

# Reasoning and Problem Solving

## Step 4: The Multiplication Symbol

### National Curriculum Objectives:

Mathematics Year 2: (2C7) [Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication \( \$\times\$ \), division \( \$\div\$ \) and equals \(=\) signs](#)

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 (Problem Solving)

**Developing** Use digit cards to create a multiplication sum with the greatest possible answer using knowledge of repeated addition. Uses up to five equal groups of 2 or 10.

**Expected** Use digit cards to create a multiplication sum with the greatest possible answer using knowledge of repeated addition. Uses up to ten equal groups of 2, 5 or 10.

**Greater Depth** Use digit cards to create a multiplication sum with the greatest possible answer using knowledge of repeated addition. Uses up to twelve equal groups of 2, 5, 10 or 3.

Questions 2, 5 and 8 (Reasoning)

**Developing** Compare the multiplication and repeated addition statements using up to five equal groups of 2 and 10.

**Expected** Compare the multiplication and repeated addition statements using up to ten equal groups of 2, 5 and 10.

**Greater Depth** Compare the multiplication and repeated addition statements using up to twelve equal groups of 2, 5, 10 and 3.

Questions 3, 6 and 9 (Reasoning)

**Developing** Explain who has given the correct matching statement by comparing multiplication and repeated addition. Uses up to five equal groups of 2 or 10.

**Expected** Explain who has given the correct matching statement by comparing multiplication and repeated addition. Uses up to ten equal groups of 2, 5 or 10.

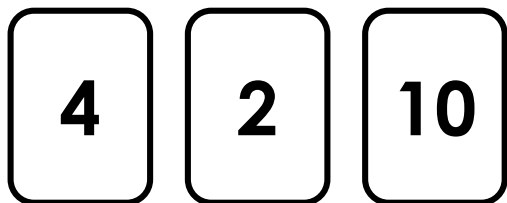
**Greater Depth** Explain who has given the correct matching statement by comparing multiplication and repeated addition. Uses up to twelve equal groups of 2, 5, 10 or 3.

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

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

## The Multiplication Symbol

1a. Choose 2 of these number cards to make a multiplication that gives you the greatest answer.



Show your working.



PS

2a. True or false?

$$2 + 2 + 2 > 2 \times 2$$

Explain your answer.



R

3a. There were 4 bags with 2 balls in each bag.



Emmy

The multiplication for this problem is  $5 \times 2$ .

The repeated addition for this problem is  $2 + 2 + 2 + 2$ .



Anton

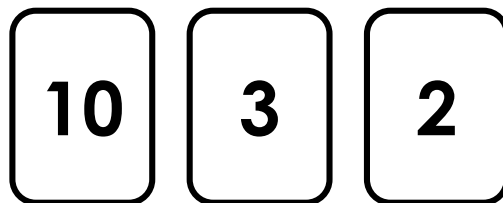
Who is correct? Prove it!



R

## The Multiplication Symbol

1b. Choose 2 of these number cards to make a multiplication that gives you the greatest answer.



Show your working.



PS

2b. True or false?

$$3 \times 2 > 2 + 2 + 2$$

Explain your answer.



R

3b. A fisherman had 2 nets with 10 fish in each net.



Rayan

The multiplication for this problem is  $3 \times 10$ .

The repeated addition for this problem is  $10 + 10$ .



Stephanie

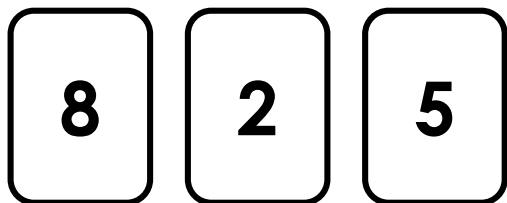
Who is correct? Prove it!



R

## The Multiplication Symbol

4a. Choose 2 of these number cards to make a multiplication that gives you the greatest answer.



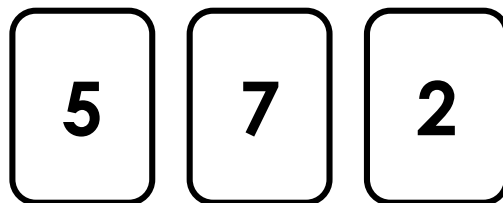
Show your working.



PS

## The Multiplication Symbol

4b. Choose 2 of these number cards to make a multiplication that gives you the greatest answer.



Show your working.



PS

5a. True or false?

$$\begin{array}{c} 5 + 5 + 5 + 5 \\ + 5 + 5 + 5 \end{array} < 5 \times 10$$

Explain your answer.



