

Lesson 1 Division (2-digit)

Study how to divide 94 by 13.

Since $10 \times 13 = 130$ and 130 is greater than 94, there is no tens digit.

$$13 \overline{) 94}$$

\times	1	2	3	4	5	6	7	8
13	13	26	39	52	65	78	91	104

94 is between 91 and 104.
 $94 \div 13$ is between 7 and 8.
 The *quotient* is 7.

$$\begin{array}{r} 7 \\ 13 \overline{) 94} \\ \underline{91} \leftarrow (7 \times 13 = 91) \\ 3 \leftarrow (94 - 91 = 3) \end{array}$$

Record the remainder like this.

$$13 \overline{) 94} \begin{array}{l} 7 \text{ r}3 \\ \underline{91} \\ 3 \end{array} \begin{array}{l} \uparrow \\ \text{remainder} \\ \leftarrow \end{array}$$

Divide.

a

$$1. \quad 12 \overline{) 84}$$

b

$$13 \overline{) 78}$$

c

$$19 \overline{) 95}$$

d

$$16 \overline{) 84}$$

e

$$14 \overline{) 98}$$

2. $15 \overline{) 92}$

$14 \overline{) 75}$

$16 \overline{) 74}$

$13 \overline{) 80}$

$12 \overline{) 92}$

3. $17 \overline{) 68}$

$23 \overline{) 92}$

$32 \overline{) 84}$

$18 \overline{) 72}$

$27 \overline{) 91}$

Lesson 1 Problem Solving

Solve each problem.

1. The pet store has 84 birds. They have 14 large cages. There are the same number of birds in each cage. How many birds are in each cage?

_____ birds are in each cage.

2. The pet store also has 63 kittens. There are 12 cages with the same number of kittens in each. The rest of the kittens are in the display window. How many kittens are in each cage? How many kittens are in the display window?

_____ kittens are in each cage.

_____ kittens are in the display window.

3. There are 60 guppies in a large tank. If the pet store puts 15 guppies each in a smaller tank, how many smaller tanks will be needed?

_____ smaller tanks will be needed.

4. There are 72 boxes of pet food on a shelf. The boxes are in rows of 13 each. How many full rows of boxes are there? How many boxes are left over?

There are _____ full rows of boxes.

There are _____ boxes left over.

5. There are 80 cages to be cleaned. Each of the store's 19 employees is to clean the same number of cages. The owner will clean any leftover cages. How many cages will each employee clean? How many cages will the owner clean?

Each employee will clean _____ cages.

The owner will clean _____ cages.

6. There are 52 puppies. There are 13 cages. If each cage contains the same number of puppies, how many puppies are in each cage?

There are _____ puppies in each cage.

Lesson 2 Division (3-digit)

Study how to divide 219 by 12 .

×	10	20	30	40
12	120	240	360	480

↑ 219

219 ÷ 12 is between 10 and 20.
The tens digit is 1.

$$\begin{array}{r} 1 \\ 12 \overline{) 219} \\ \underline{120} \\ 99 \end{array}$$

×	1	2	3	4	5	6	7	8	9
12	12	24	36	48	60	72	84	96	108

99 ----- ↑

99 ÷ 12 is between 8 and 9.
The ones digit is 8.

$$\begin{array}{r} 18 \text{ r}3 \\ 12 \overline{) 219} \\ \underline{120} \\ 99 \\ \underline{96} \\ 3 \end{array}$$

Divide.

a

1. $13 \overline{) 351}$

b

$16 \overline{) 256}$

c

$17 \overline{) 323}$

d

$14 \overline{) 490}$

e

$12 \overline{) 814}$

2. $26 \overline{) 316}$

$31 \overline{) 413}$

$17 \overline{) 212}$

$24 \overline{) 360}$

$28 \overline{) 564}$

Lesson 2 Problem Solving

Solve each problem.

1. There are 448 packages of paper in the supply room. Fourteen packages are used each day. At that rate, how many days will the supply of paper last?

The supply of paper will last _____ days.

2. There are 338 cases on a truck. The truck will make 12 stops and leave the same number of cases at each stop. How many cases will be left at each stop? How many cases will still be on the truck?

_____ cases will be left at each stop.

_____ cases will still be on the truck.

3. There are 582 tickets to be sold. Each of 24 students is to receive the same number of tickets and sell as many as possible. The teacher is to sell any tickets left over. How many tickets is each student to sell? How many is the teacher to sell?

Each student is to sell _____ tickets.

The teacher is to sell _____ tickets.

4. A machine operated 38 h and produced 988 parts. The same number of parts was produced each hour. How many parts were produced each hour?

_____ parts were produced each hour.

5. After 24 h, the machine in problem 4 had produced 582 parts. About how many parts is the machine producing each hour? Is it producing at the rate it is designed to do?

About _____ parts are being produced each hour.

6. Suppose the machine in problem 4 was operated 19 h. During this time 988 parts were produced. The same number of parts was produced each hour. How many were produced each hour?

