

WA5MNACN3

Calculating with number

Core + Challenge

NAPLAN-style

Division with Remainders

I can divide by a one-digit number, find the remainder, and decide what it means in a problem.

Name: _____ Date: _____ Score: _____ / 55

Key idea

Dividing makes **equal groups**. The **remainder (r)** is what is **left over**. It must be **smaller** than the number you divide by.

Short division: divide each place from the left. Carry what is left over into the next place.

In a story, decide what to do with the remainder: **round up** (another bus), **round down** (full boxes only) or say what is **left**.

Example: $23 \div 4 = 5 \text{ r } 3$. Five groups of 4 use 20 counters, and 3 are left over.

$$23 \div 4 = 5 \text{ r } 3$$



$$137 \div 5 = 27 \text{ r } 2$$

$$\begin{array}{r} 27 \text{ r } 2 \\ 5 \overline{) 137} \\ \underline{10} \\ 37 \\ \underline{35} \\ 2 \end{array}$$

A

Warm up *group, share and divide*

/ 16 marks

Circle groups of the number you divide by. Write the answer with a remainder. 1 mark each.

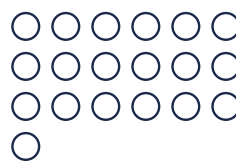
1 $17 \div 5$



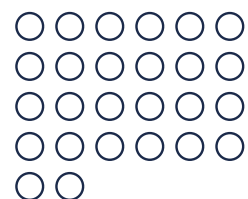
2 $22 \div 4$



3 $19 \div 3$



4 $26 \div 6$



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Share the counters equally. Draw them in the bags. Draw the leftovers outside. 1 mark each.

- 5 Share **14** counters into **4** bags.

- 6 Share **20** counters into **3** bags.

- 7 Share **11** counters into **2** bags.

- 8 Share **17** counters into **5** bags.

Use short division. Write the remainder. 1 mark each.

- 9 $47 \div 3$

$$3 \overline{) 47}$$

- 10 $86 \div 4$

$$4 \overline{) 86}$$

- 11 $157 \div 6$

$$6 \overline{) 157}$$

- 12 $395 \div 7$

$$7 \overline{) 395}$$

Think about the remainder. Write the answer. 1 mark each.

- 13 40 eggs are packed in boxes of 6. How many boxes are **full**?

- 14 30 students go to camp. Each car takes 4 students. How many cars are needed?

- 15 25 stickers are shared equally by 4 children. How many stickers are **left over**?

- 16 A 45 cm ribbon is cut into 6 cm pieces. How many **whole** pieces?

B Practise use the skill

/ 20 marks

- 1 **125** students are going to Perth Zoo. Each minibus carries **9** students. Use short division. How many minibuses are needed? Explain what the remainder means.

[3 marks]

$$9 \overline{) 125}$$

Answer: _____

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- 2 Mum shares **38** strawberries equally into **5** lunchboxes. Draw the strawberries as dots. How many go in each lunchbox? How many are left over? [2 marks]

Answer: _____

- 3 Four friends share **\$94** equally. They only use whole dollars. Write the amounts in the bar model. How much does each friend get? How much is left over? [2 marks]

\$94

?

?

?

?

Answer: _____

- 4 Complete the table. [3 marks]

Number	Divide by	Answer	Remainder
58	7		
100	8		
	6	9	5
73		10	3

- 5 Circle the division that has a remainder of **3**. Show how you know. [2 marks]

$27 \div 4$

$29 \div 5$

$35 \div 6$

$40 \div 7$

Answer: _____

- 6 Tennis balls are sold in cans of **4**. The coach has **90** balls. **a)** How many cans can she fill? **b)** How many **more** balls does she need to fill one more can? [2 marks]

a) _____

b) _____

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- 7 A farmer packs **350** apples into bags of **8**. How many bags are full? How many apples are left over? [2 marks]

$$8 \overline{) 350}$$

Answer: _____

- 8 Draw jumps of **7** from 0 on the number line. How many whole jumps fit before 45? Use the jumps to write $45 \div 7$. [2 marks]



Answer: _____

- 9 a) A muffin recipe needs **3** eggs. Ella has **20** eggs. How many batches can she make? b) **40** guests come to a party. Each table seats **6**. How many tables are needed? For each, say if you rounded **up** or **down**. [2 marks]

a) _____

b) _____

C Think it through *explain your thinking*

/ 10 marks

- 1 Ava says $43 \div 5 = 7 \text{ r } 8$. Do you agree with Ava? Explain her mistake and find the correct answer. [2 marks]

- 2 **True or false?** “When you divide by 6, the remainder can be 6.” Explain. [2 marks]

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- 3** **Always, sometimes or never true?** “An odd number divided by 2 has a remainder of 1.” Circle one. Explain. [2 marks]

Always

Sometimes

Never

- 4** Sort these divisions into the table: $48 \div 4$, $50 \div 4$, $36 \div 6$, $38 \div 6$, $77 \div 7$, $30 \div 8$ [2 marks]

	Remainder is 0	Remainder is not 0
Answer is 10 or more		
Answer is less than 10		

- 5** $50 \div 8 = 6 \text{ r } 2$. Write a short story where the answer is **6**. Then write a story where the answer is **7**. [2 marks]

D Challenge *stretch yourself*

/ 9 marks

- 1** I am a number between **30** and **60**. When I am divided by 4, the remainder is **1**. [3 marks]
When I am divided by 5, the remainder is **3**. What number could I be? Find **all** the answers.

Answer: _____

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- 2 Sam divided a number by **7**. His answer was **23 r 4**. **a)** What was the number? [3 marks]
Work backwards. **b)** Divide the same number by **6**. What is the answer?

Answer: _____

- 3 **158** students play in teams of **6** at the sports carnival. **a)** How many full teams are there? How many students are left over? **b)** Each leftover student joins a **different** team. How many teams now have **7** players? **c)** How many **more** students would be needed to make one more full team of 6? [3 marks]

Answer: _____

How did I go?

Warm up ____ / 16 Practise ____ / 20 Think it through ____ / 10 Challenge ____ / 9 **Total ____ / 55**

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