# Reasoning and Problem Solving
# Step 6: Divide by 1

## National Curriculum Objectives:

**Mathematics Year 4: (4C6b) Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers**

## Differentiation:

**Questions 1, 4 and 7 (Reasoning)**
**Developing Identify and explain the odd one out of 3 calculations using knowledge of dividing 1-digit numbers by 1 or itself. Images included for support.**
**Expected Identify and explain the odd one out of 3 calculations using knowledge of dividing numbers by 1 or itself. Some images included for support.**
**Greater Depth Identify and explain the odd one out of 3 calculations using knowledge of dividing numbers by 1 or itself. A mixture of words and numbers included. No images included.**

**Questions 2, 5 and 8 (Reasoning)**
**Developing Explain whether the answer is correct using knowledge of dividing 1-digit by 1 or itself. Images included for support.**
**Expected Explain whether the answer is correct using knowledge of dividing a number by 1 or itself. Some images included for support.**
**Greater Depth Explain whether the answer is correct using knowledge of dividing a number by 1 or itself. A mixture of words and numbers included. No images included.**

**Questions 3, 6 and 9 (Problem Solving)**
**Developing Solve a word problem involving a 1-digit number divided by 1 or by itself and write a division calculation to prove the answer. Images included for support.**
**Expected Solve a word problem involving a number divided by 1 or by itself and write a division calculation to prove the answer. Some images included for support.**
**Greater Depth Solve a word problem involving a number divided by 1 or by itself and write a division calculation to prove the answer. A mixture of words and numbers included. No images included.**

## More Year 4 Multiplication and Division resources.

## Did you like this resource? Don't forget to review it on our website.

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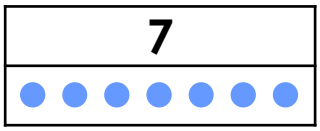
# Divide by 1

1a. Circle the odd one out.

A.

$7 \div 7 = 1$

B.




C.

$7 \div 1 = 7$

Explain your reasoning.

D

R

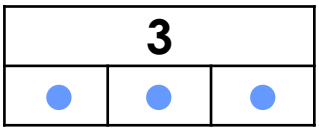
# Divide by 1

1b. Circle the odd one out.

A.

$3 \div 3 = 1$

B.




C.

$3 \div 1 = 3$

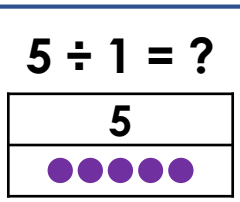
Explain your reasoning.

D

R

2a. Freddy is trying to work out the calculation below.

$5 \div 1 = ?$




The answer to the calculation is 1.

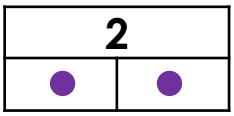
Is he correct? Explain your answer.

D

R

2b. Harvey is trying to work out the calculation below.

$2 \div 2 = ?$



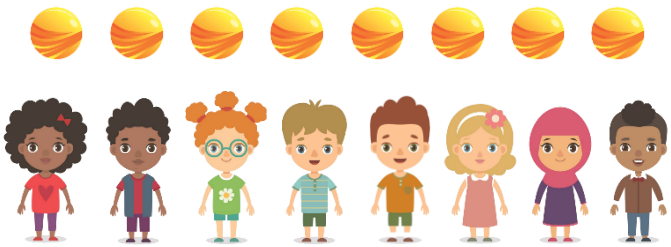

The answer to the calculation is 1.

Is he correct? Explain your answer.

D

R

3a. Charlie has 8 marbles. He shared the marbles between his friends below.



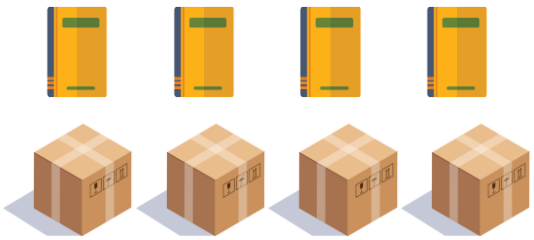
How many marbles did he give to each friend?

Write a division calculation to prove your answer.

D

PS

3b. A librarian has 4 books. She puts 1 book in each of the boxes below.



How many books did she put in each box?

Write a division calculation to prove your answer.