_____ parts were produced each hour.

Lesson 3 Division (3-digit)

$$\begin{array}{r}
 8 \text{ r}2 \\
 12 \overline{) 98} \\
 \underline{96} \\
 2
 \end{array}$$

These should be the same.

$$\begin{array}{r}
 \text{Check} \quad 8 \\
 \times 12 \\
 \hline
 16 \\
 80 \\
 \hline
 96 \\
 + 2 \\
 \hline
 98
 \end{array}$$

To check $98 \div 12 = 8 \text{ r}2$, multiply 8 by _____ and add _____ to that product. The answer should be _____.

$$\begin{array}{r}
 12 \\
 34 \overline{) 408} \\
 \underline{340} \\
 68 \\
 \underline{68} \\
 0
 \end{array}$$

These should be the same.

$$\begin{array}{r}
 \text{Check} \quad 12 \\
 \times 34 \\
 \hline
 48 \\
 360 \\
 \hline
 408
 \end{array}$$

To check $408 \div 34 = 12$, multiply 12 by _____. The answer should be _____.

Divide. Check each answer.

a

1. $16 \overline{) 88}$

b

$14 \overline{) 84}$

c

$23 \overline{) 94}$

2. $19 \overline{) 114}$

$36 \overline{) 756}$

$32 \overline{) 836}$

3. $25 \overline{) 330}$

$36 \overline{) 672}$

$45 \overline{) 810}$

Lesson 3 Problem Solving

Solve each problem. Check each answer.

- 1.** Lucinda had $59¢$ to buy pencils that cost $14¢$ each. **1.**
How many pencils could she buy? How many cents would she have left?

She could buy _____ pencils.

She would have _____ ¢ left.

- 2.** The grocer has 98 cans of beans to put on a shelf. **2.**
He thinks he can put 16 cans in each row. If he does, how many rows will he have? How many cans will be left?

He will have _____ rows.

_____ cans will be left.

- 3.** The grocer in problem 2 could only put 13 cans in **3.**
each row. How many rows does he have? How many cans are left?

He has _____ rows.

_____ cans are left.

- 4.** There are 774 cartons ready for shipment. Only 27 **4.**
cartons can be shipped on each truck. How many full truckloads will there be? How many cartons will be left?

There will be _____ full loads.

_____ cartons will be left.

- 5.** There are 605 books in the storage room. There are **5.**
the same number of books in each of 17 full boxes and the rest in an extra box. How many books are in each full box? How many books are in the extra box?

_____ books are in each full box.

_____ books are in the extra box.

Lesson 4 Division (4-digit)

Study how to divide 8550 by 25.

×	100	200	300	400
25	2500	5000	7500	10 000

8550

The hundreds digit is 3.

$$\begin{array}{r} 3 \\ 25 \overline{) 8550} \\ \underline{7500} \\ 1050 \end{array}$$

×	10	20	30	40	50
25	250	500	750	1000	1250

1050

The tens digit is 4.

$$\begin{array}{r} 34 \\ 25 \overline{) 8550} \\ \underline{7500} \\ 1050 \\ \underline{1000} \\ 50 \end{array}$$

×	1	2
25	25	50

50

The ones digit is 2.

$$\begin{array}{r} 342 \\ 25 \overline{) 8550} \\ \underline{7500} \\ 1050 \\ \underline{1000} \\ 50 \\ \underline{50} \\ 0 \end{array}$$

Divide.

a

$$1. \quad 32 \overline{) 5280}$$

b

$$43 \overline{) 6751}$$

c

$$26 \overline{) 6318}$$

d

$$75 \overline{) 9150}$$

$$2. \quad 42 \overline{) 8956}$$

$$31 \overline{) 9875}$$

$$23 \overline{) 3844}$$

$$63 \overline{) 9008}$$

$$3. \quad 35 \overline{) 1960}$$

$$75 \overline{) 3900}$$

$$63 \overline{) 2656}$$

$$27 \overline{) 1430}$$

Lesson 4 Problem Solving

Solve each problem.

1. A truck is loaded with 8073 kg of food. Each case of food has a mass of 23 kg. How many cases are on the truck?

_____ cases are on the truck.

2. During an 8-h shift, one machine was able to package 8215 boxes of rice. These boxes were packed 24 to a carton. How many full cartons of rice would this be? How many boxes would be left?

There would be _____ full cartons.

_____ boxes would be left.

3. The bakery uses 75 kg of butter in each batch of butter-bread dough. How many batches of dough could be made with 6300 kg of butter?

_____ batches of dough could be made.

4. There are 2030 students in a school. How many classes of 28 students each could there be? How many students would be left?

There could be _____ full classes.

_____ students would be left.

5. In 27 days 3888 L of oil were used. The same amount of oil was used each day. How much oil was used each day?

_____ L were used each day.

6. There are 5100 parts to be packed. The parts are to be packed 24 to a box. How many boxes can be filled? How many parts will be left?

