Name & Surname: _____ Class: _____ Date: _____

DIVISION LEFTOVERS

Quotients and remainders up to 4 digits

About 40 minutes Level ★★★☆☆

Divide and Check Leftovers

When you share into **equal groups**, a little is sometimes left over.

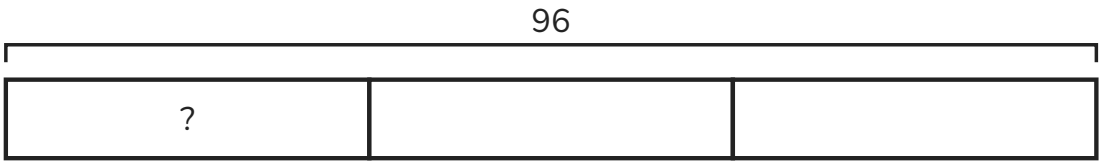
- Example with **place value**: 85 ÷ 4 = (80 ÷ 4) + (5 ÷ 4) = 20 + 1 R 1 = 21 R 1.
- Steps: Divide → Multiply → Subtract → Bring down. Repeat with **each digit**.
- Check with **multiplication**: 21 × 4 + 1 = 85 and 1 < 4.

Task A

/4

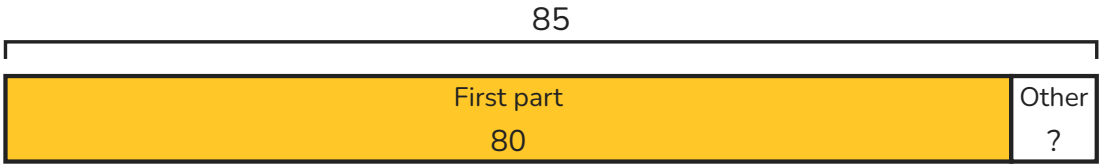
Use the bar models to show equal sharing and place value.

1 A teacher has 96 pencils to pack **equally** into 3 boxes. How many pencils go in each box?



Answer: _____ **pencils**

2 A student splits 85 counters into 80 and the rest to divide by 4 using **place value**. The first part is 80. What is the other part?



Answer: _____ **counters**

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PRACTICE EQUAL SHARING

Practice 2- and 3-digit dividends with 1-digit divisors.

Task B /10

Solve each division. Show the quotient and remainder.

WARM UP

1 Work out 48 ÷ 4 using **equal** groups.

Answer: _____

2 Work out 63 ÷ 7 using **multiplication** facts.

Answer: _____

3 Work out 56 ÷ 5. Give the **quotient** and remainder as R.

Answer: _____

4 Work out 73 ÷ 8. Give the **quotient** and remainder as R.

Answer: _____

PRACTICE

5 An **area** model splits 96 into 90 + 6. Divide each part by 3, then add to find 96 ÷ 3.

Answer: _____

6 Work out 87 ÷ 2. Give the **quotient** and remainder as R.

Answer: _____

7 Work out 125 ÷ 5 using **place value**.

Answer: _____

PROBLEM SOLVING

8 154 stickers are shared **equally** among 3 children. How many does each get, and what is left over?

Answer: _____

9 234 pencils are packed **equally** into 4 boxes. How many in each box, and what is left over?

Answer: _____

10 Explain how you **know** 47 ÷ 3 = 15 R 2 is correct.

Answer: _____

Key words

dividend: the number you share or divide up

divisor: the number you divide by

quotient: the answer to division, without the remainder

remainder: what is left over, smaller than the divisor

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SPOT THE MISTAKES

Find the wrong step in each division solution.

Task C

/4

Find the wrong step and explain the remainder mistake.



Student A

Work out 47 ÷ 3 using **long division**.

1. Divide: 3 into 4 = 1 R 1, bring down 7 to make 17
2. Multiply: 3 into 17 = 4 R 5
3. So the answer is 14 R 5

The mistake is in step: _____

What went wrong?

.....

Correct answer: _____



Student B

Work out 604 ÷ 3 using **place value**.

