

VEDIC MATHEMATICS

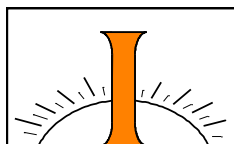
TEACHER'S MANUAL

ELEMENTARY LEVEL

Practice Exercises & Answers

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Compiled from the Manual by Sivaram Pusapati, Japan, 2016



INSPIRATION BOOKS

Lesson-1 Homework (answers at the end of the book)

Note: This Homework Workbook Practices are extracted from the Elementary Level Teacher's Manual of www.vedicmaths.org (click [here](#) for the link).



Practice A

Add the following:



Practice B

a $6 + 4 =$

b $4 + 16 =$

c $5 + 25 =$

d $13 + 7 =$

e $22 + 8 =$

f $38 + 2 =$

g $54 + 6 =$

h $47 + 3 =$

i $61 + 9 =$

j $85 + 5 =$

a $37 + 23 =$

b $42 + 28 =$

c $54 + 16 =$

d $49 + 21 =$

e $45 + 35 =$

f $72 + 18 =$

g $38 + 22 =$

h $35 + 35 =$



Practice C: In the following exercise fill in the missing numbers.

a 37 is close to ___ and is ___ below.

b 49 is close to ___ and is ___ below.

c 68 is close to ___ and is ___ below.



Practice D: Add by jumping to the nearest multiple of 10 first.

a $49 + 5 =$

b $58 + 3 =$

c $37 + 6 =$

d $28 + 6 =$

e $79 + 6 =$

f $38 + 7 =$

g $57 + 7 =$

h $69 + 4 =$



Practice E: Add mentally by first finding tens and then units.

a $37 + 47 =$

b $55 + 28 =$

c $47 + 25 =$

d $29 + 36 =$

e $56 + 25 =$

f $38 + 26 =$

g $29 + 44 =$

h $35 + 49 =$



Practice F See how many you can find.

1 $+$ 2 $+$ 7 $=$ 10

$+$ $+$ $=$ 10

$+$ $+$ $=$ 10

$+$ $+$ $=$ 10

$+$ $+$ $=$ 10

$+$ $+$ $=$ 10

$+$ $+$ $=$ 10

$+$ $+$ $=$ 10



Practice G Try these by discovering the 10s first (wholeness):

a $3 + 2 + 8 =$

b $9 + 8 + 1 =$

c $7 + 2 + 4 + 3 =$

d $4 + 5 + 5 + 7 =$

e $8 + 9 + 2 =$

f $7 + 6 + 2 + 4 =$

g $8 + 8 + 3 + 2 =$

h $7 + 6 + 3 + 4 =$

i $4 + 7 + 4 + 2 =$

j $6 + 9 + 2 + 2 =$

k $7 + 5 + 1 + 2 =$

l $3 + 5 + 4 + 3 =$



Practice H Use the method of completing the whole to add the following numbers.

a $29 + 7 + 1 + 5 =$

b $16 + 3 + 6 + 17 =$

c $8 + 51 + 12 + 3 =$

d $37 + 7 + 21 + 13 =$

e $13 + 16 + 17 + 24 =$

f $12 + 26 + 34 + 8 =$

g $33 + 25 + 22 + 15 =$

h $18 + 13 + 14 + 23 =$



Practice I Try these completing the whole:

a
$$\begin{array}{r} 44 \\ 22 \\ 65 \\ \hline 86 \end{array} +$$

b
$$\begin{array}{r} 35 \\ 76 \\ \hline 45 \end{array} +$$

c
$$\begin{array}{r} 48 \\ 38 \\ 62 \\ \hline 71 \end{array} +$$

d
$$\begin{array}{r} 6327 \\ 0584 \\ \hline 0743 \end{array} +$$

e
$$\begin{array}{r} 549 \\ 182 \\ 317 \\ 241 \\ 726 \\ \hline 321 \end{array} +$$

**Practice J**

Try these:

$$\begin{array}{r} 4\ 7 \\ 2\ 3 \\ 3\ 6 \\ \hline 3\ 6 + \\ \hline \end{array}$$

$$\begin{array}{r} 3\ 5 \\ 2\ 8 \\ 5\ 7 \\ \hline 3\ 2 + \\ \hline \end{array}$$

$$\begin{array}{r} 4\ 8 \\ 3\ 9 \\ 8\ 8 \\ \hline 7\ 1 + \\ \hline \end{array}$$

$$\begin{array}{r} 3\ 3\ 2\ 7 \\ 2\ 5\ 7\ 7 \\ 5\ 8\ 5 \\ \hline 3\ 8\ 3 + \\ \hline \end{array}$$

$$\begin{array}{r} 2\ 4\ 2 \\ 1\ 8\ 8 \\ 1\ 1\ 5 \\ 2\ 4\ 3 \\ 7\ 9\ 6 \\ \hline 3\ 2\ 1 + \\ \hline \end{array}$$

**Practice K**

Try some (hint: Add 10 and step back by one):

$$\mathbf{a} \quad 55 + 9 = \boxed{}$$

$$\mathbf{b} \quad 64 + 9 = \boxed{}$$

$$\mathbf{c} \quad 45 + 9 = \boxed{}$$

$$\mathbf{d} \quad 73 + 9 = \boxed{}$$

$$\mathbf{e} \quad 82 + 9 = \boxed{}$$

$$\mathbf{f} \quad 26 + 9 = \boxed{}$$

$$\mathbf{g} \quad 67 + 9 = \boxed{}$$

$$\mathbf{h} \quad 38 + 9 = \boxed{}$$

**Practice L**

Add these. (hint: Add a multiple of 10 and step back by one)

$$\mathbf{a} \quad 44 + 19 = \boxed{}$$

$$\mathbf{b} \quad 55 + 29 = \boxed{}$$

$$\mathbf{c} \quad 36 + 49 = \boxed{}$$

$$\mathbf{d} \quad 73 + 19 = \boxed{}$$

$$\mathbf{e} \quad 47 + 39 = \boxed{}$$

$$\mathbf{f} \quad 26 + 59 = \boxed{}$$

$$\mathbf{g} \quad 17 + 69 = \boxed{}$$

$$\mathbf{h} \quad 28 + 29 = \boxed{}$$

**Practice M**

Add these (hint: add multiples of 10 and step back):

$$\mathbf{a} \quad 44 + 18 = \boxed{}$$

$$\mathbf{b} \quad 44 + 27 = \boxed{}$$

$$\mathbf{c} \quad 55 + 28 = \boxed{}$$

$$\mathbf{d} \quad 35 + 37 = \boxed{}$$

$$\mathbf{e} \quad 62 + 29 = \boxed{}$$

$$\mathbf{f} \quad 36 + 37 = \boxed{}$$

$$\mathbf{g} \quad 19 + 19 = \boxed{}$$

$$\mathbf{h} \quad 28 + 29 = \boxed{}$$

**Practice N**

Add these (hint: find the nearest multiple of 10 for the appropriate side number and add it to the other side number, finally step back):

a $39 + 44 =$

b $33 + 38 =$

c $48 + 35 =$

d $27 + 34 =$

e $33 + 28 =$

f $9 + 73 =$

g $18 + 19 =$

h $26 + 27 =$

**Practice O**

Try these subtractions using the nearest multiples of 10

a $44 - 19 =$

b $66 - 29 =$

c $88 - 49 =$

d $55 - 9 =$

e $52 - 28 =$

f $72 - 48 =$

g $66 - 38 =$

h $81 - 58 =$

i $83 - 36 =$

j $90 - 66 =$

k $55 - 27 =$

l $60 - 57 =$

Lesson-2 Homework (answers at the end of the book)



Practice A

Double the following numbers. Just write down the answer.

a	24	<input type="text"/>	b	41	<input type="text"/>	c	14	<input type="text"/>
d	45	<input type="text"/>	e	15	<input type="text"/>	f	25	<input type="text"/>
g	36	<input type="text"/>	h	27	<input type="text"/>	i	18	<input type="text"/>
j	29	<input type="text"/>	k	34	<input type="text"/>	l	48	<input type="text"/>



Practice B

Double the following numbers:

a	58	<input type="text"/>	b	61	<input type="text"/>	c	73	<input type="text"/>
d	65	<input type="text"/>	e	66	<input type="text"/>	f	88	<input type="text"/>
g	76	<input type="text"/>	h	91	<input type="text"/>	i	380	<input type="text"/>



Practice C

Double these:

a	362	<input type="text"/>	b	453	<input type="text"/>	c	612	<input type="text"/>
d	319	<input type="text"/>	e	707	<input type="text"/>	f	610	<input type="text"/>
g	472	<input type="text"/>	h	626	<input type="text"/>	i	1234	<input type="text"/>
j	663	<input type="text"/>						

**Practice D**

Try these:

a 53×4

b 28×4

c 33×4

d 61×4

e 18×4

f 81×4

g 16×4

h 16×8

i 22×8

j 45×8

**Practice E**

Multiply the following:

a $8\frac{1}{2} \times 4$

b $11\frac{1}{2} \times 8$

c $19\frac{1}{2} \times 4$

d $2\frac{1}{4} \times 4$

e $5\frac{1}{2} \times 8$

f $9\frac{1}{2} \times 4$

g $30\frac{1}{2} \times 4$

h $3\frac{1}{4} \times 4$

**Practice F**

Find half of the following numbers:

a 10

b 6

c 40

d 14

e 50

f 90

**Practice G**

Try to halve these numbers:

a 36

b 28

c 52

d 18

e 34

f 86

g 56

h 32

i 62

j 98

**Practice H**

Halve the following numbers. Try to do them in your head.

a 164

b 820

c 216

d 152

e 94

f 326

g 234

h 416

i 380

j 256

k 456

l 57

**Practice I**

Use halving to do the following divisions.

Divide by 4:

a 56

b 68

c 84

d 180

e 244

Divide by 8:

f 120

g 440

h 248

i 216

j 44

**Practice J**

Find the following:

a 16×7

b 18×6

c 14×7

d 12×9

e 4×14

f 6×16

g 7×18

h 9×14

**Practice K**

Find the following:

a 16×18

b 14×16

c 12×18

d 16×12

**Practice L**

Multiply the following:

a 68×5

b 42×5

c 36×5

d 426×5

e 8.6×5

f 5.4×5

g 4.68×5

h 0.66×5

**Practice M**

Multiply the following:

a 46×50

b 864×50

c 72×25

d 85×25

e 86.8×50

f 4.2×50

g 34.56×50

h 2.8×25

**Practice N**

Divide by 5:

a 65

b 135

c 375

d 470

e 505

f 4005

g 1235

h 7070

i 885

j 49

k 52

l 22.2

**Practice O**

Divide by 50:

a 650

b 1250

c 3300

d 8.8

e 44

f 77

Divide by 25:

g 225

h 550

i 44

j 137

k 6

Lesson-3 Homework (answers at the end of the book)



Practice A

Find the digit sum of the following numbers:

NUMBER	DIGIT SUM
13	
241	
171	
242	
303	
1213	
900	



Practice B

Find the digit sum of the following numbers:

NUMBER	DIGIT SUM
83	
614	
345	
5555	
78	
2379	
521832	
999	



Practice C

Find the digit sums of the numbers below. Use casting out 9's.

NUMBER	DIGIT SUM
39	
93	
993	
9993	
9329	
941992	
79896	

Practice D

Use casting out 9's to find the digit sums of the numbers below.

NUMBER	DIGIT SUM
465	
274	
3335	
6193	
2532	
819	
723	



NUMBER	DIGIT SUM
2346	
16271	
9653	
36247	
215841	
7152	
9821736	

Practice E In all of the following puzzles the answer is a 2-figure number.

Some have more than one answer. Can you find them?

You are given the digit sum of the answer and another fact.

