

WA5MNACN3

Calculating with number

Core + Challenge

NAPLAN-style

Multiplication and Division Word Problems

I can draw a bar model to decide whether to multiply or divide, and solve one- and two-step problems.

Name: _____ Date: _____ Score: _____ / 56

Key idea

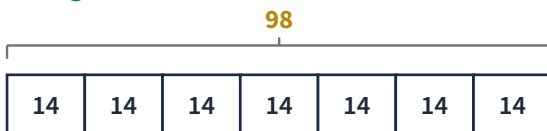
Draw the story as a bar model. Equal parts show equal groups.

Know the **number of groups** and the **size** of each group? **Multiply** to find the total.

Know the **total**? **Divide** to find the size of each group, or how many groups there are.

Example: 7 bags of 14 marbles is $7 \times 14 = 98$. Sharing 98 marbles into 7 bags is $98 \div 7 = 14$.

7 bags of 14 marbles: $7 \times 14 = 98$



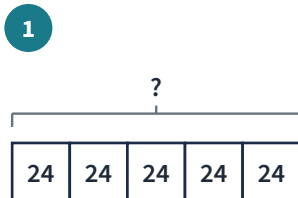
98 marbles in 7 equal bags: $98 \div 7 = 14$

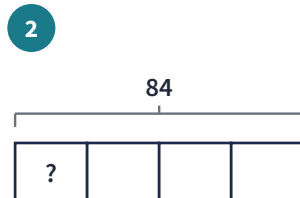


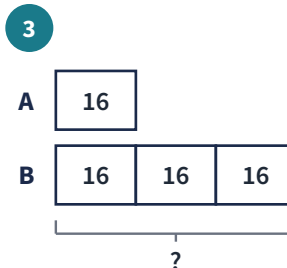
A Warm up model, choose and solve

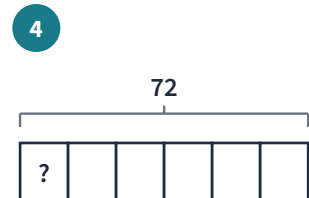
/ 16 marks

Find the missing number ? in each bar model. 1 mark each.









Circle $\times$ or $\div$. Then write the answer. 1 mark each.

- 5 8 packs of 6 juice boxes. How many juice boxes?



- 6 48 pencils are shared into 6 cups. How many in each cup?



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- 7 72 chairs are put in rows of 9. How many rows?



- 8 A book has 7 chapters of 25 pages. How many pages?



Write the numbers on the bar model. Write ? for the unknown. Then answer. 1 mark each.

- 9 3 teams of 15 players. How many players?



- 10 60 cards in 5 equal piles. How many in each pile?



- 11 7 boxes of 20 pencils. How many pencils?



- 12 90 km in 6 equal parts. How long is each part?



Solve. 1 mark each.

- 13 27 spiders each have 8 legs. How many legs?

- 14 96 students are in 4 equal classes. How many in each class?

- 15 Movie tickets cost \$15 each. What do 6 tickets cost?

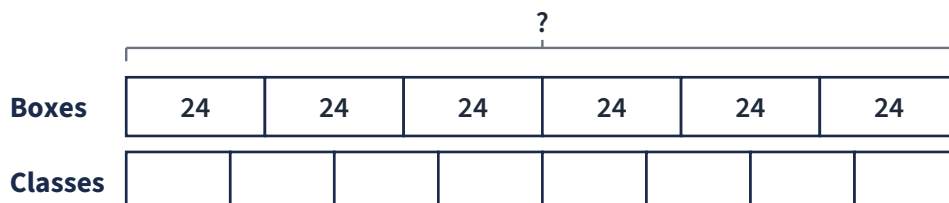
- 16 How many weeks are in 140 days?

B Practise use the skill

/ 21 marks

- 1 A school buys 6 boxes of 24 pencils. The pencils are shared equally between 8 classes. Complete the bar models. How many pencils does each class get?