1. 6 ÷ 3 = 2, write 2 in the hundreds place
2. 0 ÷ 3 = 0, write 0 in the tens place
3. 4 ÷ 3 = 1 R 1, so the answer is 21 R 1

The mistake is in step: _____

What went wrong?

.....

Correct answer: _____

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TACKLE BIGGER DIVIDENDS

Divide up to 4-digit numbers and check your answers.

Task D

/10

Solve these larger divisions. Check with multiplication.

WARM UP

1. Work out 72 ÷ 3 using **multiplication** facts.

Answer: _____

2. Work out 91 ÷ 7 using **equal** groups.

Answer: _____

3. Work out 100 ÷ 6. Give the **quotient** and remainder as R.

Answer: _____

PRACTICE

4. Work out 1,243 ÷ 3. Give the **quotient** and remainder as R.

Answer: _____

5. Work out 2,516 ÷ 6. Give the **quotient** and remainder as R.

Answer: _____

6. Work out 3,842 ÷ 5. Give the **quotient** and remainder as R.

Answer: _____

7. Work out 1,000 ÷ 8 using **place value**.

Answer: _____

PROBLEM SOLVING

8. 1,356 crayons are shared **equally** among 9 classes. How many does each class get, and what is left over?

Answer: _____

9. 2,230 pages are packed **equally** into 7 boxes for recycling. How many in each box, and what is left over?

Answer: _____

10. Explain how an **area** model helps you check 824 ÷ 4 = 206.

Answer: _____

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AREAS AND REMAINDERS

Use area to check multiplication and sort divisions.

Task E

/5

Find the area and perimeter of each rectangle. Area checks multiplication.

1



Area: _____ cm²

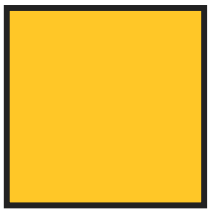
Perimeter: _____ cm

2



Area: _____ cm²

3



Area: _____ cm²

Perimeter: _____ cm

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DIVISION LEFTOVERS

Task F Example done for you /5

Color each box by whether the division has a remainder or not.

● **No remainder**: color it blue or draw ● ▲ **Has remainder**: color it orange or draw ▲

48 ÷ 4 ●	50 ÷ 4	96 ÷ 3	97 ÷ 3
125 ÷ 6	144 ÷ 6		

How did I do?

Circle a face for each line.

I can find the quotient and remainder for 1-digit divisors. ☹ 😐 ☺

I can use place value and area models to divide. ☹ 😐 ☺

I can check my answer with multiplication. ☹ 😐 ☺

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Answer sheet: Division Leftovers

Task A

1. 32 pencils
2. 5 counters

Task B

1. 12
2. 9
3. 11 R 1
4. 9 R 1
5. 32
6. 43 R 1
7. 25
8. 51 R 1
9. 58 R 2
10. $15 \times 3 + 2 = 47$ and $2 < 3$, so the check works.

Task C

1. Step 2 is wrong: They picked a quotient that is too small. The remainder 5 is bigger than the divisor 3, so you can still divide. 3 into 17 is 5 R 2. Correct answer: 15 R 2
2. Step 3 is wrong: They found the zero but left it out of the final quotient. The 0 holds place value, so the hundreds, tens and ones give 201 R 1. Correct answer: 201 R 1

Task D

1. 24
2. 13
3. 16 R 4
4. 414 R 1
5. 419 R 2
6. 768 R 2
7. 125
8. 150 R 6
9. 318 R 4
10. $800 \div 4 = 200$ and $24 \div 4 = 6$, so $200 + 6 = 206$ and $206 \times 4 = 824$.

Task E

1. area = 24 cm², perimeter = 20 cm
2. area = 90 cm²
3. area = 81 cm², perimeter = 36 cm

Task F

No remainder (blue ●): $48 \div 4$, $96 \div 3$, $144 \div 6$
Has remainder (orange ▲): $50 \div 4$, $97 \div 3$, $125 \div 6$

Pictures: Characters: Open Peeps by Pablo Stanley (CC0)

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