D

PS

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# Divide by 1

4a. Circle the odd one out.

A.

$14 \div 1 = 14$

B.


C.

$14 \div 14 = 1$

Explain your reasoning.

E R

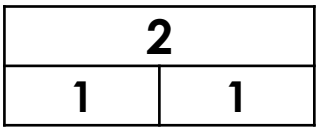
# Divide by 1

4b. Circle the odd one out.

A.

$2 \div 2 = 1$

B.




C.

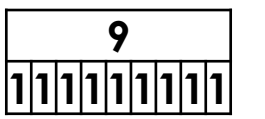
$2 \div 1 = 2$

Explain your reasoning.

E R

5a. Phil is trying to work out the calculation below.

$9 \div 9 = ?$



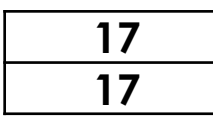

The answer to the calculation is 1.

Is he correct? Explain your answer.

E R

5b. Cali is trying to work out the calculation below.

$17 \div 1 = ?$




The answer to the calculation is 1.

Is she correct? Explain your answer.

E R

6a. A gardener has 8 seeds. He puts 1 seed into each of the pots below.

How many seeds does he plant in each pot?

Write a number sentence to prove your answer.

E PS

6b. A teacher has 5 pencils. She shares these out to each of the children below.

How many pencils do they have each?

Write a number sentence to prove your answer.

E PS

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## Divide by 1

7a. Circle the odd one out.

A.

eight ÷ eight = one

B.

| eight | | | | | | | |
|---|---|---|---|---|---|---|---|

C.

eight ÷ one = eight

Explain your reasoning.

GD

R

## Divide by 1

7b. Circle the odd one out.

A.

eleven ÷ eleven = one

B.

| eleven |
|---|
| |

C.

eleven ÷ one = eleven

Explain your reasoning.

GD

R

8a. Jo is trying to work out the calculation below.

sixteen ÷ one = ?

The answer to the calculation is one.

Is she correct? Explain your answer.

GD

R

8b. Fynn is trying to work out the calculation below.

twenty ÷ twenty = ?

The answer to the calculation is one.

Is he correct? Explain your answer.

GD

R

9a. A child has thirteen puzzles.

He gives thirteen puzzles to his thirteen friends.

How many jigsaw puzzles does each friend get?

Write a division calculation to prove your answer.

GD

PS

9b. A baker has nineteen truffles.

She puts nineteen truffles on the top of nineteen cupcakes

How many truffles does she put on each cupcake?

Write a division calculation to prove your answer.

GD

PS

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## Reasoning and Problem Solving
## Divide by 1

### Developing

1a. A is the odd one out because both B and C represent the calculation 7 ÷ 1 = 7.

2a. Freddy is incorrect because 5 grouped into 1 equals 5.

3a. Charlie would give 1 marble to each friend. The calculation would be 8 ÷ 8 = 1.

### Expected

4a. A is the odd one out because both B and C represent the calculation 14 ÷ 14 = 1.

5a. Phil is correct because 9 shared between 9 equals 1.

6a. The gardener would put 1 seen into each pot. The calculation would be 8 ÷ 8 = 1

### Greater Depth

7a. C is the odd one out because both A and B represent the calculation 8 ÷ 8 = 1.

8a. Jo is incorrect because sixteen grouped into one equals sixteen.

9a. The child would give each friend one puzzle. The calculation would be 13 ÷ 13 = 1

## Reasoning and Problem Solving
## Divide by 1

### Developing

1b. C is the odd one out because both A and B represent the calculation 3 ÷ 3 = 1.

2b. Harvey is correct because 2 shared between 2 equals 1.

3b. The librarian would put one book into each box. The calculation would be 4 ÷ 4 = 1.

### Expected

4b. C is the odd one out because both A and B represent the calculation 2 ÷ 2 = 1.

5b. Cali is incorrect because 17 grouped into 1 equals 17.

6b. The teacher would give each child 1 pencil. The calculation would be 5 ÷ 5 = 1

### Greater Depth

7b. A is the odd one out because both B and C represent the calculation 11 ÷ 1 = 11.

8b. Fynn is correct because twenty shared between twenty equals one.

9b. The baker would put one truffle onto each cupcake. The calculation would be 19 ÷ 19 = 1

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