*	*12.*
$18 \times 4 =$	$57 \div 19 =$	$18 \times 5 =$	$39 \div 13 =$
$85 \div 17 =$	$54 \div 18 =$	$75 \div 15 =$	$19 \times 4 =$
$12 \times 5 =$	$13 \times 6 =$	$16 \times 4 =$	$13 \times 6 =$
$11 \times 7 =$	$16 \times 6 =$	$52 \div 13 =$	$90 \div 18 =$
$39 \div 13 =$	$51 \div 17 =$	$72 \div 18 =$	$17 \times 5 =$

13.	*14.*	*15.*	*16.*
$\frac{1}{4}$ of $60 =$	$\frac{1}{5}$ of $90 =$	$\frac{1}{7}$ of $98 =$	$\frac{1}{6}$ of $90 =$
$\frac{1}{2}$ of $34 =$	$\frac{1}{6}$ of $78 =$	$\frac{1}{7}$ of $91 =$	$\frac{1}{5}$ of $65 =$
$\frac{1}{3}$ of $54 =$	$\frac{1}{3}$ of $51 =$	$\frac{1}{5}$ of $85 =$	$\frac{1}{4}$ of $72 =$
$\frac{1}{5}$ of $65 =$	$\frac{1}{4}$ of $64 =$	$\frac{1}{3}$ of $45 =$	$\frac{1}{3}$ of $42 =$
$\frac{1}{6}$ of $96 =$	$\frac{1}{2}$ of $38 =$	$\frac{1}{4}$ of $52 =$	$\frac{1}{4}$ of $76 =$

1.	*2.*	*3.*	*4.*
76 − 23 =	37 + 48 =	84 ÷ 8 =	76 ÷ 3 =
44 + 48 =	100 − 69 =	37 + 18 =	19 × 4 =
37 + 36 =	82 + 18 =	49 − 16 =	83 − 29 =
29 + 52 =	94 − 18 =	18 × 4 =	17 × 5 =
80 − 27 =	67 − 38 =	90 ÷ 4 =	48 + 24 =

5.	*6.*	*7.*	*8.*
85 ÷ 5 =	25 + 46 =	47 + 18 =	19 × 5 =
13 × 7 =	82 − 29 =	18 × 4 =	27 + 56 =
82 − 46 =	17 × 5 =	73 − 27 =	90 ÷ 4 =
70 ÷ 9 =	43 + 29 =	48 + 36 =	16 × 4 =
44 + 27 =	13 × 6 =	76 ÷ 3 =	43 − 19 =

9.	*10.*	*11.*	*12.*
72 ÷ 4 =	18 × 4 =	78 ÷ 3 =	16 × 5 =
13 × 3 =	87 ÷ 9 =	48 + 18 =	68 ÷ 4 =
25 + 58 =	69 − 35 =	19 × 3 =	91 − 52 =
41 − 27 =	84 + 16 =	37 + 65 =	27 + 48 =
38 + 16 =	98 ÷ 5 =	86 − 48 =	14 × 7 =

13.	*14.*	*15.*	*16.*
45 + 38 =	65 − 37 =	17 + 58 =	100 ÷ 3 =
16 × 6 =	100 ÷ 6 =	14 × 7 =	13 × 7 =
18 × 3 =	63 + 29 =	85 − 66 =	36 + 38 =
51 − 29 =	17 × 4 =	54 + 39 =	15 × 4 =
100 ÷ 7 =	83 ÷ 4 =	100 ÷ 8 =	74 − 28 =

SECTION VI.

EXERCISE 1.

1. 4 apples will cost — times as much as 1 apple.

2. 10 peaches will cost — times as much as 1 peach.

3. 1 lamp will cost $\frac{1}{8}$ as much as — lamps.

4. 1 cent is what part of 3 cents? 1 cent is — of 3 cents.

5. 2 cents are what part of 3 cents? 1 cent is — of 3 cents. 2 cents are — of 3 cents.

6. 3 dollars is what part of 8 dollars? 1 dollar is — of 8 dollars. 3 dollars are — of 8 dollars.

