

Reasoning and Problem Solving

Step 5: Multiplication from Pictures

National Curriculum Objectives:

Mathematics Year 2: (2C6) [Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers](#)

Mathematics Year 2: (2C9b) [Show that multiplication of two numbers can be done in any order \(commutative\) and division of one number by another cannot](#)

Mathematics Year 2: (2C8) [Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Identify the odd one out, using knowledge of making multiplications from pictures. Multiplication sentences use up to five equal groups, where images can be counted. No use of coins.

Expected Identify the odd one out, using knowledge of making multiplications from pictures. Multiplication sentences use up to twelve equal groups. Some use of coins and images which can be counted.

Greater Depth Identify the odd one out, using knowledge of making multiplications from pictures. Multiplication sentences use up to twelve equal groups, where images can be counted. Some use of images representing 2, 3, 5 or 10 which cannot be counted individually.

Questions 2, 5 and 8 (Reasoning)

Developing Draw images to prove whether an amount has been multiplied correctly. Multiplication sentences use up to five equal groups.

Expected Draw images to prove whether an amount has been multiplied correctly. Multiplication sentences use up to twelve equal groups.

Greater Depth Draw images to prove whether an amount has been multiplied correctly. Multiplication sentences use up to twelve equal groups, including coins.

Questions 3, 6 and 9 (Problem Solving)

Developing Complete an image and calculation to match a given story. Multiplication sentences use up to five equal groups, where images can be counted. No use of coins.

Expected Complete an image and calculation to match a given story. Multiplication sentences use up to twelve equal groups. Use of images which can be counted.

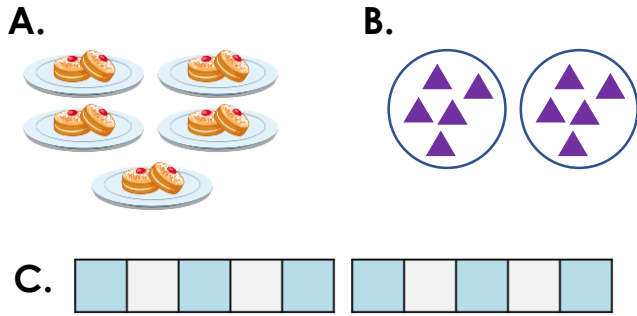
Greater Depth Complete an image and calculation to match a given story. Multiplication sentences use up to twelve equal groups, where images can be counted. Some use of images representing 2, 3, 5 or 10 which cannot be counted individually.

More [Year 2 Multiplication and Division](#) resources.

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

Multiplication from Pictures

1a. Circle the image that is the odd one out. Explain why.

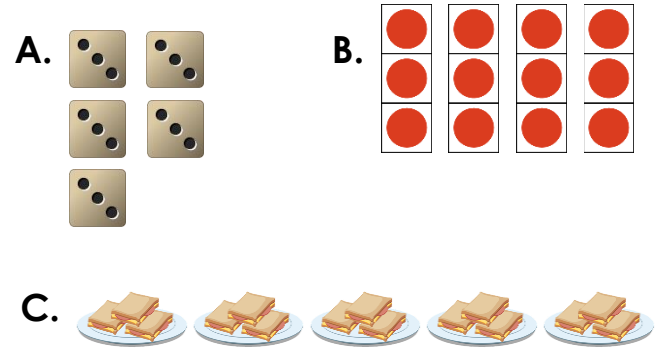


 _____ lots of 5 = _____

R

Multiplication from Pictures

1b. Circle the image that is the odd one out. Explain why.



 5 lots of _____ = _____

R

2a. Bill buys 2 boxes of chocolates. Each box has 5 chocolates inside.



There are enough chocolates for 12 of us to have one each.

2 lots of 5 = _____

Is he correct? Draw images to support your answer.



R

2b. Amelia buys 5 packs of stickers for her book. Each packet has 2 stickers.



I will have 10 stickers altogether.

5 lots of 2 = _____

Is she correct? Draw images to support your answer.



R

3a. Complete the image and calculation below to match the story.

3 tables are left in the school hall. Each table has an equal amount of cakes. How many cakes are there altogether?



3 lots of 3 = _____

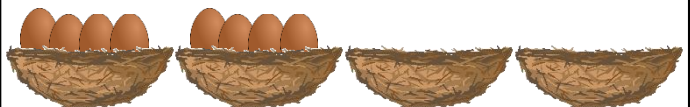
x 3 =



PS

3b. Complete the image and calculation below to match the story.

There are 4 nests in a tree. There are 4 eggs in each nest. How many eggs are there altogether?



4 lots of 4 = _____

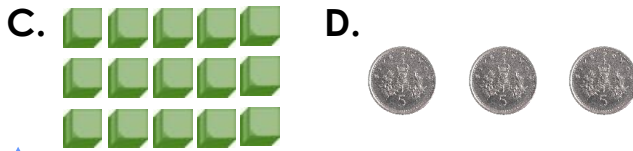
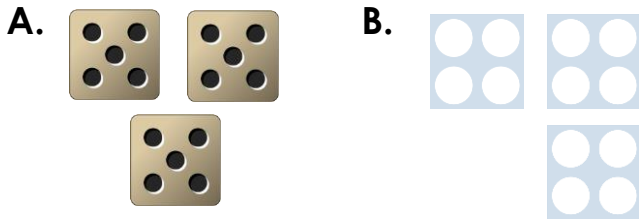
4 x =



PS

Multiplication from Pictures

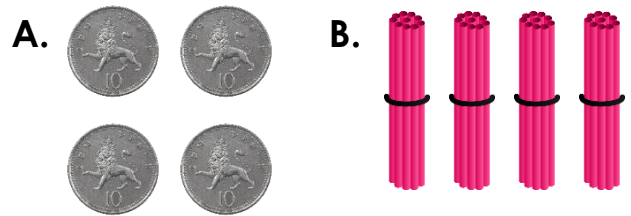
4a. Circle the image that is the odd one out. Explain why.