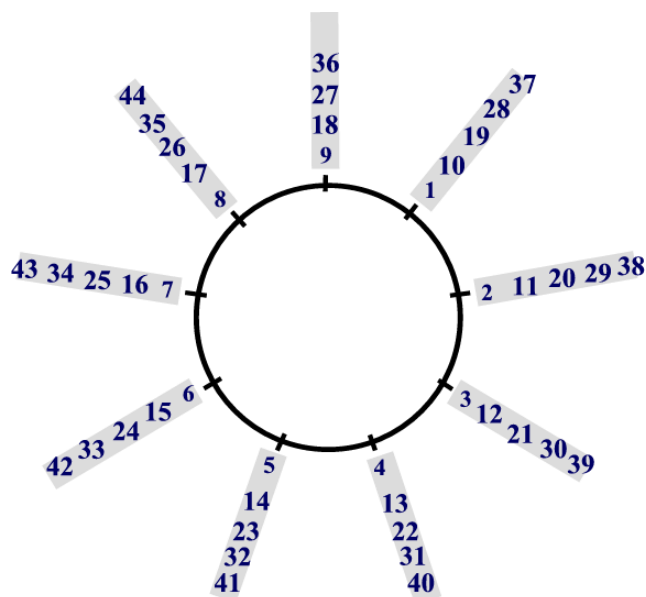
DIGIT SUM	OTHER FACT	NUMBER OF ANSWERS	ANSWER(S)
5	difference between the figures is 3	2	
6	the figures are the same	1	
6	first figure is double the second	1	
7	difference between the figures is 3	2	
7	one figure is a 4	2	
6	both figures are odd	3	
5	the figures are consecutive*	2	
9	the figures are consecutive*	2	
3	one figure is double the other	2	
8	the answer is below 20	1	
1	number is less than 40	5	
1	the first figure is a 2	1	

* **Consecutive** means one after the other. E.g. 6 and 7 are consecutive (or 7 and 6).

**Practice F**

Try more puzzles if you wish. All answers are 2-figure numbers. You can use the 9-point circle below the table for hints.

DIGIT SUM	OTHER FACT	ANSWER(s)
5	number is between 20 and 30	
8	answer ends in 5	
7	first figure is 2	
2	figures differ by 7 (two answers possible)	
1	answer is in the $7 \times$ table	
3	first figure is 3 times the second	
4	number is in the $5 \times$ table	
6	figures are the same	
8	last figure is 3 times the first	
5	number is in the $8 \times$ table	
9	ends in 7	
3	both figures are odd (four answers possible)	



**Practice G**

Add the following and check your answers using the digit sums:

a	$\begin{array}{r} 66 \\ \underline{77} + \end{array}$	b	$\begin{array}{r} 57 \\ \underline{29} + \end{array}$	c	$\begin{array}{r} 94 \\ \underline{58} + \end{array}$	d	$\begin{array}{r} 304 \\ \underline{271} + \end{array}$	e	$\begin{array}{r} 787 \\ \underline{176} + \end{array}$
----------	---	----------	---	----------	---	----------	---	----------	---

f	$\begin{array}{r} 389 \\ \underline{55} + \end{array}$	g	$\begin{array}{r} 5131 \\ \underline{676} + \end{array}$	h	$\begin{array}{r} 456 \\ \underline{209} + \end{array}$	i	$\begin{array}{r} 5555 \\ \underline{7777} + \end{array}$
----------	--	----------	--	----------	---	----------	---

**Practice H**

Add the following and check your answers using the digit sums:

a	$\begin{array}{r} 35 \\ \underline{47} + \end{array}$	b	$\begin{array}{r} 56 \\ \underline{27} + \end{array}$	c	$\begin{array}{r} 35 \\ \underline{59} + \end{array}$	d	$\begin{array}{r} 52 \\ \underline{24} + \end{array}$	e	$\begin{array}{r} 456 \\ \underline{333} + \end{array}$	f	$\begin{array}{r} 188 \\ \underline{277} + \end{array}$
----------	---	----------	---	----------	---	----------	---	----------	---	----------	---

g	$\begin{array}{r} 78 \\ \underline{87} + \end{array}$	h	$\begin{array}{r} 66 \\ \underline{48} + \end{array}$	i	$\begin{array}{r} 555 \\ \underline{77} + \end{array}$	j	$\begin{array}{r} 823 \\ \underline{37} + \end{array}$	k	$\begin{array}{r} 3760 \\ \underline{481} + \end{array}$
----------	---	----------	---	----------	--	----------	--	----------	--

**Practice I**

Multiply the following numbers and check each one using the digit sums:

a	88×8	<input type="text"/>	b	32×3	<input type="text"/>	c	73×4	<input type="text"/>
d	717×6	<input type="text"/>	e	234×5	<input type="text"/>	f	533×2	<input type="text"/>
g	3115×3	<input type="text"/>	h	142857×7	<input type="text"/>			

**Practice J**

Draw the patterns for the nine numbers using the Squares below. You can use different colours for each number.

Colour all the 1s

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

Colour all the 2s

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

Colour all the 3s

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

Colour all the 4s

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

Colour all the 5s

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

Colour all the 6s

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

Colour all the 7s

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

Colour all the 8s

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

Colour all the 9s

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

What are your observations?

Lesson-4 Homework (answers at the end of the book)



Practice A

Add the following mentally from left to right:

a $\begin{array}{r} 5 \ 6 \\ 6 \ 7 + \\ \hline \end{array}$

b $\begin{array}{r} 8 \ 8 \\ 3 \ 3 + \\ \hline \end{array}$

c $\begin{array}{r} 4 \ 5 \\ 6 \ 7 + \\ \hline \end{array}$

d $\begin{array}{r} 5 \ 4 \\ 6 \ 4 + \\ \hline \end{array}$

e $\begin{array}{r} 3 \ 9 \\ 4 \ 9 + \\ \hline \end{array}$

f $\begin{array}{r} 2 \ 7 \\ 5 \ 6 + \\ \hline \end{array}$

g $\begin{array}{r} 7 \ 7 \\ 8 \ 8 + \\ \hline \end{array}$

h $\begin{array}{r} 6 \ 3 \\ 7 \ 4 + \\ \hline \end{array}$



Practice B

Add the following sums mentally from left to right:

a $\begin{array}{r} 3 \ 6 \ 3 \\ 4 \ 5 \ 6 + \\ \hline \end{array}$

b $\begin{array}{r} 8 \ 1 \ 9 \\ 9 \ 1 \ 8 + \\ \hline \end{array}$

c $\begin{array}{r} 7 \ 7 \ 7 \\ 4 \ 4 \ 4 + \\ \hline \end{array}$

d $\begin{array}{r} 7 \ 3 \ 7 \\ 1 \ 3 \ 9 + \\ \hline \end{array}$

e $\begin{array}{r} 3 \ 4 \ 5 \\ 9 \ 3 \ 7 + \\ \hline \end{array}$

f $\begin{array}{r} 1 \ 3 \ 6 \ 9 \\ 3 \ 8 \ 8 \ 3 + \\ \hline \end{array}$

g $\begin{array}{r} 9 \ 6 \ 3 \ 1 \\ 8 \ 7 \ 0 \ 9 + \\ \hline \end{array}$

h $\begin{array}{r} 4 \ 4 \ 4 \ 4 \\ 4 \ 8 \ 3 \ 8 \\ 5 \ 5 \ 5 + \\ \hline \end{array}$



Practice C

Multiply the following from left to right:

a $\begin{array}{r} 2 \ 7 \\ 3 \times \\ \hline \end{array}$

b $\begin{array}{r} 7 \ 6 \\ 6 \times \\ \hline \end{array}$

c $\begin{array}{r} 2 \ 6 \\ 6 \times \\ \hline \end{array}$

d $\begin{array}{r} 7 \ 2 \\ 7 \times \\ \hline \end{array}$

e $\begin{array}{r} 7 \ 8 \\ 9 \times \\ \hline \end{array}$

f $\begin{array}{r} 8 \ 3 \\ 3 \times \\ \hline \end{array}$

g $\begin{array}{r} 6 \ 4 \ 2 \\ 4 \times \\ \hline \end{array}$

h $\begin{array}{r} 2 \ 5 \ 6 \\ 3 \times \\ \hline \end{array}$

i $\begin{array}{r} 7 \ 4 \ 1 \\ 3 \times \\ \hline \end{array}$

j $\begin{array}{r} 2 \ 2 \ 3 \\ 9 \times \\ \hline \end{array}$

k $\begin{array}{r} 1 \ 0 \ 5 \ 9 \\ 7 \times \\ \hline \end{array}$

l $\begin{array}{r} 8 \ 6 \ 3 \ 1 \\ 4 \times \\ \hline \end{array}$

m $\begin{array}{r} 5 \ 4 \ 3 \ 2 \\ 8 \times \\ \hline \end{array}$

n $\begin{array}{r} 4 \ 0 \ 9 \ 7 \\ 7 \times \\ \hline \end{array}$

**Practice D**

Multiply the following:

- | | | | | | | | | |
|----------|--------------------------|----------------------|----------|--------------------------|----------------------|----------|--------------------------|----------------------|
| a | 15×18 | <input type="text"/> | b | 15×24 | <input type="text"/> | c | 46×15 | <input type="text"/> |
| d | 82×35 | <input type="text"/> | e | 66×15 | <input type="text"/> | f | 124×45 | <input type="text"/> |
| g | 15×54 | <input type="text"/> | h | 55×16 | <input type="text"/> | i | 75×18 | <input type="text"/> |
| j | 446×15 | <input type="text"/> | k | 132×35 | <input type="text"/> | l | 85×18 | <input type="text"/> |
| m | $16 \times 4\frac{1}{2}$ | <input type="text"/> | n | $24 \times 3\frac{1}{2}$ | <input type="text"/> | o | $\text{£}4.50 \times 32$ | <input type="text"/> |

**Practice E**

Try these:

- | | | | | | | | |
|----------|---|----------|---|----------|---|----------|---|
| a | $\begin{array}{r} 62 \\ - 47 \\ \hline \end{array}$ | b | $\begin{array}{r} 75 \\ - 28 \\ \hline \end{array}$ | c | $\begin{array}{r} 51 \\ - 15 \\ \hline \end{array}$ | d | $\begin{array}{r} 67 \\ - 38 \\ \hline \end{array}$ |
| e | $\begin{array}{r} 46 \\ - 25 \\ \hline \end{array}$ | f | $\begin{array}{r} 65 \\ - 37 \\ \hline \end{array}$ | g | $\begin{array}{r} 90 \\ - 62 \\ \hline \end{array}$ | h | $\begin{array}{r} 82 \\ - 38 \\ \hline \end{array}$ |

**Practice F**

Check your answers to Practice E by using the digit sum check.

**Practice G**

Subtract the following from left to right:

- | | | | | | | | |
|----------|---|----------|---|----------|--|----------|---|
| a | $\begin{array}{r} 444 \\ - 183 \\ \hline \end{array}$ | b | $\begin{array}{r} 63 \\ - 28 \\ \hline \end{array}$ | c | $\begin{array}{r} 813 \\ - 345 \\ \hline \end{array}$ | d | $\begin{array}{r} 695 \\ - 368 \\ \hline \end{array}$ |
| e | $\begin{array}{r} 51 \\ - 38 \\ \hline \end{array}$ | f | $\begin{array}{r} 3456 \\ - 281 \\ \hline \end{array}$ | g | $\begin{array}{r} 7117 \\ - 1771 \\ \hline \end{array}$ | h | $\begin{array}{r} 8008 \\ - 3839 \\ \hline \end{array}$ |
| i | $\begin{array}{r} 6363 \\ - 3388 \\ \hline \end{array}$ | j | $\begin{array}{r} 51015 \\ - 27986 \\ \hline \end{array}$ | k | $\begin{array}{r} 14285 \\ - 7148 \\ \hline \end{array}$ | l | $\begin{array}{r} 9630369 \\ - 3690963 \\ \hline \end{array}$ |

Lesson-5 Homework (answers at the end of the book)



Practice A

Apply *All from 9 and the Last from 10* to the following:

a 444 **b** 675 **c** 2468

d 18276 **e** 8998 **f** 9888

g 1020304 **h** 7



Practice B

Apply the formula to these numbers:

a 3570 **b** 920 **c** 1234560

d 3300



Practice C

Subtract the following:

a $1000 - 481$ **b** $1000 - 309$ **c** $1000 - 892$

d $1000 - 97$ **e** $100 - 78$ **f** $100 - 33$

g $10000 - 8877$ **h** $10000 - 9876$ **i** $1000 - 808$

j $1000 - 710$ **k** $10000 - 6300$



Practice D

Subtract the following:

a $1000 - 86$ **b** $1000 - 93$ **c** $1000 - 35$

d $10000 - 678$ **e** $10000 - 353$ **f** $10000 - 177$

g $10000 - 62$ **h** $10000 - 85$ **i** $1000 - 8$

j $10000 - 3$

**Practice E**

Try these:

a $600 - 88$

b $400 - 83$

c $900 - 73$

d $6000 - 762$

e $2000 - 979$

f $50000 - 4334$

g $70000 - 8012$

**Practice F**

Subtract the following:

a $8000 - 3504$

b $5000 - 1234$

c $300 - 132$

d $2000 - 1444$

e $700 - 232$

f $60,000 - 23,331$

**Practice G**

Subtract the following:

a $5000 - 74$

b $8000 - 58$

c $6000 - 94$

d $4000 - 19$

e $80000 - 345$

f $30000 - 276$

g $50000 - 44$

h $700 - 8$

i $30000 - 54$

j $20000 - 222$

k $30000 - 670$

l $70000 - 99$

**Practice H**

Do the following money subtractions in a similar way.