7. 1 book will cost what part as much as 5 books? 1 book will cost — as much as 5 books.

8. 2 books will cost what part as much as 5 books? 2 books will cost — as much as 5 books.

9. If 5 books cost 10 dollars, 1 book will cost $\frac{1}{5}$ of 10 dollars, or — dollars. 2 books will cost 2 times — dollars, or — dollars.

10. If it takes a boy four hours to do a piece of work, it would have taken 2 boys — hours to do it.

1. If I can buy 20 lb. of sugar for a dollar, what will 4 lb. cost? 6 lb.? 15 lb.?

2. Four men can build a wall in 6 days. It will take one man — days to build it.

3. At $1\frac{1}{2}$¢ each, how much will it cost to get washed at the laundry 12 collars and 8 pairs of cuffs?

4. 16 gallons are how many quarts more than 32 quarts? How many gallons less than 100 quarts?

5. What is the cost of 8 apples at 2 cents apiece? If 1 apple costs 2 cents, 8 apples will cost 8 times 2 cents. 8 times 2 cents are —.

6. At 3 cents apiece, what will 9 oranges cost? 9 oranges will cost 9 times as much as 1 orange. 9 times 3 cents are — cents.

7. If four pencils cost 12¢, 1 pencil will cost — of 12¢, or —¢. 5 pencils will cost 5 times —¢, or —¢.

4 pencils cost 12¢.
1 pencil cost —¢.
5 pencils cost —¢.

8. 3 bottles of ink cost 24¢.
1 bottle of ink cost —¢.
8 bottles of ink cost —¢.

1. At 6 cents a pound, what will 12 lb. of meat cost? What will 4 lb. 8 oz. cost?

2. 4 tops cost 12¢.
1 top cost —¢.
9 tops cost —¢.

3. 12 apples will cost — times as much as 3 apples. If 3 apples cost 2¢, 12 apples will cost — times 2¢, or —¢.

4. A pound of meat costs 20 cents. What can you say about 2 pounds? about 30 cents? If a pound of meat costs 20 cents, 2 pounds will cost — cents. For 30 cents I can buy — pounds of meat at 20 cents a pound.

5. A boy can saw one-half a cord of wood in a day. What can you say about 1 cord? about 2 cords? about 6 days? about 2 boys?

6. A man earns $7 a week. How much will he earn in a quarter of a year?

7. If a man smokes 3 cigars every week-day, and 4 on Sunday, how many will he smoke during a month of 4 weeks?

8. Name two equal numbers whose sum is $35 + 37$.

9. Name three equal numbers whose sum is $38 + 46$.

1. Name four equal numbers whose sum is 34 + 50.

2. A purse contains one dollar. How many times may 10 cents be taken from it? 2 cents? 4 cents?

3. How many "nickels" or five cent pieces in 90 cents?

4. What five coins may make 82 cents?

5. Charles has 25 cents and Edward 17 cents. How many cents must Charles give Edward that both may have the same amount?

6. $\frac{1}{3}$ of what number is equal to $\frac{1}{2}$ of 50?

7. How many days in the months of June, July and August?

8. What two months, one following the other, have together 62 days?

9. Provide yourself with a long string and measure off $16\frac{1}{2}$ feet. Tie a knot at the end of every foot and tie a little piece of colored string at the end of every yard. This string is just 1 rod long. How many feet in 1 rod? Keep this string to measure distances.

10. In 10 ft. there are — yd. and — ft.

11. In 14 ft. there are — yd. and — ft.

12. In 1 rod there are — yd. and — ft.

13. There are how many yards in 1 rod?

1. "Guess" and then measure the following distances. Give the difference between your estimate and the true measure. Make a table as follows:

DISTANCE.	ESTIMATE.	TRUE MEASURE.	ERROR.
Length of school-room			
Height of window			
Width of school grounds			
Length of this page			
Your height			
Width of window-pane			
Height of teacher's desk			
Distance around your hat			

2. How many rods and feet wide is the lot upon which your school-house is placed?

3. In 20 ft. there is — rd. and — ft.

4. In 8 yd. there is — rd. and — yd.

1. In 2 rd. there are — ft. How many ft. in 3 rd.? in 4 rd.?

2. In 40 ft. there are — rd. and — ft.

3. In 50 ft. there are — rd. and — ft.

4. In 70 ft. there are — rd. and — ft.

5. In 11 yd. there are — rd. How many rd. in 22 yd.?

6. In 30 yd. there are — rd. and — yd.

7. A room is 4 yd. long. How many feet longer must it be to be a rod long?

8. A farmer owned 100 acres of land. He planted $\frac{1}{4}$ of it with potatoes and the rest with corn. How many acres did he plant with corn?