R

5b. True or false?

$$10 \times 2 > 5 + 5 + 5 + 5$$

Explain your answer.



R

6a. A farmer had 7 fields. He put 10 cows in each field.



The multiplication for this problem is  $7 \times 7$ .

The repeated addition for this problem is  $10 + 10 + 10 + 10 + 10 + 10 + 10$ .



Chen

Who is correct? Prove it!



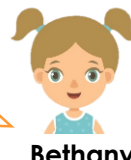
R

6b. There are 9 plates on a table with 5 sausages on each plate.



The multiplication for this problem is  $9 \times 5$ .

The repeated addition for this problem is  $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5$ .



Bethany

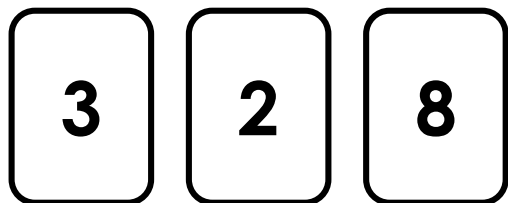
Who is correct? Prove it!



R

## The Multiplication Symbol

7a. Choose 2 of these number cards to make a multiplication that gives you the greatest answer.



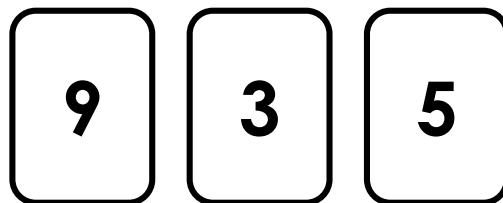
Show your working.



PS

## The Multiplication Symbol

7b. Choose 2 of these number cards to make a multiplication that gives you the greatest answer.



Show your working.



PS

8a. True or false?

$$12 \times 5 = 10 + 10 + 10 + 10 + 10 + 10$$

Explain your answer.



R

8b. True or false?

$$7 \times 3 < 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2$$

Explain your answer.



R

9a. There are 11 teams of children with 3 children in each team.



Abel

The multiplication for this problem is  $11 \times 3$ .

The repeated addition for this problem is  $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$ .



Amya

Who is correct? Prove it!



R

9b. A farmer plants 12 rows of carrots. There are 5 carrots in each row.



Amanda

The multiplication for this problem is  $12 \times 5$ .

The repeated addition for this problem is  $12 + 12 + 12 + 12 + 12$ .



Gabriel

Who is correct? Prove it!



R

## Reasoning and Problem Solving The Multiplication Symbol

### Developing

- 1a.  $4 \times 10 = 40$  or  $10 \times 4 = 40$ . Accept workings which use repeated addition, multiplication, 'lots of' or pictorial representations.
- 2a. True;  $2 + 2 + 2 = 6$  and  $2 \times 2 = 4$ .
- 3a. Anton;  $2 + 2 + 2 + 2$  is the same as 4 lots of 2.

### Expected

- 4a.  $8 \times 5 = 40$  or  $5 \times 8 = 40$ . Accept workings which use repeated addition, multiplication, 'lots of' or pictorial representations.
- 5a. True;  $5 \times 10 = 50$  and  $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 35$ .
- 6a. Chen;  $10 + 10 + 10 + 10 + 10 + 10 + 10$  is the same as 7 lots of 10.

### Greater Depth

- 7a.  $3 \times 8 = 24$  or  $8 \times 3 = 24$ . Accept workings which use repeated addition, multiplication, 'lots of' or pictorial representations.
- 8a. True; both sums equal 60.
- 9a. Abel;  $11 \times 3$  is the same as 11 lots of 3.

## Reasoning and Problem Solving The Multiplication Symbol

### Developing

- 1b.  $10 \times 3 = 30$  or  $3 \times 10 = 30$ . Accept workings which use repeated addition, multiplication, 'lots of' or pictorial representations.
- 2b. False; both sums equal 6.
- 3b. Stephanie;  $10 + 10$  is the same as 2 lots of 10.

### Expected

- 4b.  $5 \times 7 = 35$  or  $7 \times 5 = 35$ . Accept workings which use repeated addition, multiplication, 'lots of' or pictorial representations.
- 5b. False; both sums equal 20.
- 6b. Jamie;  $9 \times 5$  is the same as 9 lots of 5.

### Greater Depth

- 7b.  $9 \times 5 = 45$  or  $5 \times 9 = 45$ . Accept workings which use repeated addition, multiplication, 'lots of' or pictorial representations.
- 8b. False;  $2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 18$  and  $7 \times 3 = 21$ .
- 9b. Amanda;  $12 \times 5$  is the same as 12 lots of 5.