a $£10 - £2.34$

b $£10 - £6.51$

c $£10 - £5.82$

d $£10 - £9.07$

e $£20 - £7.44$

f $£20 - £12.78$

g $£20 - £3.18$

h $£20 - £8.40$



Practice I

Subtract:

a $100 - 34$

b $1000 - 474$

c $5000 - 542$

d $800 - 72$

e $1000 - 33$

f $5000 - 84$

g $700 - 58$

h $9000 - 186$

i $10000 - 4321$

j $200 - 94$

k $10000 - 358$

l $400 - 81$

m $7000 - 88$

n $900 - 17$

o $30000 - 63$

p $90000 - 899$

Lesson-6 Homework (answers at the end of the book)



Practice A

Add the following (try some of them mentally):

a
$$\begin{array}{r} 3\ 4\ 5\ 6 \\ 4\ 7\ 1\ 7 \\ \hline \end{array}$$

b
$$\begin{array}{r} 1\ 8\ 1\ 9 \\ 1\ 7\ 1\ 6 \\ \hline \end{array}$$

c
$$\begin{array}{r} 6\ 4\ 4\ 6 \\ 2\ 8\ 3\ 8 \\ \hline \end{array}$$

d
$$\begin{array}{r} 8\ 3\ 2\ 1 \\ 1\ 8\ 2\ 3 \\ \hline \end{array}$$

e
$$\begin{array}{r} 7\ 6\ 7 \\ 6\ 1\ 6 \\ \hline \end{array}$$

f
$$\begin{array}{r} 3\ 8\ 3 \\ 3\ 8\ 4 \\ \hline \end{array}$$

g
$$\begin{array}{r} 4\ 4\ 4 \\ 2\ 4\ 6 \\ \hline \end{array}$$

h
$$\begin{array}{r} 8\ 8\ 8 \\ 7\ 0\ 7 \\ \hline \end{array}$$

i
$$\begin{array}{r} 5\ 5\ 1 \\ 6\ 6\ 2 \\ \hline \end{array}$$

j
$$\begin{array}{r} 4\ 5\ 5\ 4 \\ 3\ 6\ 3\ 6 \\ \hline \end{array}$$

k
$$\begin{array}{r} 1\ 2\ 3\ 4 \\ 4\ 9\ 4\ 4 \\ \hline \end{array}$$

l
$$\begin{array}{r} 5\ 2\ 3\ 4 \\ 9\ 3\ 9\ 3 \\ \hline \end{array}$$



Practice B

Subtract the following. Split each sum into two easy ones.

a
$$\begin{array}{r} 3\ 2\ 4\ 3 \\ 1\ 3\ 1\ 9 \\ \hline \end{array}$$

b
$$\begin{array}{r} 4\ 4\ 4\ 4 \\ 1\ 8\ 2\ 8 \\ \hline \end{array}$$

c
$$\begin{array}{r} 7\ 0\ 7\ 0 \\ 1\ 5\ 2\ 6 \\ \hline \end{array}$$

d
$$\begin{array}{r} 3\ 7\ 2\ 1 \\ 1\ 9\ 0\ 9 \\ \hline \end{array}$$

e
$$\begin{array}{r} 6\ 8\ 8\ 9 \\ 1\ 9\ 3\ 6 \\ \hline \end{array}$$

f
$$\begin{array}{r} 8\ 5\ 2 \\ 1\ 3\ 9 \\ \hline \end{array}$$

g
$$\begin{array}{r} 7\ 7\ 7 \\ 5\ 8\ 5 \\ \hline \end{array}$$

h
$$\begin{array}{r} 6\ 6\ 6\ 6 \\ 2\ 9\ 3\ 8 \\ \hline \end{array}$$



Practice C

Multiply the following:

a 432×3

b 453×2

c 626×2

d 433×3

e 308×6

f 814×4

g 515×5

h 919×3

i 1416×4

j 2728×2

k 3193×3

l 131415×3

**Practice D**

Divide the following mentally:

a $2 \overline{)656}$

b $2 \overline{)726}$

c $3 \overline{)1899}$

d $6 \overline{)1266}$

e $4 \overline{)2048}$

f $4 \overline{)2844}$

g $3 \overline{)2139}$

h $2 \overline{)2636}$

i $4 \overline{)2816}$

j $4 \overline{)812}$

k $6 \overline{)4818}$

l $3 \overline{)1266}$

m $5 \overline{)2045}$

n $2 \overline{)3814}$

o $7 \overline{)21014}$

p $3 \overline{)91827}$

q $2 \overline{)387252}$

r $8 \overline{)40168}$

s $5 \overline{)103545}$

t $3 \overline{)15015}$

u $13 \overline{)391352}$

Lesson-7 Homework (answers at the end of the book)



Practice A

Try the ones below using vertically and crosswise method.

$$\begin{array}{r} \text{a} \quad 7 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 8 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 7 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 8 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 8 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 9 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 6 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i} \quad 7 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j} \quad 6 \\ \times 5 \\ \hline \end{array}$$



Practice B

This is the same as before except that we cross-add. There is a carry in the sums in the second row.

$$\begin{array}{r} \text{a} \quad 13 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 12 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 11 \\ \times 15 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 13 \\ \times 13 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 11 \\ \times 11 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 13 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 12 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 14 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i} \quad 16 \\ \times 16 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j} \quad 13 \\ \times 18 \\ \hline \end{array}$$



Practice D

Multiply the following:

$$\text{a} \quad 94 \times 94 \quad \boxed{}$$

$$\text{b} \quad 97 \times 89 \quad \boxed{}$$

$$\text{c} \quad 87 \times 99 \quad \boxed{}$$

$$\text{d} \quad 87 \times 98 \quad \boxed{}$$

$$\text{e} \quad 87 \times 95 \quad \boxed{}$$

$$\text{f} \quad 95 \times 95 \quad \boxed{}$$

$$\text{g} \quad 79 \times 96 \quad \boxed{}$$

$$\text{h} \quad 98 \times 96 \quad \boxed{}$$

$$\text{i} \quad 92 \times 99 \quad \boxed{}$$

$$\text{j} \quad 99 \times 99 \quad \boxed{}$$

$$\text{k} \quad 88 \times 88 \quad \boxed{}$$

$$\text{l} \quad 97 \times 56 \quad \boxed{}$$

$$\text{m} \quad 44 \times 98 \quad \boxed{}$$

$$\text{n} \quad 97 \times 63 \quad \boxed{}$$

**Practice E**

Multiply these numbers mentally, just write down the answer:

a $\begin{array}{r} 87 \\ 97 \\ \hline \end{array}$

b $\begin{array}{r} 79 \\ 98 \\ \hline \end{array}$

c $\begin{array}{r} 98 \\ 93 \\ \hline \end{array}$

d $\begin{array}{r} 94 \\ 95 \\ \hline \end{array}$

e $\begin{array}{r} 96 \\ 96 \\ \hline \end{array}$

f $\begin{array}{r} 88 \\ 96 \\ \hline \end{array}$

g $\begin{array}{r} 89 \\ 98 \\ \hline \end{array}$

h $\begin{array}{r} 93 \\ 96 \\ \hline \end{array}$

i $\begin{array}{r} 93 \\ 99 \\ \hline \end{array}$

j $\begin{array}{r} 97 \\ 97 \\ \hline \end{array}$

k $\begin{array}{r} 96 \\ 67 \\ \hline \end{array}$

l $\begin{array}{r} 95 \\ 75 \\ \hline \end{array}$

m $\begin{array}{r} 89 \\ ?? \\ \hline 8277 \end{array}$

find the missing numbers

**Practice F**

Multiply these numbers mentally

a 107×104

b 107×108

c 133×103

d 102×104

e 123×102

f 171×101

g 103×111

h 125×105

i 103×103

j 111×111

k 162×102

l 113×105

m $\begin{array}{r} 103 \\ ??? \\ \hline 10815 \end{array}$

find the missing numbers

**Practice G**

Multiply the following mentally:

a 667×998

b 768×997

c 989×998

d 885×997

e 883×998

f 467×998

g 891×989

h 8888×9996

i 6999×9997

j 90909×99994

k 78989×99997

l 9876×9998

**Practice H**

Find:

a 1222×1003

b 1051×1007

c 1123×1002

d 1007×1006

e 15111×10003

**Practice I**

a 212×103

b 106×208

c 182×98

d 93×186

e 93×46

f 56×104

g 306×118

h 51×104

i 206×54

j 44×99

k 48×184

l 228×212

**Practice J**

Multiply mentally:

a 41×42

b 204×207

c 321×303

d 203×208

e 902×909

f 48×47

g 188×196

h 199×198

i 189×194

j 207×211

k 312×307

l 5003×5108

m 63×61

n 23×24

o 79×77

**Practice K**

Find:

a 97×993

b 92×989

c 9988×98

d 9996×988

**Practice L**

Find:

a 103×1015

b 106×1012

c 10034×102

d 1122×104

**Practice M**

Square the following:

a 94

b 103

c 108

d 1012

e 98

f 88

g 91

h 10006

i 988

j 997

k 9999

l 9989

m 111

n 13

o 987

**Practice N**

Square the following:

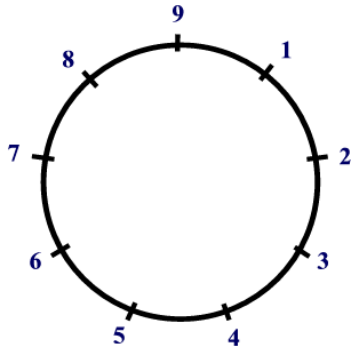
a 206**b** 212**c** 302**d** 601**e** 21**f** 72**g** 4012**h** 511**Practice O**

The following exercise contains a mixture of all the different types of multiplication we have seen so far:

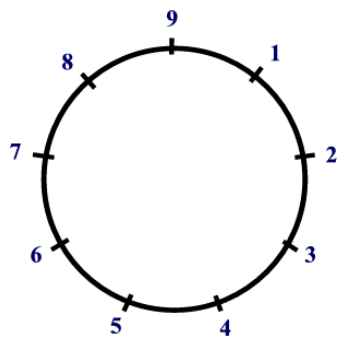
a 654×3 **b** 86×98 **c** 97×92 **d** 73×4 **e** 7×22 **f** 16×24 **g** 798×997 **h** 8899×9993 **i** 106^2 **j** 996^2 **k** 103×109 **l** 123×104 **m** 203×209 **n** 188×197 **o** 87×97 **p** 32×33 **q** 2004×2017 **r** 9997×98 **s** 1023×102

CLASS WORK: Connect the digit sums of multiplication tables from 1 to 10. This helps us in divisibility check.

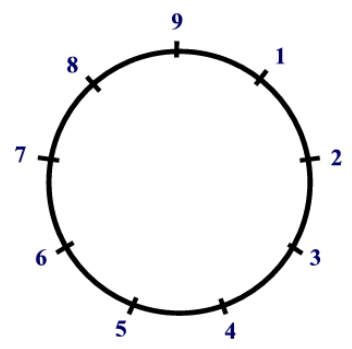
3 TIMES TABLE



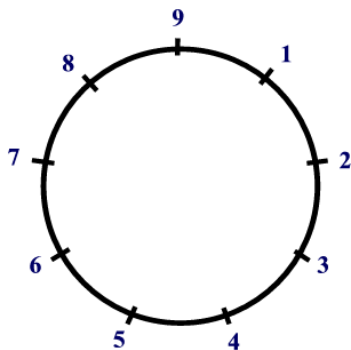
2 TIMES TABLE



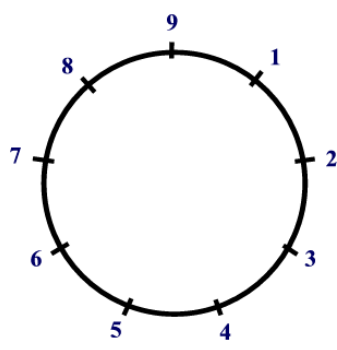
6 TIMES TABLE



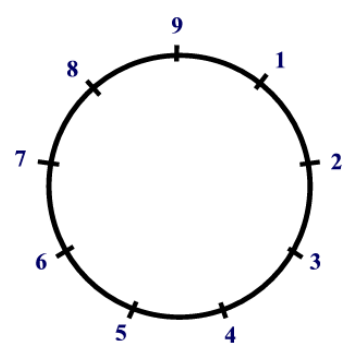
5 TIMES TABLE



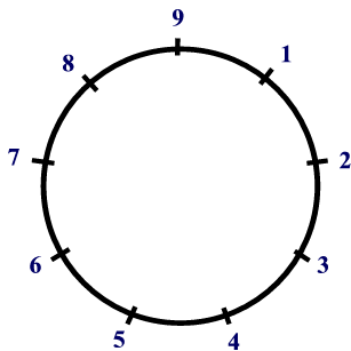
1 TIMES TABLE



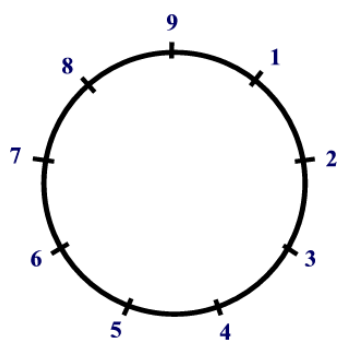
9 TIMES TABLE



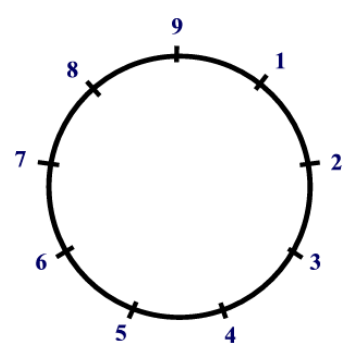
4 TIMES TABLE



8 TIMES TABLE



7 TIMES TABLE



Lesson-8 Homework (answers at the end of the book)