9. There are 24 hours in a day. How many hours in 3 days?

10. How many 5 cent pieces make a half-dollar?

11. 24 sheets of paper make one quire. How many sheets in 2 quires? in 3 quires? How many quires and sheets are 50 sheets?

12. If it takes 12 panes of glass for one window, how many windows can be made with 48 panes of glass?

13. How many shoes will be needed for 8 horses? How many for 4 yoke of oxen?

1. How many quarts in 12 gal.? in 15 gal.?

2. How many brass balls, for horns, will be needed for 10 yoke of oxen?

3. How many dozen bananas and what part of a dozen are in a bunch of 50 bananas?

4. How many yards and how many feet besides are there in 40 feet of string?

5. How many dozen pens and what part of a dozen, at 1 cent each, can you buy for 30 cents?

6. How many faces have 8 cubes?

7. How many faces have 12 cylinders?

8. In one pasture were 15 sheep, in another 23 sheep, and in another 31 sheep. How many in the three pastures?

9. How many pecks in 9 bushels?

10. How many quarts in 6 pecks?

11. What will be the cost of 9 quarts of beans at 8 cents a quart?

12. There are 45 plants in a strawberry bed in 5 equal rows. How many plants in each row?

13. What number do you put with each of the following numbers to make 50: 42, 16, 18, 25, 34, 45, 15, 21, 38 and 20?

14. How many leaflets in 12 clovers?

1. There are 95 pages in one book and 40 pages in another book. How many more pages in the first than in the second book?

2. How many cows in 5 fields? 40 in the first, 25 in the second, 32 in the third, 14 in the fourth, 27 in the fifth.

3. How many sheets of paper in $2\frac{1}{2}$ quires? How many quires and sheets in 45 sheets?

4. If there are 18 buttons on one card and 24 buttons on another, how many buttons on both?

5. How many mittens in 15 pairs?

6. Into how many yard-sticks can a stick be cut which is 36 ft. long? 45 ft. long?

7. When cloth is 25 cents a yard how many yards can you buy for a dollar?

8. A little boy spent 25 cents and 15 cents and 30 cents out of a dollar bill. How much money had he left?

9. If 45 cents will buy 9 yards of calico what will 1 yard cost?

10. Mary had 21 cents in 3-cent pieces. How many 3-cent pieces were there?

11. In one car there were 84 people, and in the second 65. How many more in the first car than in the second?

1. How many legs have 3 spiders and 4 flies?

2. Mary spent 49 days with her grandmother. How many weeks did she spend?

3. How many days in November, December and January?

4. Harry lived 90 miles away from his cousin; he went half the distance the first day. How many miles had he left to go?

5. Emma is 15 years old and her father is three times her age. How old is he?

6. Frank is 9 years old, and he is just $\frac{1}{3}$ as old as his mother. What is his mother's age?

7. A man sold 15 barrels of flour to one man, 23 to another, 16 to another, and then had 42 barrels left. How many had he at first?

8. A lady paid 47 cents for some velvet, 15 cents for ribbon, 34 cents for lace. How much did she pay for all?

9. If a man travels 57 miles by stage and 8 miles by train how far does he travel in all?

10. A man bought a wagon for 87 dollars and sold it for 96 dollars. How much did he gain?

1. How many 10-dollar bills will pay for a cart which cost 40 dollars?

2. A little girl sewed one hour and a quarter. How many minutes did she sew?

3. Mary studied 30 minutes (or $\frac{1}{2}$ hour) every day for 5 days. How many hours did she study?

4. There are 52 weeks in a year. In $\frac{1}{4}$ of a year there are — weeks.

5. A man paid 81 dollars for a horse and $\frac{1}{9}$ as much for a saddle. How much did the saddle cost him?

6. A gallon holds 4 quarts. How many quarts will 9 gallons hold?

7. A bushel holds 32 quarts. How many quarts in $\frac{1}{2}$ a bushel?

8. There are 7×8 apples in a basket, and 4×6 apples are taken out. Then how many apples are left?

9. 56 is how many more than 3×3?

