

Reasoning and Problem Solving

Step 2: Multiply 3 Numbers

National Curriculum Objectives:

Mathematics Year 4: (4C6a) [Recall multiplication and division facts for multiplication tables up to \$12 \times 12\$](#)

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 best way to group the numbers in a multiplication calculation. Includes facts from the 2, 3, 4, 5 and 10 times tables.

Expected Identify and explain the best way to group the numbers in a multiplication calculation. Using knowledge of place value to multiply a 2-digit number by a 1-digit number when working out the answer.

Greater Depth Identify and explain the best way to group the numbers in a multiplication calculation. Using knowledge of the 10, 11 and 12 times table and place value to multiply a 2-digit number by a 2-digit number when working out the answer.

Questions 2, 5 and 8 (Problem Solving)

Developing Arrange the cards to create a multiplication number sentence and identify the cards which cannot be used. Includes facts from the 2, 3, 4, 5 and 10 times tables.

Expected Arrange the cards to create a multiplication number sentence and identify the cards which cannot be used.

Greater Depth Arrange the cards to create a multiplication number sentence and identify the cards which cannot be used. Using knowledge of the 10, 11 and 12 times table and place value to multiply a 2-digit number by a 2-digit number when working out the answer.

Questions 3, 6 and 9 (Problem Solving)

Developing Find 3 numbers which can be multiplied to make a given product. Includes facts from the 2, 3, 4, 5 and 10 times tables.

Expected Find 3 numbers which can be multiplied to make a given product.

Greater Depth Find 3 numbers which can be multiplied to make a given product. Using knowledge of place value to multiply a 2-digit number by a 2-digit number when working out the answer.

More [Year 4 Multiplication and Division](#) resources.

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

Multiply 3 Numbers

Multiply 3 Numbers

1a. Tick the best way to group the numbers in the calculation below.

$$5 \times 3 \times 4$$

☐

$$3 \times 4 \times 5$$

☐

Explain your reasoning.



R

1b. Tick the best way to group the numbers in the calculation below.

$$9 \times 2 \times 2$$

☐

$$2 \times 2 \times 9$$

☐

Explain your reasoning.



R

2a. Arrange the cards to create a multiplication number sentence.

$$\boxed{2} \quad \boxed{3} \quad \boxed{20} \quad \boxed{\times}$$

$$\boxed{\times} \quad \boxed{5} \quad \boxed{=} \quad \boxed{2}$$

Which card cannot be used?



PS

2b. Arrange the cards to create a multiplication number sentence.

$$\boxed{40} \quad \boxed{5} \quad \boxed{=} \quad \boxed{30}$$

$$\boxed{3} \quad \boxed{\times} \quad \boxed{2} \quad \boxed{\times}$$

Which card cannot be used?



PS

3a. Using the numbers 1 to 9, complete the number sentence below.

$$\boxed{} \times \boxed{} \times \boxed{} = 18$$

You may use each number more than once.

Find 5 possibilities.



PS

3b. Using the numbers 1 to 9, complete the number sentence below.

$$\boxed{} \times \boxed{} \times \boxed{} = 20$$

You may use each number more than once.

Find 5 possibilities.



PS

Multiply 3 Numbers

Multiply 3 Numbers

4a. Tick the best way to group the numbers in the calculation below.

$$4 \times 2 \times 9$$

☐

$$9 \times 2 \times 4$$

☐

Explain your reasoning.



R

4b. Tick the best way to group the numbers in the calculation below.

$$6 \times 6 \times 2$$

☐

$$2 \times 6 \times 6$$

☐

Explain your reasoning.



R

5a. Arrange the cards to create a multiplication number sentence.

$$3 \quad 2 \quad 6 \quad \times \quad 5$$

$$\times \quad 8 \quad = \quad 70 \quad 80$$

Which cards cannot be used?



PS

5b. Arrange the cards to create a multiplication number sentence.

$$4 \quad 5 \quad = \quad 63 \quad 7$$

$$56 \quad \times \quad 2 \quad 6 \quad \times$$

Which cards cannot be used?



PS

6a. Using the numbers 2 to 9, complete the number sentence below.

$$\square \times \square \times \square = 48$$

You may use each number more than once.

Find 5 possibilities.



PS

6b. Using the numbers 2 to 9, complete the number sentence below.

$$\square \times \square \times \square = 36$$

You may use each number more than once.

Find 5 possibilities.