Practice A

Divide the following and check using the digit sums:

a $3 \overline{)4681}$

b $4 \overline{)913}$

c $5 \overline{)7032}$

d $6 \overline{)321}$

e $7 \overline{)222}$

f $8 \overline{)9080}$

g $9 \overline{)1001}$

h $2 \overline{)34567}$



Practice B

Approximate the following:

a 723×81

b 67×82

c 4133×572

d 38×49

e 6109×377

f 3333×4444

g 1812×1066



Practice C

What is the last figure in the following sums?

a 456×567

b 76543×97

c $67 \times 78 \times 89$

d $789 + 987$

e 346×564

f $5328 + 9845$

**Practice D**

For each of the numbers below, write down the totals this formula gives you and then write down whether 4 divides into the number or not.

a 246**b** 656**c** 92**d** 5573**e** 7624**f** 345678**Practice E**

Test the following numbers for divisibility by 11:

a 5192**b** 3476**c** 1358016**d** 85547**e** 570317**f** 1030607**Practice F**

Find the remainder from 11 for each of the following numbers:

a 71263**b** 45678**c** 203527**d** 67**e** 349**f** 3817**g** 1827**h** 8351**i** 481**j** 34143**k** 523281**l** 909192

Lesson-9 Homework (answers at the end of the book)



Practice A

Convert the following numbers:

- | | | | | | | | | |
|----------|-------------|----------------------|----------|-------------|----------------------|----------|--------------|----------------------|
| a | $6\bar{1}$ | <input type="text"/> | b | $8\bar{2}$ | <input type="text"/> | c | $3\bar{3}$ | <input type="text"/> |
| d | $5\bar{7}$ | <input type="text"/> | e | $46\bar{2}$ | <input type="text"/> | f | $999\bar{1}$ | <input type="text"/> |
| g | $1\bar{2}$ | <input type="text"/> | h | $11\bar{1}$ | <input type="text"/> | i | $12\bar{3}$ | <input type="text"/> |
| j | $3\bar{4}0$ | <input type="text"/> | | | | | | |



Practice B

Remove the bar numbers:

- | | | | | | | | | |
|----------|--------------|----------------------|----------|---------------------|----------------------|----------|---------------|----------------------|
| a | $6\bar{1}4$ | <input type="text"/> | b | $4\bar{2}3$ | <input type="text"/> | c | $5\bar{2}5$ | <input type="text"/> |
| d | $3\bar{1}7$ | <input type="text"/> | e | $45\bar{2}3$ | <input type="text"/> | f | $333\bar{2}3$ | <input type="text"/> |
| g | $5\bar{1}32$ | <input type="text"/> | h | $6\bar{2}7\bar{3}$ | <input type="text"/> | i | $2\bar{1}1$ | <input type="text"/> |
| j | $41\bar{3}1$ | <input type="text"/> | k | $1\bar{3}15\bar{1}$ | <input type="text"/> | l | $1\bar{3}1$ | <input type="text"/> |



Practice C

Remove the bar numbers:

- | | | | | | | | | |
|----------|---------------------------------|----------------------|----------|---------------------------------|----------------------|----------|---------------------------------|----------------------|
| a | $6\bar{1}\bar{2}$ | <input type="text"/> | b | $7\bar{3}\bar{3}$ | <input type="text"/> | c | $5\bar{1}\bar{1}$ | <input type="text"/> |
| d | $9\bar{0}\bar{4}$ | <input type="text"/> | e | $72\bar{4}\bar{1}$ | <input type="text"/> | f | $333\bar{2}\bar{2}$ | <input type="text"/> |
| g | $6\bar{2}\bar{1}4$ | <input type="text"/> | h | $5\bar{3}\bar{1}22$ | <input type="text"/> | i | $33\bar{2}\bar{2}44$ | <input type="text"/> |
| j | $7\bar{3}\bar{3}\bar{3}$ | <input type="text"/> | k | $5\bar{1}\bar{0}\bar{4}$ | <input type="text"/> | l | $44\bar{1}\bar{1}\bar{2}$ | <input type="text"/> |
| m | $74\bar{0}\bar{3}\bar{1}$ | <input type="text"/> | n | $7\bar{1}\bar{0}\bar{3}\bar{1}$ | <input type="text"/> | o | $6\bar{3}\bar{3}\bar{2}\bar{2}$ | <input type="text"/> |
| p | $3\bar{1}\bar{1}\bar{0}\bar{2}$ | <input type="text"/> | q | $3\bar{1}\bar{1}\bar{4}\bar{1}$ | <input type="text"/> | r | $3\bar{2}\bar{1}\bar{2}\bar{2}$ | <input type="text"/> |

**Practice D**

Subtract using bar numbers:

$$\begin{array}{r} \text{a} \quad 543 \\ \underline{168} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 567 \\ \underline{279} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 804 \\ \underline{388} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 737 \\ \underline{558} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 6413 \\ \underline{1878} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 8024 \\ \underline{5339} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 6543 \\ \underline{2881} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 7103 \\ \underline{3991} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{i} \quad 4545 \\ \underline{1791} - \\ \hline \end{array}$$

$$\begin{array}{r} \text{j} \quad 3204 \\ \underline{2081} - \\ \hline \end{array}$$

**Practice E**

Put the following into bar form:

$$\text{a} \quad 49 \quad \boxed{}$$

$$\text{b} \quad 58 \quad \boxed{}$$

$$\text{c} \quad 77 \quad \boxed{}$$

$$\text{d} \quad 88 \quad \boxed{}$$

$$\text{e} \quad 69 \quad \boxed{}$$

$$\text{f} \quad 36 \quad \boxed{}$$

$$\text{g} \quad 17 \quad \boxed{}$$

$$\text{h} \quad 359 \quad \boxed{}$$

$$\text{i} \quad 848 \quad \boxed{}$$

$$\text{j} \quad 7719 \quad \boxed{}$$

$$\text{k} \quad 328 \quad \boxed{}$$

$$\text{l} \quad 33339 \quad \boxed{}$$

$$\text{m} \quad 609 \quad \boxed{}$$

$$\text{n} \quad 708 \quad \boxed{}$$

**Practice F**

Remove the large digits from the following:

$$\text{a} \quad 38 \quad \boxed{}$$

$$\text{b} \quad 388 \quad \boxed{}$$

$$\text{c} \quad 298 \quad \boxed{}$$

$$\text{d} \quad 378 \quad \boxed{}$$

$$\text{e} \quad 3991 \quad \boxed{}$$

$$\text{f} \quad 3822 \quad \boxed{}$$

$$\text{g} \quad 4944 \quad \boxed{}$$

$$\text{h} \quad 390 \quad \boxed{}$$

$$\text{i} \quad 299 \quad \boxed{}$$

$$\text{j} \quad 98 \quad \boxed{}$$

$$\text{k} \quad 87 \quad \boxed{}$$

$$\text{l} \quad 888 \quad \boxed{}$$

$$\text{m} \quad 996 \quad \boxed{}$$

$$\text{n} \quad 2939 \quad \boxed{}$$

$$\text{o} \quad 1849 \quad \boxed{}$$

$$\text{p} \quad 7 \quad \boxed{}$$

**Practice G**

Which of the following sums are correct according to the alternative digit sum check?

a $213312 \times 45 = 9599040$

☐

b $234 \times 234 = 54756$

☐

c $3741 \times 45 = 186345$

☐

d $86 \times 68 = 5848$

☐

e $876 \times 333 = 290808$

☐

f $1011 \times 1101 = 1113111$

☐

Lesson-10 Homework (answers at the end of the book)



Practice A

Multiply the following by 11:

a 23×11

b 61×11

c 44×11

d 50×11



Practice B

Fill in the table below.

Number	Tick if Divisible by 11	No. of Times it Divides
242		
594		
187		
791		
693		



Practice C

Try these:

a 68×11

b 79×11

c 47×11

d 86×11

e 55×11

f 93×11



Practice D

Multiply the following by 11:

a 423×11

b 636×11

c 534×11

d 516×11

e 706×11

f 260×11

g 444×11

h 135×11

i 531×11

**Practice E**

Multiply by 11:

a 384×11

b 629×11

c 888×11

d 555×11

e 393×11

f 939×11

**Practice F**

Multiply the following:

a 73×77

b 58×52

c 81×89

d 104×106

e 42×48

f 34×36

g 93×97

h 27×23

i 297×293

j 303×307

**Practice G**

Multiply the following:

a 64×38

b 88×46

c 33×74

d 66×28

e 36×78

f 46×54

g 298×20

h 391×309

i 795×705

j 401×499

**Practice H**

Find the following:

a 89×99

b 82×99

c 19×99

d 45×99

e 778×999

f 7654×9999

g 79×999

h 124×9999

i 8989×99999

j 47×99999

**Practice I**

Multiply the following:

a 38×78

b 26×86

c 91×11

d 59×59

e 63×43

f 24×84

g 88×28

h 29×89

I 97×17

j 64×44

**Practice J**

Find:

a 49×51

b 27×33

c 57×63

d 64×66

e 85×65

f 55×95

g 33×47

h 91×99

i 44×48

j 43×47

k 74×86

l 98×102

m 62×38

n 48×72

o 73×93

p 196×204

**Practice K**

Find:

a 46×101

b 246×1001

c 321×1001

g 74×1001

h 73×101

i 29×1010101

j 277×101

k 521×101

l 616×101

d 439×1001

e 3456×10001

f 53×10101

**Practice L**

Find:

a 54×201

b 32×102

c 333×1003

d 41×10201

e 33×30201

f 17×20102

g 13×105

h 234×2001

i 234×1003

j 43×203

Lesson-11 Homework (answers at the end of the book)



Practice A

Multiply the following mentally:

a 73×3

b 63×7

c 424×4

d 777×3

e 654×3

f 717×8

g 876×7



Practice B

Multiply mentally:

a $\begin{array}{r} 22 \\ 31 \times \\ \hline \end{array}$ **b** $\begin{array}{r} 21 \\ 31 \times \\ \hline \end{array}$ **c** $\begin{array}{r} 21 \\ 22 \times \\ \hline \end{array}$ **d** $\begin{array}{r} 22 \\ 13 \times \\ \hline \end{array}$ **e** $\begin{array}{r} 61 \\ 31 \times \\ \hline \end{array}$ **f** $\begin{array}{r} 32 \\ 21 \times \\ \hline \end{array}$ **g** $\begin{array}{r} 31 \\ 31 \times \\ \hline \end{array}$ **h** $\begin{array}{r} 13 \\ 13 \times \\ \hline \end{array}$