10. 42 is how many more than 4×5?

11. 50 is how many more than 7×4?

12. 35 is how many more than 4×4?

13. 72 is how many more than 8×5?

14. In a basket were 42 oranges. It would hold 85 oranges. How many more were needed to fill it?

1. What number must be taken from 56 to leave 38?

2. What number must be taken from 38 to leave 14?

3. A man sold 15 horses one month, and 24 horses the next month. How many did he sell in all?

4. What will 12 rocking-horses cost at 3 dollars each?

5. A school-room has 60 seats in 5 equal rows. How many seats in each row?

6. What is the cost of 25 bushels of potatoes at 2 dollars a bushel?

7. The sum of 2 numbers is 84. One of the numbers is 52. What is the other?

8. There were 5 strips of carpeting each 6 yards long. How many *feet* of carpeting in all?

9. How many times must you empty a peck measure to fill a basket holding 64 quarts of beans?

10. What part of a bushel will it take to fill a four-quart measure 4 times?

11. If an ox wears 8 shoes how many oxen will 32 shoes supply?

12. Mary had 20 hens and she sold 4. What *part* of the whole flock did she sell?

1. What three equal numbers make 45?

2. What four equal numbers make 64.

3. How many quarts in 36 pints?

4. What two numbers will you have by taking 8 from 25 and putting it with 12? By taking 9 from 33 and putting it with 7?

5. Mary learned 12 lines of poetry every day for 6 days. How much did she learn in all?

6. At 20 cents a quire what will 12 sheets of paper cost? What will 50 sheets cost?

7. How much are a quarter of a dollar, a dime, a five-cent piece, and 8 pennies?

8. How much will 25 two-cent stamps cost?

9. What will 3 five-cent stamps and 10 one-cent stamps cost?

10. Six squares and 3 triangles have — corners.

11. Four squares have — more corners than four triangles.

12. How many wheels have 4 wagons and 5 gigs?

13. One boy had $\frac{3}{4}$ of 24 cents; another $\frac{2}{3}$ of 24 cents. Which one had the most?

14. On a fence were 12 robins, on the ground were 18 crows, and in a tree were 16 blue-jays. How many birds in all?

1. What will $5\frac{1}{2}$ pounds of sugar cost at 8 cents a pound?

2. What will 2 yards of cloth cost if 5 yards cost 40 cents?

3. Mabel lives $1\frac{1}{2}$ miles from school. How far does she walk to and from school in 5 days?

4. How long will a bushel of potatoes last if 8 quarts are used each day?

5. What cost 24 quarts of oil at 12 cents a gallon?

6. A girl has to "practice" three-quarters of an hour every day; twenty minutes in the morning and the rest of the time at night. How many minutes does she practice at night?

7. Make problems, using the following: $\frac{2}{3}$ of 24; $63 \div 7$; 8×9; $100 - 36$; $50 - (6 \times 3)$; $62 + 15 + 18$; $9 \times 6 + 3 \times 8$; $8 \times 6\frac{1}{2}$; $72 \div 8$.

8. What will 2 quires of paper cost at the rate of 2 sheets for a cent?

9. In a school of 36 pupils $\frac{2}{3}$ of the children were girls. How many were boys?

10. At 30 cents a dozen what will 18 eggs cost?

11. From 5 dozen bananas there were sold 32 bananas. What are the rest worth at 2 cents apiece?

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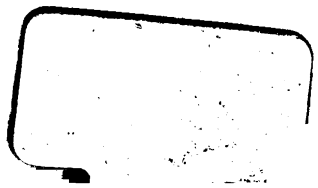
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