_____ full boxes will be packed.

_____ parts will be left.

Lesson 5 Division (2-, 3-, and 4-digit)

Divide.

$$1. \quad \overset{a}{28} \overline{) 776}$$

$$\overset{b}{42} \overline{) 5176}$$

$$\overset{c}{19} \overline{) 95}$$

$$\overset{d}{33} \overline{) 133}$$

$$2. \quad 12 \overline{) 2606}$$

$$22 \overline{) 6754}$$

$$24 \overline{) 792}$$

$$11 \overline{) 1716}$$

$$3. \quad 14 \overline{) 84}$$

$$89 \overline{) 801}$$

$$75 \overline{) 753}$$

$$16 \overline{) 2616}$$

$$4. \quad 75 \overline{) 6375}$$

$$23 \overline{) 5543}$$

$$25 \overline{) 8000}$$

$$25 \overline{) 800}$$

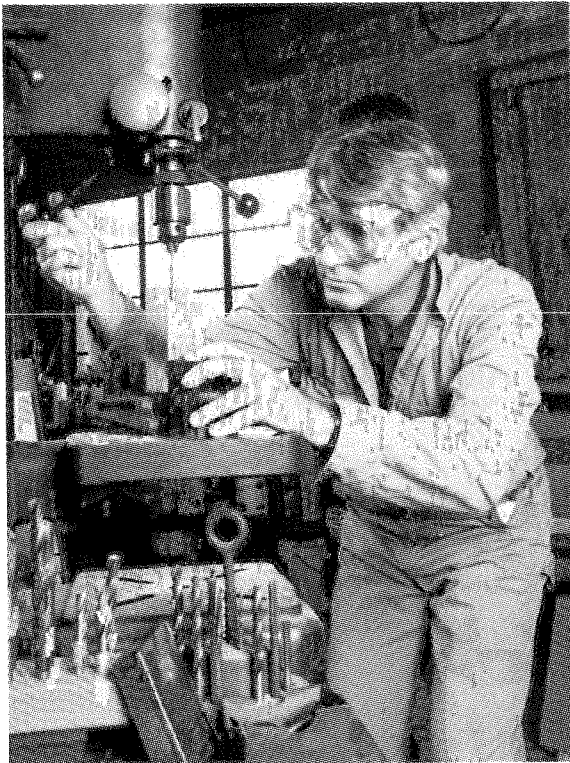
$$5. \quad 15 \overline{) 6009}$$

$$60 \overline{) 1860}$$

$$20 \overline{) 7020}$$

$$48 \overline{) 1704}$$

Lesson 5 Problem Solving



ORDER FORM
6912 Zanappas

Solve each problem.

1. An order was received for 6912 zanappas. Machine A can produce the zanappas in 12 h. At that rate, how many zanappas would be produced each hour?
 _____ zanappas would be produced each hour.
2. It would take Machine B 24 h to produce the zanappas needed to fill the order. At that rate, how many zanappas would be produced each hour?
 _____ zanappas would be produced each hour.
3. Machine C could produce the zanappas needed to fill the order in 48 h. At that rate, how many zanappas could be produced each hour?
 _____ zanappas could be produced each hour.
4. How many zanappas could be produced if all three machines operated for a period of 8 h?
 _____ zanappas could be produced.

1.	2.
3.	4.

CHAPTER 4 PRACTICE TEST**Division (2-digit through 4-digit by 2-digit)**

Divide.

$$1. \quad \overset{a}{12} \overline{) 72}$$

$$\overset{b}{13} \overline{) 89}$$

$$\overset{c}{11} \overline{) 94}$$

$$\overset{d}{17} \overline{) 68}$$

$$2. \quad 17 \overline{) 265}$$

$$11 \overline{) 858}$$

$$31 \overline{) 961}$$

$$12 \overline{) 506}$$

$$3. \quad 36 \overline{) 4366}$$

$$42 \overline{) 1890}$$

$$73 \overline{) 3934}$$

$$14 \overline{) 2184}$$

$$4. \quad 13 \overline{) 169}$$

$$26 \overline{) 3175}$$

$$16 \overline{) 75}$$

$$36 \overline{) 144}$$

$$5. \quad 54 \overline{) 1458}$$

$$25 \overline{) 2095}$$

$$28 \overline{) 573}$$

$$42 \overline{) 99}$$

CHAPTER 5 PRETEST

Division (4- and 5-digit by 2-digit)

Divide.

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
1.	$25 \overline{) 75}$	$25 \overline{) 750}$	$25 \overline{) 7500}$	$25 \overline{) 75000}$

2.	$38 \overline{) 4256}$	$17 \overline{) 4033}$	$33 \overline{) 7326}$	$25 \overline{) 2145}$
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3.	$42 \overline{) 89523}$	$16 \overline{) 97978}$	$25 \overline{) 62940}$	$15 \overline{) 31762}$
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4.	$27 \overline{) 12204}$	$48 \overline{) 27648}$	$62 \overline{) 19664}$	$72 \overline{) 31968}$
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