Practice C

Multiply the following mentally:

a $\begin{array}{r} 21 \\ 47 \\ \hline \end{array}$ **b** $\begin{array}{r} 23 \\ 43 \\ \hline \end{array}$ **c** $\begin{array}{r} 24 \\ 29 \\ \hline \end{array}$ **d** $\begin{array}{r} 22 \\ 28 \\ \hline \end{array}$ **e** $\begin{array}{r} 22 \\ 53 \\ \hline \end{array}$ **f** $\begin{array}{r} 31 \\ 36 \\ \hline \end{array}$

g $\begin{array}{r} 22 \\ 56 \\ \hline \end{array}$ **h** $\begin{array}{r} 31 \\ 72 \\ \hline \end{array}$ **i** $\begin{array}{r} 44 \\ 53 \\ \hline \end{array}$ **j** $\begin{array}{r} 33 \\ 84 \\ \hline \end{array}$ **k** $\begin{array}{r} 33 \\ 69 \\ \hline \end{array}$ **l** $\begin{array}{r} 34 \\ 42 \\ \hline \end{array}$

m $\begin{array}{r} 33 \\ 34 \\ \hline \end{array}$ **n** $\begin{array}{r} 22 \\ 52 \\ \hline \end{array}$ **o** $\begin{array}{r} 34 \\ 66 \\ \hline \end{array}$ **p** $\begin{array}{r} 51 \\ 54 \\ \hline \end{array}$ **q** $\begin{array}{r} 35 \\ 67 \\ \hline \end{array}$ **r** $\begin{array}{r} 55 \\ 59 \\ \hline \end{array}$

s $\begin{array}{r} 54 \\ 64 \\ \hline \end{array}$ **t** $\begin{array}{r} 55 \\ 63 \\ \hline \end{array}$ **u** $\begin{array}{r} 44 \\ 81 \\ \hline \end{array}$ **v** $\begin{array}{r} 45 \\ 81 \\ \hline \end{array}$ **w** $\begin{array}{r} 48 \\ 72 \\ \hline \end{array}$ **x** $\begin{array}{r} 34 \\ 19 \\ \hline \end{array}$

**Practice D**

Multiply using the moving multiplier method:

$$\begin{array}{r} \text{a} \quad 321 \\ \underline{21} \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 321 \\ \underline{23} \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 421 \\ \underline{22} \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 321 \\ \underline{41} \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 1212 \\ \underline{21} \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 1331 \\ \underline{22} \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 1313 \\ \underline{31} \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 11221 \\ \underline{22} \\ \hline \end{array}$$

**Practice E**

Multiply, treating the numbers as 2-figure numbers:

$$\begin{array}{r} \text{a} \quad 112 \\ \underline{203} \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 123 \\ \underline{131} \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 123 \\ \underline{122} \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 112 \\ \underline{123} \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 421 \\ \underline{22} \\ \hline \end{array}$$

**Practice F**

Multiply using pairs of digits:

$$\begin{array}{r} \text{a} \quad 211 \\ \underline{304} \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 307 \\ \underline{407} \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 203 \\ \underline{432} \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 211 \\ \underline{311} \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 504 \\ \underline{504} \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 501 \\ \underline{501} \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 712 \\ \underline{112} \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 703 \\ \underline{211} \\ \hline \end{array}$$

**Practice G**

Multiply:

a $(x + 5)(x + 6)$

b $(x + 2)(x + 9)$

c $(x + 10)(x + 1)$

d $(x + 20)(x + 20)$

e $(x + 1)(x + 1)$

f $(x + 22)(x + 28)$

g $(y + 52)(y + 4)$

h $(x + 4)^2$

**Practice H**

Multiply the following:

a $(2x + 5)(x + 4)$

b $(x + 8)(3x + 11)$

c $(2x + 1)(2x + 20)$

d $(2x + 3)(3x + 7)$

e $(4x + 3)(x + 6)$

f $(3x + 17)(3x + 4)$

g $(6x + 1)(5x + 1)$

h $(2x + 5)(4x + 5)$

i $(3x + 3)(4x + 5)$

j $(2x + 3y)(2x + 5y)$

k $(5x + 2y)(2x + 5y)$

l $(4x + 3y)(7x + y)$

**Practice I**

Multiply:

a $(x + 3)(x - 5)$

b $(x + 7)(x - 2)$

c $(x - 4)(x + 5)$

d $(x - 5)(x - 4)$

e $(x - 3)(x - 3)$

f $(2x - 3)(x + 4)$

g $(2x - 3)(3x + 6)$

h $(3x - 1)(x + 7)$

**Practice J**

Multiply (there are no carries in the first few sums):

$$\begin{array}{r} \text{a} \quad 1 \ 2 \ 1 \\ 1 \ 3 \ 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b} \quad 1 \ 3 \ 1 \\ 2 \ 1 \ 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c} \quad 1 \ 2 \ 1 \\ 2 \ 2 \ 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d} \quad 3 \ 1 \ 3 \\ 1 \ 2 \ 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{e} \quad 2 \ 1 \ 2 \\ 3 \ 1 \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{f} \quad 1 \ 2 \ 3 \\ 3 \ 2 \ 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{g} \quad 2 \ 1 \ 2 \\ 4 \ 1 \ 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{h} \quad 2 \ 2 \ 2 \\ 3 \ 3 \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{i} \quad 2 \ 4 \ 6 \\ 3 \ 3 \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{j} \quad 1 \ 0 \ 5 \\ 5 \ 0 \ 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{k} \quad 1 \ 0 \ 6 \\ 2 \ 2 \ 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{l} \quad 5 \ 1 \ 5 \\ 5 \ 5 \ 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{m} \quad 4 \ 4 \ 4 \\ 7 \ 7 \ 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{n} \quad 3 \ 2 \ 1 \\ 3 \ 2 \ 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{o} \quad 1 \ 2 \ 3 \\ 2 \ 7 \ 1 \\ \hline \end{array}$$

$$\begin{array}{r} \text{p} \quad 1 \ 2 \ 4 \\ 3 \ 5 \ 6 \\ \hline \end{array}$$

**Practice K**

Multiply the following from right to left:

$$\text{a} \quad 31 \times 41 \quad \boxed{}$$

$$\text{b} \quad 23 \times 22 \quad \boxed{}$$

$$\text{c} \quad 61 \times 42 \quad \boxed{}$$

$$\text{d} \quad 52 \times 53 \quad \boxed{}$$

$$\text{e} \quad 54 \times 45 \quad \boxed{}$$

$$\text{f} \quad 78 \times 33 \quad \boxed{}$$

$$\text{g} \quad 17 \times 71 \quad \boxed{}$$

$$\text{h} \quad 88 \times 88 \quad \boxed{}$$

$$\text{i} \quad 231 \times 32 \quad \boxed{}$$

$$\text{j} \quad 416 \times 41 \quad \boxed{}$$

$$\text{k} \quad 182 \times 23 \quad \boxed{}$$

$$\text{l} \quad 473 \times 37 \quad \boxed{}$$

$$\text{m} \quad 5432 \times 32 \quad \boxed{}$$

$$\text{n} \quad 6014 \times 24 \quad \boxed{}$$

$$\text{o} \quad 3333 \times 22 \quad \boxed{}$$

$$\text{p} \quad 444 \times 333 \quad \boxed{}$$

$$\text{q} \quad 543 \times 345 \quad \boxed{}$$

$$\text{r} \quad 707 \times 333 \quad \boxed{}$$

Lesson-12 Homework (answers at the end of the book)



Practice A

Square the following numbers:

a 55

b 15

c $8\frac{1}{2}$

d 95

e 105

f 195

g 155

h 245

i 35

j $20\frac{1}{2}$

k 8005

l 350

What number, when squared, gives:

m 2025

n $30\frac{1}{4}$

o 902500



Practice B

Square the following using the method ($53^2=25+3,03^2$):

a 54^2

b 56^2

c 57^2

d 58^2

e 61^2

f 62^2

g 51^2



Practice C

Square the following using the method ($47^2=25-3,03^2$):

a 46

b 44

c 42

d 39

e 43

f 49

g 41

h 37



Practice D

Find the Duplex of the following numbers:

a 5

b 23

c 55

d 2

e 14

f 77

g 26

h 90



Practice E

Square the following:

a 31

b 14

c 41

d 26

e 23

f 32

g 21

h 66

i 81

j 91

k 56

l 63

m 77

n 33



Practice F

Square the following, grouping the first pair of figures together:

a 121

b 104

c 203

d 113

e 116

f 108

g 111



Practice G

Square the following, grouping the last 2 figures together:

a 211

b 412

c 304

d 902

e 407

f 222

g 711

**Practice H**

Square the following:

a $(3x + 4)$

b $(5y + 2)$

c $(2x - 1)$

d $(x + 7)$

e $(x - 5)$

f $(x + 2y)$

g $(3x + 5y)$

h $(2a + b)$

i $(2x - 3y)$

j $(x + y)$

k $(x - y)$

l $(x - 8y)$

**Practice I**

Which are not square numbers? (judge by the last digit and digit sum)

a 4539

b 5776

c 6889

d 5271

e 104976

f 65436

g 27478

h 75379

**Practice J**

Find the square root of:

a 2116

b 5329

c 1444

d 6724

e 3481

f 4489

g 8836

h 361

i 784

j 3721

k 2209

l 4225

m 9604

n 5929



Practice K

Find the duplex of the following numbers:

a 3

b 34

c 47

d 1

e 88

f 234

g 282

h 111

i 304

j 270

k 1234

l 3032

m 7130

n 20121

o 32104



Practice L

Square the following numbers:

a 212

b 131

c 204

d 513

e 263

f 264

g 313

h 217

i 3103

j 2132

k 1414

l 4144

Lesson-13 Homework (answers at the end of the book)



Practice A

Solve the following equations, check each answer to make sure it is right:

a $x + 3 = 10$	<input type="text"/>	b $x - 3 = 10$	<input type="text"/>	c $20 + x = 100$	<input type="text"/>
d $x - 19 = 44$	<input type="text"/>	e $x + 88 = 100$	<input type="text"/>	f $x - 3\frac{1}{2} = 4\frac{1}{2}$	<input type="text"/>
g $x + 123 = 1000$	<input type="text"/>	h $x + 1.3 = 5$	<input type="text"/>	i $5x = 35$	<input type="text"/>
j $2x = 26$	<input type="text"/>	k $3x = 960$	<input type="text"/>	l $2x = 76$	<input type="text"/>
m $40x = 120$	<input type="text"/>	n $2\frac{1}{2}x = 10$	<input type="text"/>	o $\frac{x}{7} = 7$	<input type="text"/>
p $\frac{x}{4} = 5$	<input type="text"/>				



Practice B

Solve the following equations mentally. Check your answers.

a $3x + 7 = 19$	<input type="text"/>	b $2x + 11 = 21$	<input type="text"/>	c $4x - 5 = 7$	<input type="text"/>
d $3x - 8 = 10$	<input type="text"/>	e $\frac{x}{3} + 4 = 6$	<input type="text"/>	f $\frac{x}{2} - 8 = 2$	<input type="text"/>
g $\frac{2x}{3} = 8$	<input type="text"/>	h $\frac{x+4}{7} = 5$	<input type="text"/>	i $\frac{x-21}{10} = 1$	<input type="text"/>
j $2x + 1 = 3.8$	<input type="text"/>				



Practice C

Solve the following mentally:

a $\frac{2x}{3} + 4 = 8$	<input type="text"/>	b $\frac{3x}{5} - 4 = 5$	<input type="text"/>	c $\frac{7x}{2} - 10 = 11$	<input type="text"/>
d $\frac{3x}{8} + 17 = 20$	<input type="text"/>	e $\frac{2x+1}{3} = 4$	<input type="text"/>	f $\frac{2x-3}{5} = 3$	<input type="text"/>
g $\frac{5x+2}{3} = 9$	<input type="text"/>	h $\frac{6x-1}{7} = 5$	<input type="text"/>	i $3(5x-2) = 54$	<input type="text"/>
j $8(x+3) = 64$	<input type="text"/>	k $3(7x-3) = 33$	<input type="text"/>	l $2(4x+3) = 102$	<input type="text"/>

Lesson-14 Homework (answers at the end of the book)



Practice A

Combine the following, cancelling down your answer or leaving as mixed numbers where necessary:

a $\frac{2}{5} + \frac{1}{4}$

b $\frac{3}{8} + \frac{2}{5}$

c $\frac{1}{2} + \frac{2}{5}$

d $1\frac{1}{3} + 2\frac{1}{4}$

e $3\frac{3}{4} + 2\frac{1}{3}$

f $\frac{3}{5} - \frac{2}{7}$

g $\frac{8}{9} - \frac{1}{2}$

h $\frac{3}{4} - \frac{1}{20}$

i $5\frac{3}{5} - 2\frac{1}{2}$

j $10\frac{2}{3} - 1\frac{4}{5}$

k $\frac{5}{12} + \frac{7}{18}$



Practice B

Use prior simplification to add or subtract the following:

a $\frac{1}{3} + \frac{4}{9}$

b $\frac{3}{8} + \frac{1}{6}$

c $\frac{3}{5} + \frac{3}{10}$

d $\frac{5}{6} - \frac{3}{4}$

e $\frac{5}{6} + \frac{3}{4}$

f $\frac{5}{18} - \frac{1}{27}$

g $3\frac{3}{4} - 1\frac{1}{8}$

h $\frac{7}{36} - \frac{11}{60}$



Practice C

Put the following fractions in ascending order:

a $\frac{1}{3}, \frac{2}{5}$

b $\frac{3}{4}, \frac{8}{11}$

c $\frac{2}{3}, \frac{7}{12}, \frac{3}{4}$

d $\frac{5}{6}, \frac{5}{8}, \frac{6}{7}$

Lesson-15 Homework (answers at the end of the book)