PS

Multiply 3 Numbers

Multiply 3 Numbers

7a. Tick the best way to group the numbers in the calculation below.

$$7 \times 7 \times 2 \quad \square$$

$$2 \times 7 \times 7 \quad \square$$

Explain your reasoning.



R

7b. Tick the best way to group the numbers in the calculation below.

$$9 \times 5 \times 4 \quad \square$$

$$5 \times 4 \times 9 \quad \square$$

Explain your reasoning.



R

8a. Arrange the cards to create a multiplication number sentence.

$$7 \quad 5 \quad 9 \quad \times \quad 11$$

$$\times \quad 330 \quad = \quad 6 \quad 240$$

Which cards cannot be used?



PS

8b. Arrange the cards to create a multiplication number sentence.

$$114 \quad 5 \quad = \quad 7 \quad 2$$

$$12 \quad \times \quad 3 \quad 168 \quad \times$$

Which cards cannot be used?



PS

9a. Using the numbers 2 to 9, complete the number sentence below.

$$\square \times \square \times \square = 225$$

You may use each number more than once.

How many possibilities can you find?



PS

9b. Using the numbers 2 to 9, complete the number sentence below.

$$\square \times \square \times \square = 105$$

You may use each number more than once.

How many possibilities can you find?



PS

Reasoning and Problem Solving

Multiply 3 Numbers

Developing

1a. $3 \times 4 \times 5$; you can use the times tables to work out $3 \times 4 = 12$ then $12 \times 5 = 60$.

2a. Various answers; for example:
 $2 \times 2 \times 5 = 20$. The card 3 cannot be used.

3a. Various answers; for example:
 $3 \times 3 \times 2$; $3 \times 2 \times 3$; $2 \times 3 \times 3$; $1 \times 3 \times 6$;
 $1 \times 6 \times 3$; $3 \times 1 \times 6$

Expected

4a. $4 \times 2 \times 9$; you can use the times tables to work out $4 \times 2 = 8$ then $8 \times 9 = 72$.

5a. Various answers; for example:
 $2 \times 5 \times 8 = 80$. The cards 3, 6 and 70 cannot be used.

6a. Various answers; for example:
 $3 \times 2 \times 8$; $8 \times 2 \times 3$; $4 \times 2 \times 6$; $6 \times 2 \times 4$;
 $3 \times 4 \times 4$; $4 \times 3 \times 4$

Greater Depth

7a. Accept either answer accompanied with valid reasoning, for example: $7 \times 7 \times 2$ because you can use the times tables to work out $7 \times 7 = 49$ then $49 \times 2 = 98$.

8a. Various answers; for example:
 $11 \times 6 \times 5 = 330$. The cards 7, 9 and 240 cannot be used.

9a. Various answers; for example:
 $5 \times 5 \times 9$; $9 \times 5 \times 5$; $5 \times 9 \times 5$

Reasoning and Problem Solving

Multiply 3 Numbers

Developing

1b. $2 \times 2 \times 9$; you can use the times tables to work out $2 \times 2 = 4$ then $4 \times 9 = 36$.

2b. Various answers; for example:
 $5 \times 2 \times 3 = 30$. The card 40 cannot be used.

3b. Various answers; for example:
 $2 \times 2 \times 5$; $2 \times 5 \times 2$; $5 \times 2 \times 2$; $1 \times 5 \times 4$;
 $1 \times 4 \times 5$; $4 \times 5 \times 1$

Expected

4b. $2 \times 6 \times 6$; you can use the times tables to work out $2 \times 6 = 12$ then $12 \times 6 = 72$.

5b. Various answers; for example:
 $4 \times 2 \times 7 = 56$. The cards 5, 6 and 63 cannot be used.

6b. Various answers; for example:
 $3 \times 2 \times 6$; $3 \times 6 \times 2$; $2 \times 3 \times 6$; $2 \times 6 \times 3$;
 $6 \times 3 \times 2$; $6 \times 2 \times 3$

Greater Depth

7b. Accept either answer accompanied with valid reasoning, for example: $5 \times 4 \times 9$ because you can use the times tables to work out $5 \times 4 = 20$ then $20 \times 9 = 180$.

8b. Various answers; for example:
 $12 \times 7 \times 2 = 168$. The cards 5, 3 and 114 cannot be used.

9b. Various answers; for example:
 $5 \times 3 \times 7$; $5 \times 7 \times 3$; $3 \times 5 \times 7$; $3 \times 7 \times 5$;
 $7 \times 5 \times 3$; $7 \times 3 \times 5$