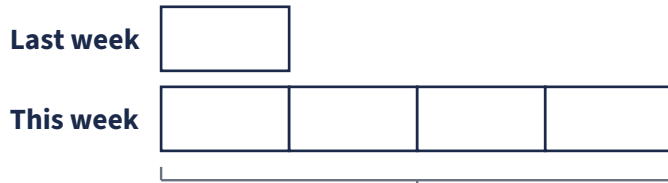
[3 marks]



Answer: _____

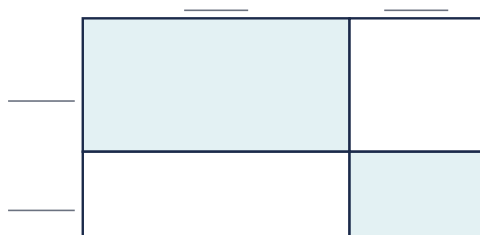
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- 2 This week a netball team scored **52** goals. That is **4 times** as many as last week. [2 marks]
Label the bar model. How many goals did they score last week? How many in the two weeks altogether?



Answer: _____

- 3 A class of **27** students hires bikes on Rottnest Island. Each bike costs **\$32** for the day. Label and complete the area model. What is the total cost? [2 marks]



Answer: _____

- 4 Complete the table. Decide if you multiply or divide, then solve. [3 marks]

Problem	× or ÷	Answer
5 rows of 18 chairs. How many chairs?		
96 eggs go into cartons of 6. How many cartons?		
\$135 is shared by 3 friends. How much each?		

- 5 **150** students and **6** teachers are going to an AFL game. Each van carries **8** people. How many vans are needed? Explain what you did with the remainder. [2 marks]

Answer: _____

- 6 Ava has **72** stickers. She puts them in rows of **8**. Circle the number sentence that shows how many rows. Then find the answer. [2 marks]

72 × 8

72 ÷ 8

72 − 8

8 ÷ 72

Answer: _____

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- 7 At the school fete, the sausage sizzle cooked **23** packs of **8** sausages. Every sausage was sold for **\$3**. How much money did they take? [2 marks]

Answer: _____

- 8 A Transperth bus drives a **45 km** route. It does the route **6** times a day, for **5** days. [2 marks]
How far does it drive altogether?

Answer: _____

- 9 A book has **240** pages. Mia reads **6** pages each day. **a)** How many days will she take? **b)** If she reads **8** pages a day instead, how many **fewer** days will she take? [3 marks]

a) _____

b) _____

C Think it through *explain your thinking*

/ 10 marks

- 1 **96** students travel to Kings Park in **4** buses, with the same number in each bus. [2 marks]
Noah says, "Multiply, because it says **in**. $96 \times 4 = 384$." Do you agree with Noah?
Explain.

- 2 **True or false?** "If you **double** the number of groups and **halve** the size of each group, the total stays the same." Show an example. [2 marks]

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- 3 **Always, sometimes or never true?** “A word problem with the word **each** is a multiplication problem.” Circle one. Give examples. [2 marks]

☐ Always☐ Sometimes☐ Never

- 4 Which story is the **odd one out**? Explain. [2 marks]

A 6 bags have 8 apples in each. How many apples?

B There are 8 rows of 6 chairs. How many chairs?

C 48 players make 6 equal teams. How many in each team?

D 6 spiders each have 8 legs. How many legs?

- 5 Write **two** different stories for $72 \div 6 = 12$. In the first, 12 is **how many in each group**. In the second, 12 is **how many groups**. [2 marks]

D Challenge *stretch yourself*

/ 9 marks

- 1 Pencils come in packs of 8. Each pack costs \$6. A teacher spends \$54. **a)** How many pencils does she get? **b)** Could she buy **exactly 100** pencils? Explain. [3 marks]

Answer:

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- 2 I think of a number. I multiply it by 6. Then I divide the answer by 4. I get 27. [3 marks]
What was my number? Show how you worked backwards.



Answer: _____

- 3 36 chairs are set out in equal rows. There must be **at least 3** rows and **at least 3** chairs in each row. Find **all** the ways. Use the table. [3 marks]

Rows	Chairs in each row

How did I go?

Warm up ___ / 16 Practise ___ / 21 Think it through ___ / 10 Challenge ___ / 9 Total ___ / 56

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