Practice A

Divide by 9:

a $9 \overline{) 51}$

b $9 \overline{) 34}$

c $9 \overline{) 17}$

d $9 \overline{) 44}$

e $9 \overline{) 60}$

f $9 \overline{) 71}$

g $9 \overline{) 26}$

h $9 \overline{) 46}$



Practice B

Divide the following by 9:

a $9 \overline{) 57}$

b $9 \overline{) 77}$

c $9 \overline{) 58}$

d $9 \overline{) 49}$

e $9 \overline{) 64}$

f $9 \overline{) 88}$

g $9 \overline{) 96}$



Practice C

Divide the following:

a $9 \overline{) 2123}$

b $9 \overline{) 312}$

c $9 \overline{) 11202}$

d $9 \overline{) 431}$

e $9 \overline{) 5030}$

f $9 \overline{) 707}$

g $9 \overline{) 203010}$

h $9 \overline{) 164}$

i $9 \overline{) 31032}$

**Practice D**

Divide the following:

a $9 \overline{) 6153}$

b $9 \overline{) 3282}$

c $9 \overline{) 555}$

d $9 \overline{) 8252}$

e $9 \overline{) 661}$

f $9 \overline{) 4741}$

g $9 \overline{) 12345}$

h $9 \overline{) 4747}$

i $9 \overline{) 20082}$

**Practice E**

Divide the following by 9:

a 6153

b 3272

c 555

d 8252

e 661

f 4741

g 5747

h 2938

i 12345

j 75057

k 443322

l 1918161

**Practice F**

Try some of these:

a $8 \overline{) 22}$

b $8 \overline{) 15}$

c $8 \overline{) 25}$

d $8 \overline{) 51}$

**Practice G**

Try the following.

a $8 \overline{) 111}$

b $8 \overline{) 151}$

c $8 \overline{) 100}$

d $8 \overline{) 214}$

e $8 \overline{) 1121}$

**Practice H**

Try these:

a $7 \overline{) 13}$

b $7 \overline{) 31}$

c $7 \overline{) 23}$

d $7 \overline{) 40}$

e $7 \overline{) 103}$

f $7 \overline{) 111}$

g $7 \overline{) 100}$

**Practice I**

Divide by 99:

a $121416 \overline{) 121416}$

b $213141 \overline{) 213141}$

c $332211 \overline{) 332211}$

d $282828 \overline{) 282828}$

e $363432 \overline{) 363432}$

f $11221122 \overline{) 11221122}$

g $3456 \overline{) 3456}$

**Practice J**

Divide by 98:

a $112203 \overline{) 112203}$

b $102010 \overline{) 102010}$

c $131313 \overline{) 131313}$

d $200202 \overline{) 200202}$

e $2131 \overline{) 2131}$

**Practice K**

Divide the following (do as many mentally as you can):

a $88 \overline{) 121}$

b $76 \overline{) 211}$

c $83 \overline{) 132}$

d $98 \overline{) 333}$

e $887 \overline{) 1223}$

f $867 \overline{) 1513}$

g $779 \overline{) 2222}$

h $765 \overline{) 3001}$

i $8907 \overline{) 13103}$

j $7999 \overline{) 12321}$

k $7789 \overline{) 21012}$

l $8888 \overline{) 44344}$

**Practice L**

Divide the following:

a $89 \overline{) 1021}$

b $88 \overline{) 1122}$

c $79 \overline{) 1001}$

d $88 \overline{) 2111}$

e $97 \overline{) 1111}$

f $888 \overline{) 10011}$

g $887 \overline{) 11243}$

h $899 \overline{) 21212}$

I $988 \overline{) 30125}$

j $8899 \overline{) 201020}$

**Practice M**

Divide the following:

a $123 \overline{) 1377}$

b $131 \overline{) 1481}$

c $121 \overline{) 256}$

d $132 \overline{) 1366}$

e $1212 \overline{) 13545}$

f $161 \overline{) 1781}$

g $1003 \overline{) 321987}$

h $111 \overline{) 79999}$

**Practice N**

Divide the following:

a $112 \overline{) 1234}$

b $121 \overline{) 3993}$

c $103 \overline{) 432}$

d $1012 \overline{) 21312}$

e $122 \overline{) 3333}$

f $123 \overline{) 2584}$

g $113 \overline{) 13696}$

h $1212 \overline{) 137987}$

i $111 \overline{) 79999}$

j $121 \overline{) 2652}$

k $1231 \overline{) 33033}$

Lesson-16 Homework (answers at the end of the book)



Practice A

Divide the following:

a $103 \div 43$

b $234 \div 54$

c $74 \div 23$

d $504 \div 72$

e $444 \div 63$

f $543 \div 82$

g $567 \div 93$



Practice B

Copy each of the following sums and replace the question mark with the correct number:

a $\begin{array}{r} 5 \overline{) 21} \\ \underline{3 \text{ rem } ?} \end{array}$

b $\begin{array}{r} 7 \overline{) 51} \\ \underline{6 \text{ rem } ?} \end{array}$

c $\begin{array}{r} 4 \overline{) 30} \\ \underline{6 \text{ rem } ?} \end{array}$

d $\begin{array}{r} 3 \overline{) 22} \\ \underline{? \text{ rem } 4} \end{array}$

e $\begin{array}{r} 5 \overline{) 42} \\ \underline{6 \text{ rem } ?} \end{array}$

f $\begin{array}{r} 6 \overline{) 39} \\ \underline{4 \text{ rem } ?} \end{array}$

g $\begin{array}{r} 5 \overline{) 24} \\ \underline{5 \text{ rem } ?} \end{array}$

h $\begin{array}{r} 7 \overline{) 26} \\ \underline{4 \text{ rem } ?} \end{array}$



Practice C

Divide the following:

a $97 \div 28$

b $184 \div 47$

c $210 \div 53$

d $373 \div 63$

e $353 \div 52$

f $333 \div 44$

g $267 \div 37$

h $357 \div 59$

i $353 \div 59$

**Practice D**

Divide the following (the remainder is zero for the first four sums, so you will know if it is correct):

a $19902 \div 62$

b $44749 \div 73$

c $1936 \div 88$

d $4032 \div 72$

e $4154 \div 92$

f $23824 \div 51$

g $92054 \div 63$

h $142857 \div 61$

i $12233 \div 53$

j $9018 \div 71$

k $8910 \div 72$

l $23658 \div 112$

m $40000000 \div 61$

n $14018 \div 64$

o $4712 \div 45$

p $22222 \div 76$

q $651258 \div 82$

r $301291 \div 56$

s $511717 \div 73$

t $360293 \div 46$

**Practice E**

Divide the following, giving answer and remainder:

a $373 \div 58$

b $357 \div 48$

c $300 \div 59$

d $321 \div 47$

e $505 \div 78$

f $543 \div 68$

**Practice F**

Find to 2 decimal places:

a $108 \div 31$

b $4050 \div 73$

c $9876 \div 94$

d $25.52 \div 38$

e $78 \div 49$

f $6.7 \div 88$

g $19 \div 62$

h $62 \div 19$

Answers to Workbook Practices:

Lesson-1 Homework Answers:



Practice A

a 10 b 20 c 30 d 20 e 30
f 40 g 60 h 50 i 70 j 90



Practice B

a 60 b 70 c 70 d 70
e 80 f 90 g 60 h 70



Practice C

a 40, 3 b 50, 1 c 70, 2



Practice D

a 54 b 61 c 43 d 34
e 85 f 45 g 64 h 73



Practice E

a 84 b 83 c 72 d 65
e 81 f 64 g 73 h 84



Practice F

2+2+6
1+1+8 2+3+5
1+3+6 2+4+4
1+4+5 3+3+4



Practice G

a 13 b 18 c 16
d 21 e 19 f 19
g 21 h 20 i 17
j 19 k 15 l 15



Practice H

<u>a</u>	42	b	42	c	74 _u
<u>d</u>	78	e	70	f	80 _u
<u>g</u>	95	h	68	<u>i</u>	25 _u
<u>j</u>	65	k	81	l	59 _u
<u>m</u>	58	n	80	o	98 _u



Practice I

<u>a</u>	217	b	156	c	219	d	7654	e	2336 _u
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_u



Practice J

<u>a</u>	142	b	152	c	246	d	6872	e	1905 _u
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_u



Practice K

<u>a</u>	64	b	73	c	54	d	82 _u
<u>e</u>	91	f	35	g	76	h	47 _u



Practice L

<u>a</u>	63	b	84	c	85	d	92 _u
<u>e</u>	86	f	85	g	86	h	57 _u



Practice M

<u>a</u>	62	b	71	c	83	d	72 _u
<u>e</u>	91	f	73	g	38	h	57 _u



Practice N

<u>a</u>	83	b	71	c	83	d	61 _u
<u>e</u>	61	f	82	g	37	h	53 _u



Practice O

<u>a</u>	25	b	37	c	39	d	46 _u
<u>e</u>	24	f	24	g	28	h	23 _u
<u>i</u>	47	j	24	k	28	l	3

Lesson-2 Homework Answers:



Practice A

<u>a</u>	48	b	82	c	28	d	90	e	30	f	50
<u>g</u>	72	h	54	<u>i</u>	36	j	58	k	68	l	96



Practice B

<u>a</u>	116	b	122	c	146	d	130	e	132
<u>f</u>	176	g	152	h	182	<u>i</u>	760		



Practice C

<u>a</u>	724	b	906	c	1224	d	638	e	1414
<u>f</u>	1220	g	944	h	1252	<u>i</u>	2468	j	1326



Practice D

<u>a</u>	212	b	112	c	132	d	244
<u>e</u>	72	f	324	g	64	h	128
<u>i</u>	176	j	360				



Practice E

<u>a</u>	34	b	92	c	78	d	9
<u>e</u>	44	f	38	g	122	h	13



Practice F

<u>a</u>	5	b	3	c	20	d	7	e	25	f	45
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Practice G

<u>a</u>	18	b	14	c	26	d	9	e	17
<u>f</u>	43	g	28	h	16	<u>i</u>	31	j	49



Practice H

<u>a</u>	82	b	410	c	108	d	76	e	47	f	163
<u>g</u>	117	h	208	<u>i</u>	190	j	128	k	228	l	28½



Practice I

<u>a</u>	14	b	17	c	21	d	45	e	61 _⌣
<u>f</u>	15	g	55	h	31	<u>i</u>	27	j	5½ _⌣



Practice J

<u>a</u>	112	b	108	c	98	d	108 _⌣
<u>e</u>	56	f	96	g	126	h	126 _⌣



Practice K

<u>a</u>	288	b	224	c	216	d	192 _⌣
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Practice L

<u>a</u>	340	b	210	c	180	d	2130 _⌣
<u>e</u>	43	f	27	g	23.4	h	3.3 _⌣



Practice M

<u>a</u>	2300	b	43200	c	1800	d	2125 _⌣
<u>e</u>	4340	f	210	g	1728	h	70 _⌣



Practice N

<u>a</u>	13	b	27	c	75	d	94	e	101 _⌣
<u>f</u>	801	g	247	h	1414	<u>i</u>	177	j	9.8 _⌣
<u>k</u>	10.4	l	4.44 _⌣						



Practice O

<u>a</u>	13	b	25	c	66	d	0.176	e	0.88	f	1.54 _⌣
<u>g</u>	9	h	22	<u>i</u>	1.76	j	5.48	k	0.24 _⌣		

Lesson-3 Homework Answers:



Practice A

4, 7, 9, 8, 6, 7, 9



Practice B

2, 2, 3, 2, 6, 3, 3, 9



Practice C

3, 3, 3, 3, 5, 7, 3



Practice D

6, 4, 5, 1, 3, 9 or 0, 3

6, 8, 5, 4, 3, 6, 9 or 0



Practice E

14/41, 33, 42, 25/52, 34/43, 15/51/33, 23/32, 45/54, 12/21, 17, 10/19/28/37, 28



Practice F

23, 35, 25, 29/92, 28, 93, 40, 33, 26, 32, 27, 57/75/39/93



Practice G

a 143	b 86	c 152	d 575	e 963 ↵
3+5=8	3+2=5	4+4=8	7+1=8	4+5=9 ↵

f 444 ↵	g 5807	h 665	i 13332 ↵
2+1=3	1+1=2	6+2=8	2+1=3 ↵



Practice H

a 82	b 83	c 94	d 76	e 789	f 465 ↵
8+2=1	2+9=2	8+5=4	7+6=4	6+9=6	8+7=6 ↵

g 165 ↵	h 114	i 632	j 860	k 4241 ↵
6+6=3	3+3=6	6+5=2	4+1=5	7+4=2 ↵



Practice I

a 704 (2)	b 96 (6)	c 292 (4)	d 4302 (9) ↵
e 1170 (9)	f 1066 (4)	g 9345 (3)	h 999999 (9) ↵