R

Multiplication from Pictures

4b. Circle the image that is the odd one out. Explain why.



R

5a. A rollercoaster ride has 7 carriages. Each carriage has 2 seats.



All 15 people in our group can go on the ride at the same time.

Is Muna correct? Draw images to support your answer.



R

5b. Melissa buys 2 packets of croissants. There are 8 croissants in each pack.



I can give one croissant to each of my 16 friends.

Is Melissa correct? Draw images to support your answer.



R

6a. Complete the image and calculation below to match the story.

There are 4 conveyor belts in an airport. Each conveyor belt holds 7 suitcases. How many suitcases are there altogether?



$$\square \times \square = \square$$



PS

6b. Complete the image and calculation below to match the story.

In a supermarket, 3 shelves each hold 5 cereal boxes. The boxes are in different orders. How many cereal boxes are on the 3 shelves?



$$\square \times \square = \square$$



PS

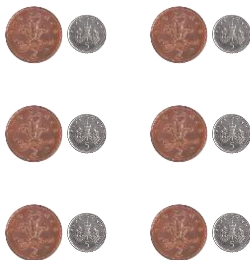
Multiplication from Pictures

7a. Circle the image that is the odd one out. Explain why.

A.



B.



C.

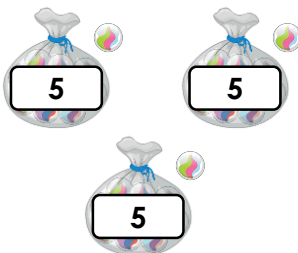


R

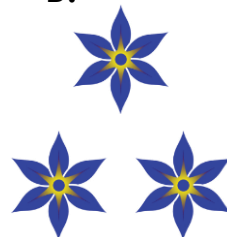
Multiplication from Pictures

7b. Circle the image that is the odd one out. Explain why.

A.



B.



C.



R

8a. Sarah buys a cupcake for each of her 9 friends. Cupcakes cost 5p.



I will need 2 twenty-pence coins and 1 five-pence coin to buy the cupcakes.

Is she correct? Draw images to support your answer.



R

8b. Sid sorts his coins into 6 piggy banks, with 9p in each piggy bank.



I have more than 55p altogether.

Is he correct? Draw images to support your answer.



R

9a. Complete the image and calculation below to match the story.

There are 6 purses in the lost property office.
Each purse has 7p inside.
How much money is there altogether?



$$\square \times \square = \square$$



PS

9b. Complete the image and calculation below to match the story.

Billy gives 5 children 12 cookies each. How many cookies are there altogether?



$$\square \times \square = \square$$



PS

Reasoning and Problem Solving Multiplication from Pictures

Developing

- 1a. A is the odd one out because it shows 5×2 , whereas B and C both show 2×5 .
- 2a. Bill is incorrect because $2 \times 5 = 10$. 10 is less than 12.
- 3a. 3 cakes should be drawn on the third table. 3 lots of 3 = 9 so $\underline{3} \times 3 = \underline{9}$ buns left altogether.

Expected

- 4a. B is the odd one out because it shows 3×4 , whereas A, C and D all show 3×5 .
- 5a. Muna is incorrect because $7 \times 2 = 14$. 14 is less than 15.
- 6a. 7 suitcases should be drawn on the second and third conveyor belts. $\underline{4} \times \underline{7} = \underline{28}$ suitcases altogether.

Greater Depth

- 7a. A is the odd one out because it shows 4×7 , whereas B and C both show 6×7 .
- 8a. Sarah is correct because $9 \times 5 = 45p$. $20p + 20p + 5p = 45p$.
- 9a. 2 more purses should have been drawn. Each purse should have 7p. $\underline{6} \times \underline{7}p = \underline{42}p$ altogether.

Reasoning and Problem Solving Multiplication from Pictures

Developing

- 1b. B is the odd one out because it shows 4×3 , whereas A and C both show 5×3 .
- 2b. Amelia is correct because $5 \times 2 = 10$.
- 3b. 4 eggs should be drawn in the third and fourth nests. 4 lots of 4 = 16 so $4 \times \underline{4} = \underline{16}$ eggs altogether.

Expected

- 4b. D is the odd one out because it shows 10×4 , whereas A, B and C all show 4×10 .
- 5b. Melissa is correct because $2 \times 8 = 16$.
- 6b. 5 cereal boxes should be drawn on the third shelf. $\underline{3} \times \underline{5} = \underline{15}$ cereal boxes altogether.

Greater Depth

- 7b. C is the odd one out because it shows 6×3 , whereas A and B both show 3×6 .
- 8b. Sid is incorrect because $6 \times 9p = 54p$. 54 is less than 55.
- 9b. 2 more children should have been drawn. Each child should have 12 cookies. $\underline{5} \times \underline{12} = \underline{60}$ cookies altogether.