Unit 4 · Division and Remainders Cheat Sheet

Unit 4 focus: division facts, models and partial quotients

1 Big Idea

Division splits an amount into equal groups. Use multiplication facts and place value to divide bigger numbers.

2 Important Vocabulary

dividend	The number being divided.	In 84 ÷ 4, the dividend is 84
divisor	The number you divide by.	In 84 ÷ 4, the divisor is 4
quotient	The answer to a division problem.	84 ÷ 4 = 21
partial quotients	A way to divide by subtracting easy groups and adding up how many groups.	96 ÷ 4: 20 groups, then 4 groups

3 How It Works

Divide 156 ÷ 6 with partial quotients.

Example: Subtract easy groups of 6.
6 × 20 = 120 156 − 120 = 36
6 × 6 = 36 36 − 36 = 0
Add the groups: 20 + 6

Answer: 26

4 Visual Model



Area model for 156 ÷ 6: the top lengths 20 and 6 add up to the quotient, 26.

5 Remember This · Watch Out!

★ Remember this

- Use a related fact: 36 ÷ 9 = 4, so 3,600 ÷ 9 = 400.
- Check with multiplication: 26 × 6 = 156.

⚠ Watch out!

- **Hold the place with a zero:** 618 ÷ 6 = 103, not 13
- **Start with the greatest place:** divide hundreds, then tens, then ones

6 Try It!

1. 2,400 ÷ 8 = ?
   Answer: 300
2. 192 ÷ 8 = ?
   Answer: 24

Answers are printed upside down. Turn the page to check!

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More practice: remainders and what they mean

1 Big Idea

Sometimes there are leftovers. The remainder is always less than the divisor, and the story tells you what to do with it.

2 Important Vocabulary

remainder	The amount left over when a number cannot be divided equally.	17 ÷ 5 = 3 R 2
interpret the remainder	Decide what the leftover amount means in the story.	23 students, 4 per car: 6 cars are needed
equal groups	Groups that all have the same number of things.	24 shared into 6 equal groups of 4
inverse operations	Operations that undo each other.	Multiplication undoes division

3 How It Works

47 students ride in vans that hold 6. How many vans are needed?

Example: 47 ÷ 6
6 × 7 = 42 47 − 42 = 5 left
So: 47 ÷ 6 = 7 R 5
5 students still need a van: add 1

Answer: 8 vans

4 Visual Model

Drop it: How many FULL boxes? 47 ÷ 6 → 7

Add 1: How many vans for EVERYONE? → 8

Use it: How many are LEFT OVER? → 5

Check: 6 × 7 + 5 = 47

5 ★ Remember This · Watch Out!

★ Remember this

- Quotient × divisor + remainder = dividend.
- Write the answer like this: 7 R 5.

⚠ Watch out!

- **Remainder too big?:** if it is 6 or more when dividing by 6, make another group
- **Answer the question asked:** the quotient is not always the answer

6 Try It!

1. What is 59 ÷ 7?
   Answer: 8 R 3
2. 50 muffins, 8 per box. How many full boxes?
   Answer: 9

Answers are printed upside down. Turn the page to check!