Lesson-4 Homework Answers:



Practice A

a	123	b	121	c	112	d	118
e	88	f	83	g	165	h	137



Practice B

a	819	b	1737	c	1221	d	876
e	1282	f	5252	g	18340	h	9837



Practice C

a	81	b	456	c	156	d	504	e	702	f	249
g	2568	h	768	i	2223	j	2007				
k	7413	l	34524	m	43456	n	28679				



Practice D

a	270	b	360	c	690
d	2870	e	990	f	5580
g	810	h	880	i	1350
j	6690	k	4620	l	1530
m	72	n	84	o	£144



Practice E

a	15	b	47	c	36	d	29
e	21	f	28	g	28	h	44



Practice F

a	8-2=6	b	3-1=2	c	6-6=9	d	4-2=2
e	1-7=3	f	2-1=1	g	9-8=1	h	1-2=8



Practice G

a	261	b	35	c	468	d	327
e	13	f	3175	g	5346	h	4169
i	2975	j	23029	k	7137	l	5939406

Lesson-5 Homework Answers:



Practice A

a 556	b 325	c 7532	d 81724
e 1002	f 112	g 8979696	h 3



Practice B

a 6430	b 80	c 8765440	d 6700
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Practice C

a 519	b 691	c 108	d 24
e 22	f 67	g 1123	h 124
i 192	j 290	k 3700	



Practice D

a 914	b 907	c 965	d 9322
e 9647	f 9823	g 9938	h 9915
i 992	j 9997		



Practice E

a 512	b 317	c 827	d 5238
e 1021	f 45666	g 61988	



Practice F

a 4496	b 3766	c 168
d 556	e 468	f 36,669



Practice G

a 4926	b 7942	c 5906	d 3981
e 79655	f 29724	g 49956	h 692
i 29946	j 19778	k 29330	l 69901



Practice H

a £7.66	b £3.49	c £4.18	d £0.93
e £12.56	f £7.22	g £16.82	h £11.60



Practice I

<u>a</u> 66	b 526	c 4458	d 728	↵
<u>e</u> 967	f 4916	g 642	h 8814	↵
<u>i</u> 5679	j 106	k 9642	l 319	↵
<u>m</u> 6912	n 883	o 29937	p 89101	↵

Lesson-6 Homework Answers:



Practice A

<u>a</u> 81/73	b 35/35	c 92/84	d 101/44	↵
e 13/83	f 76/7	g 6/90	h 15/95	↵
<u>i</u> 121/3	j 81/90	k 61/78	l 14/62/7	↵



Practice B

<u>a</u> 19/24	b 26/16	c 55/44	d 18/12	↵
<u>e</u> 49/53	f 7/13	g 19/2	h 37/28	↵



Practice C

<u>a</u> 12/96	b 90/6	c 12/52	d 12/99	e 18/48	↵
<u>f</u> 32/56	g 25/75	h 27/57	<u>i</u> 56/64	j 54/56	↵
<u>k</u> 9/57/9	l 39/42/45				↵



Practice D

<u>a</u> 3/28	b 36/3	c 6/33	d 2/11	↵
<u>e</u> 5/12	f 7/11	g 7/13	h 13/18	↵
<u>i</u> 704	j 203	k 803	l 422	↵
<u>m</u> 409	n 1907	o 3002		↵
p 30609	q 193626	r 5021	s 20709	↵
<u>t</u> 5005	u 30104			↵

Lesson-7 Homework Answers:



Practice A

<u>a</u> 63	b 64	c 54	d 49	e 72
<u>f</u> 48	g 81	h 36	<u>i</u> 35	j 30



Practice B

<u>a</u> 143	b 144	c 165	d 169	e 121
<u>f</u> 182	g 192	h 196	<u>i</u> 256	j 234



Practice D

<u>a</u> 88/36	b 86/33	c 86/13	d 85/26	e 82/65
<u>f</u> 90/25	g 75/84	h 94/08	<u>i</u> 91/08	j 9801
<u>k</u> 7744	l 5432	m 4312	n 6111	



Practice E

<u>a</u> 84/39	b 77/42	c 91/14	d 89/30
<u>e</u> 92/16	f 84/48	g 87/22	h 89/28
<u>i</u> 92/07	j 94/09	k 64/32	l 71/25
<u>m</u> 93			



Practice F

<u>a</u> 11128	b 11556	c 13699	d 10608
<u>e</u> 12546	f 17271	g 11433	h 13125
<u>i</u> 10609	j 12321	k 16524	l 11865
<u>m</u> 105			



Practice G

<u>a</u> 665/666	b 765/696	c 987/022	d 882/345
<u>e</u> 881/234	f 466/066	g 881/199	h 8884/4448
<u>i</u> 6996/9003	j 90903/54546	k 78986/63033	l 9874/0248



Practice H

<u>a</u> 1225/666	b 1058/357	c 1125/246
<u>d</u> 1013/042	e 15115/5333	



Practice I

<u>a</u>	21836	b	22048	c	17836	d	17298 _٤
<u>e</u>	4278	f	5824	g	36108	h	5304 _٤
<u>i</u>	11124	j	4356	k	8832	l	48336 _٤



Practice J

<u>a</u>	172/2	b	422/28	c	972/63	d	422/24	_٤
<u>e</u>	8199/18	f	225/6	g	368/48	h	394/02	_٤
<u>i</u>	366/66	j	436/77	k	957/84	l	25555/324	_٤
<u>m</u>	3843	n	552	o	6083			_٤



Practice K

<u>a</u>	963/21	b	909/88	c	9788/24	d	9876/048 _٤
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Practice L

<u>a</u>	1045/45	b	1072/72	c	10234/68	d	1166/88 _٤
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Practice M

<u>a</u>	8836	b	10609	c	11664	d	1024144	_٤
<u>e</u>	9604	f	7744	g	8281	h	100120036	_٤
<u>i</u>	976144	j	994009	k	99980001	l	99780121	_٤
<u>m</u>	12321	n	169	o	974169 _٤			



Practice N

<u>a</u>	424/36	b	449/44	c	912/04	d	3612/01	_٤
<u>e</u>	44/1	f	518/4	g	16096/144	h	2611/21 _٤	



Practice O

<u>a</u>	1962	b	8428	c	8924 _٤			
<u>d</u>	292	e	154	f	384 _٤			
<u>g</u>	795606	h	88927707	<u>i</u>	11236 _٤			
<u>j</u>	992016	k	11227	l	12792 _٤			
<u>m</u>	42427	n	37036	o	8439 _٤			
<u>p</u>	1056	q	4042068	r	979706 _٤			
<u>s</u>	104346 _٤							

Lesson-8 Homework Answers:



Practice A

a	1560 r1 ($3 \times 3 + 1 \rightarrow 1$)	b	228 r1 ($3 \times 4 + 1 \rightarrow 4$)	c	1406 r2 ($2 \times 5 + 2 \rightarrow 3$)
d	53 r3 ($8 \times 6 + 3 \rightarrow 6$)	e	31 r5 ($4 \times 7 + 5 \rightarrow 6$)	f	1135 r0 ($1 \times 8 + 0 \rightarrow 8$)
g	111 r2 ($3 \times 9 + 2 \rightarrow 2$)	h	17283 r1 ($3 \times 2 + 1 \rightarrow 7$)		



Practice B

a	60,000	b	5000 or 6000	c	2,000,000
d	2000	e	2,000,000	f	10,000,000
g	2,000,000				



Practice C

a	2	b	7	c	4
d	6	e	4	f	3



Practice D

a	14, no	b	16, yes	c	20, yes
d	17, no	e	8, yes	f	22, no



Practice E

a	Yes	b	Yes	c	Yes
d	Yes	e	Yes	f	No



Practice F

a	5	b	6	c	5	d	1
e	8	f	0	g	1	h	-9 or 2
i	-3 or 8	j	-1 or 10	k	0	l	-2 or 9



Practice G

a	$0 \times 1 = 0$: correct	b	$3 \times 3 = 9$: correct	c	$1 \times 1 = 5$: incorrect
d	$-2 \times 2 = 7$: correct	e	$7 \times 3 = 1$: incorrect	f	$-1 \times 1 = -1$: correct

Lesson-9 Homework Answers:



Practice A

<u>a</u> 59	b 78	c 27	d 43	e 458	↵
<u>f</u> 9989	g 8	h 109	<u>i</u> 117	j 260	↵



Practice B

<u>a</u> 594	b 383	c 485	d 297	↵
<u>e</u> 4483	f 33283	g 4932	h 5867	↵
<u>i</u> 191	j 4071	k 7149	l 71	↵



Practice C

<u>a</u> 588	b 667	c 489	d 896	e 7159	f 33278	↵
<u>g</u> 5794	h 46922	<u>i</u> 327844	j 6667	k 4896	l 43888	↵
<u>m</u> 73969	n 68971	o 56678	p 29098	q 28939	r 28078	↵



Practice D

<u>a</u> 375	b 288	c 416	d 179	e 4535	↵
<u>f</u> 2685	g 3662	h 3112	<u>i</u> 2754	j 1123	↵



Practice E

<u>a</u> $5\bar{1}$	b $6\bar{2}$	c $8\bar{3}$	d $9\bar{2}$	↵
<u>e</u> $7\bar{1}$	f $4\bar{4}$	g $2\bar{3}$	h $36\bar{1}$	↵
<u>i</u> $85\bar{2}$	j $772\bar{1}$	k $33\bar{2}$	l $3334\bar{1}$	↵
<u>m</u> $61\bar{1}$	n $71\bar{2}$			↵



Practice F

<u>a</u> $4\bar{2}$	b $41\bar{2}$	c $30\bar{2}$	d $4\bar{2}\bar{2}$	↵
<u>e</u> $40\bar{1}\bar{1}$	f $4\bar{2}\bar{2}\bar{2}$	g $51\bar{4}\bar{4}$	h $4\bar{1}\bar{0}$	↵
<u>i</u> $30\bar{1}$ or $30\bar{1}$	j $10\bar{2}$	k $1\bar{1}\bar{3}$	l $11\bar{1}\bar{2}$	↵
<u>m</u> $100\bar{4}$	n $31\bar{4}\bar{1}$	o $2\bar{2}\bar{5}\bar{1}$ or $2\bar{1}\bar{5}\bar{1}$	p $1\bar{3}$	↵

Lesson-10 Homework Answers:



Practice A

a 253 b 671 c 484 d 550[↵]



Practice B

Answers: 22, 54, 17, -, 63



Practice C

a 748 b 869 c 517[↵]
d 946 e 605 f 1023[↵]



Practice D

a 4653 b 6996 c 5874[↵]
d 5676 e 7766 f 2860[↵]
g 4884 h 1485 i 5841[↵]



Practice E

a 4224 b 6919 c 9768[↵]
d 6105 e 4323 f 10329[↵]



Practice F

a 5621 b 3016 c 7209 d 11024[↵]
e 2016 f 1224 g 9021 h 621[↵]
i 87021 j 93021[↵]



Practice G

a 2432 b 4048 c 2442 d 1848[↵]
e 2808 f 2484 g 60196 h 120819[↵]
i 560475 j 200099[↵]



Practice H

a 8811 b 8118 c 1881 d 4455[↵]
e 777222 f 76532346 g 78921 h 1239876[↵]
i 898891011 j 4699953[↵]



Practice I

<u>a</u>	2964	b	2236	c	1001	d	3481 ^u
<u>e</u>	2709	f	2016	g	2464	h	2581 ^u
<u>i</u>	1649	j	2816 ^u				
<u>k</u>	1302	l	3818	m	6603	n	2816 ^u



Practice J

<u>a</u>	2499	b	891	c	3591	d	4224	^u
<u>e</u>	5525	f	5225	g	1551	h	9009	^u
<u>i</u>	2112	j	2021	k	6364	l	9996	^u
<u>m</u>	2356	n	3456	o	6789	p	39984 ^u	



Practice K

<u>a</u>	4646	b	246246	c	321321	^u
<u>d</u>	439439	e	34563456	f	535353 ^u	
<u>g</u>	74074	h	7373	<u>i</u>	29292929	^u
<u>j</u>	27977	k	52621	l	62216 ^u	



Practice L

<u>a</u>	10854	b	3264	c	333999	d	418241	e	996633	^u
<u>f</u>	341734	g	1365	h	468234	<u>i</u>	234702	j	8729 ^u	



Practice M

<u>a</u>	812	b	1505	c	6231	d	5418	^u
<u>e</u>	3311	f	2002	g	2448	h	1197	^u
<u>i</u>	3654	j	598	k	4824	l	1624	^u
<u>m</u>	6045	n	3996	o	2496	p	2142 ^u	

Lesson-11 Homework Answers:



Practice A

<u>a</u> 219	b 441	c 1 696	d 2 331
<u>e</u> 1 962	f 5 736	g 6 132	



Practice B

<u>a</u> 682	b 651	c 462	d 286
<u>e</u> 1 891	f 672	g 961	h 169



Practice C

<u>a</u> 987	b 989	c 696	d 616	e 1 166	f 1 116
<u>g</u> 1 232	h 2 232	<u>i</u> 2 332	j 2 772	k 2 277	l 1 428
<u>m</u> 1 122	n 1 144	o 2 244	p 2 754	q 2 345	r 3 245
<u>s</u> 3 456	t 3 465	u 3 564	v 3 645	w 3 456	x 646



Practice D

<u>a</u> 6 741	b 7 383	c 9 262	d 13 161
<u>e</u> 25 452	f 29 282	g 40 703	h 246 862



Practice E

<u>a</u> 22 736	b 16 113	c 15 006
<u>d</u> 13 776	e 9 262	



Practice F

<u>a</u> 64 144	b 124 949	c 87 696	d 65 621
<u>e</u> 254 016	f 251 001	g 79 744	h 148 333



Practice G

<u>a</u> $x^2+11x+30$	b $x^2+11x+18$	c $x^2+11x+10$	d $x^2+40x+400$
<u>e</u> x^2+2x+1	f $x^2+50x+616$	g $y^2+56y+208$	h $x^2+8x+16$



Practice H

<u>a</u> $2x^2+13x+20$	b $3x^2+35x+88$	c $4x^2+42x+20$	d $6x^2+23x+21$
<u>e</u> $4x^2+27x+18$	f $9x^2+63x+68$	g $30x^2+11x+1$	h $8x^2+30x+25$
<u>i</u> $12x^2+27x+15$	j $4x^2+16xy+15y^2$	k $10x^2+29xy+10y^2$	l $28x^2+25xy+3y^2$



Practice I

<u>a</u>	$x^2-2x-15$	<u>b</u>	$x^2+5x-14$	<u>c</u>	x^2+x-20	<u>d</u>	$x^2-9x+20$
<u>e</u>	x^2-6x+9	<u>f</u>	$2x^2+5x-12$	<u>g</u>	$6x^2+3x-18$	<u>h</u>	$3x^2+20x-7$



Practice J

<u>a</u>	15 851	<u>b</u>	27 772	<u>c</u>	26 862	<u>d</u>	37 873
<u>e</u>	66 356	<u>f</u>	39 483	<u>g</u>	87 768	<u>h</u>	73 926
<u>i</u>	81 918	<u>j</u>	53 235	<u>k</u>	23 532	<u>l</u>	285 825
<u>m</u>	344 988	<u>n</u>	103 041	<u>o</u>	33 333	<u>p</u>	44 144



Practice K

<u>a</u>	1 271	<u>b</u>	506	<u>c</u>	2 562
<u>d</u>	2756	<u>e</u>	2 430	<u>f</u>	2 574
<u>g</u>	1 207	<u>h</u>	7 744	<u>i</u>	7 392
<u>j</u>	17 056	<u>k</u>	4 186	<u>l</u>	17 501
<u>m</u>	173 824	<u>n</u>	144 336	<u>o</u>	73 326
<u>p</u>	147852	<u>q</u>	187335	<u>r</u>	235431

Lesson-12 Homework Answers:



Practice A

<u>a</u>	3025	<u>b</u>	225	<u>c</u>	$72\frac{1}{4}$	<u>d</u>	9025
<u>e</u>	11025	<u>f</u>	38025	<u>g</u>	24025	<u>h</u>	60025
<u>i</u>	1225	<u>j</u>	$420\frac{1}{4}$	<u>k</u>	64080025	<u>l</u>	122500
<u>m</u>	45	<u>n</u>	$5\frac{1}{2}$	<u>o</u>	950		



Practice B

<u>a</u>	2916	<u>b</u>	3136	<u>c</u>	3249	<u>d</u>	3364	<u>e</u>	3721
<u>f</u>	3844	<u>g</u>	2601						



Practice C

<u>a</u>	2116	<u>b</u>	1936	<u>c</u>	1764	<u>d</u>	1521	<u>e</u>	1849
<u>f</u>	2401	<u>g</u>	1681	<u>h</u>	1369				



Practice D

<u>a</u>	25	<u>b</u>	12	<u>c</u>	50	<u>d</u>	4
<u>e</u>	8	<u>f</u>	98	<u>g</u>	24	<u>h</u>	0



Practice E

<u>a</u>	961	b	196	c	1681	d	676	↵
<u>e</u>	529	f	1024	g	441	h	4356	↵
<u>i</u>	6561	j	8281	k	3136	l	3969	↵
<u>m</u>	5929	n	1089					



Practice F

<u>a</u>	14 641	b	10 816	c	41 209	d	12 769	e	13 456	f	11 664	g	12321	↵
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Practice G

<u>a</u>	44 521	b	169 744	c	92 416	d	813 604	↵
<u>e</u>	165 649	f	49 284	g	505 521			



Practice H

<u>a</u>	$9x^2+24x+16$	b	$25y^2+20y+4$	c	$4x^2-4x+1$	d	$x^2+14x+49$	↵
<u>e</u>	$x^2-10x+25$	f	$x^2+4xy+4y^2$	g	$9x^2+30xy+25y^2$	h	$4a^2+4ab+b^2$	↵
<u>i</u>	$4x^2-12xy+9y^2$	j	$x^2+2xy+y^2$	k	$x^2-2xy+y^2$	l	$x^2-16xy+64y^2$	↵



Practice I

a, d, f, g ↵



Practice J

<u>a</u>	46	b	73	c	38	d	82	↵
<u>e</u>	59	f	67	g	94	h	19	↵
<u>i</u>	28	j	61	k	47	l	65	↵
<u>m</u>	98	n	77					



Practice K

<u>a</u>	9	b	24	c	56	d	1	e	128	↵
<u>f</u>	25	g	72	h	3	<u>i</u>	24	j	49	↵
<u>k</u>	20	l	12	m	6	n	5	o	25	↵



Practice L

<u>a</u>	44 944	b	17 161	c	41 616	d	263 169	↵
<u>e</u>	69 169	f	69 696	g	97 969	h	47 089	↵
<u>i</u>	9 628 609	j	4 545 424	k	1 999 396	l	17 172 736	↵

Lesson-13 Homework Answers:



Practice A

<u>a</u> 7	b 13	c 80	d 63 ^u
<u>e</u> 12	f 8	g 877	h 3.7 ^u
<u>i</u> 7	j 13	k 320	l 38 ^u
<u>m</u> 3	n 4	o 49	p 20 ^u



Practice B

<u>a</u> 4	b 5	c 3	d 6 ^u
<u>e</u> 6	f 20	g 12	h 31 ^u
<u>i</u> 31	j 1.4 ^u		



Practice C

<u>a</u> 6	b 15	c 6	d 8	^u
<u>e</u> 5.5	f 9	g 5	h 6	^u
<u>i</u> 4	j 5	k 2	l 12 ^u	

Lesson-14 Homework Answers:



Practice A

<u>a</u> $\frac{13}{20}$	b $\frac{31}{40}$	c $\frac{9}{10}$	d $3\frac{7}{12}$	^u
<u>e</u> $6\frac{1}{12}$	f $\frac{11}{35}$	g $\frac{7}{18}$	h $\frac{7}{10}$	^u
<u>i</u> $3\frac{1}{10}$	j $8\frac{13}{15}$	k $\frac{29}{36}$		^u



Practice B

<u>a</u> $\frac{7}{9}$	b $\frac{13}{24}$	c $\frac{9}{10}$	d $\frac{1}{12}$	^u
<u>e</u> $1\frac{7}{12}$	f $\frac{13}{54}$	g $2\frac{5}{8}$	h $\frac{1}{90}$	^u



Practice C

<u>a</u> $\frac{1}{3}, \frac{2}{5}$	b $\frac{8}{11}, \frac{3}{4}$	c $\frac{7}{12}, \frac{2}{3}, \frac{3}{4}$	d $\frac{5}{8}, \frac{5}{6}, \frac{6}{7}$	^u
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Lesson-15 Homework Answers:



Practice A

<u>a</u> 5 r6	b 3 r7	c 1 r8	d 4 r8
<u>e</u> 6 r6	f 7 r8	g 2 r8	h 4 r10 = 5 r1



Practice B

<u>a</u> 6 r3	b 8 r5	c 6 r4	d 5 r4
<u>e</u> 7 r1	f 9 r7	g 10 r6	



Practice C

<u>a</u> 235 r8	b 34 r6	c 1244 r6
<u>d</u> 47 r8	e 558 r8	f 78 r5
<u>g</u> 22556 r6	h 18 r2	<u>i</u> 3448 r0



Practice D

<u>a</u> 683 rem 6	b 364 rem 6	c 61 rem 6
<u>d</u> 916 rem 8	e 73 rem 4	f 526 rem 7
<u>g</u> 1371 r6	h 527 r4	<u>i</u> 2231 r3



Practice E

<u>a</u> 683 rem 6	b 363 rem 5	c 61 rem 6	d 916 rem 8
<u>e</u> 73 rem 4	f 526 rem 7	g 638 rem 5	h 326 rem 4
<u>i</u> 1371 rem 6	j 8339 rem 6	k 49258	l 213129



Practice F

<u>a</u> 2 r6	b 1 r7	c 3 r1	d 6 r3
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Practice G

<u>a</u> 13 r7	b 18 r7	c 12 r4	d 26 r6	e 140 r1
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Practice H

<u>a</u> 1 r6	b 4 r3	c 3 r2	d 5 r5
<u>e</u> 14 r5	f 15 r6	g 14 r2	



Practice I

<u>a</u> 1226 r42	b 2152 r93	c 3355 r66	d 2856 r84	e (3670 r102) 3671 r3
<u>f</u> 113344 r66	g 34 r90			



Practice J

<u>a</u> 1144 r91	b 1040 r90	c 1339 r91	d 2042 r86	e 21 r 73
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Practice K

<u>a</u> 1/33	b 2/59	c 1/49	
<u>d</u> 3/39	e 1/336	f 1/646	
<u>g</u> 2/664	h 3/706	<u>i</u> 1/4196	
<u>j</u> 1/4322	k 2/5434	l 4/8792	



Practice L

<u>a</u> 11/42	b 12/66	c 12/53	
<u>d</u> 23/87	e 11/44	f 11/243	
<u>g</u> 12/599	h 23/535	<u>i</u> 30/485	
<u>j</u> 22/5242			



Practice M

<u>a</u> 11/24	b 11/40	c 2/14	
<u>d</u> 10/46	e 11/213	f 11/10	
<u>g</u> 321/24	h 720/79		



Practice N

<u>a</u> 11/02	b 33/00	c 4/20	
<u>d</u> 21/060	e 27/39	f 21/01	
<u>g</u> 121/23	h 113/1031	<u>i</u> 720/79	
<u>j</u> 21/111	k 26/1027		

Lesson-16 Homework Answers:



Practice A

<u>a</u> 2r17	b 4r18	c 3r5	d 7r0
<u>e</u> 7r3	f 6r51	g 6r9	



Practice B

a 6	b 9	c 6	d 6
e 12	f 15	g $\bar{1}$	h $\bar{2}$



Practice C

<u>a</u> 3r13	b 3r43	c 3r51	d 5r58	e 6r41
<u>f</u> 7r25	g 7r8	h 6r3	<u>i</u> 5r58	



Practice D

<u>a</u> 321	b 613	c 22	d 56
<u>e</u> 45r14	f 467r7	g 1461r11	h 2341r56
<u>i</u> 230r43	j 127r1	k 123r54	l 211r26
<u>m</u> 655737r43	n 219r2	o 104r32	p 292r30
q 7942r14	r 5380r11	s 7009r60	t 7832r21



Practice E

<u>a</u> 6r25	b 7r21	c 5r5	d 6r39
<u>e</u> 6r37	f 7r67		



Practice F

<u>a</u> 3.48	b 55.48	c 105.06	d 0.67
<u>e</u> 1.59	f 0.08	g 0.31	h 3.26