Homework
Factor Pairs

National Curriculum Objectives:

Mathematics Year 4: (4C6a) Recall multiplication and division facts for multiplication tables up to 12 × 12
Mathematics Year 4: (4C6c) Recognise and use factor pairs and commutativity in mental calculations

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Follow the factor pairs of a given number through the maze though exploring the systematic recording of factor pairs (includes know facts of the 3, 4, 6 and 8 times table).
Expected Follow the factor pairs of a given number through the maze through exploring the systematic recording of factor pairs using knowledge of known times table facts, with given numbers to support.
Greater Depth Complete the factor pairs of given numbers through the maze, landing on factor pairs of alternate numbers through investigating systematic ways of recording and sorting factor pairs (includes known times table facts).

Questions 2, 5 and 8 (Varied Fluency)
Developing Identify whether the statement is true or false though exploring the systematic recording of factor pairs (includes know facts of the 3, 4, 6 and 8 times table).
Expected Identify whether the statement is true or false through exploring the systematic recording of factor pairs using knowledge of known times table facts, with given numbers to support.
Greater Depth Identify whether the statement is true or false through investigating systematic ways of recording and sorting factor pairs (includes known times table facts).

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify and explain which is the odd one out and why through exploring the systematic recording of factor pairs (includes know facts of the 3, 4, 6 and 8 times table).
Expected Identify and explain which is the odd one out and why through exploring the systematic recording of factor pairs using knowledge of known times table facts, with given numbers to support.
Greater Depth Complete the missing numbers to create an 'odd one out' question and explain your choices through investigating systematic ways of recording and sorting factor pairs (includes known times table facts).

Factor Pairs

1. Make your way through the maze by following the factor pairs of 24.

START	1 & 24	12 & 2	2 & 13	4 & 8	8 & 4
	4 & 6	6 & 4	8 & 3	12 & 3	11 & 2
	4 & 7	8 & 3	10 & 3	9 & 3	5 & 6
	13 & 2	3 & 8	4 & 6	2 & 12	24 & 1
	12 & 3	3 & 12	2 & 15	4 & 9	5 & 5

FINISH

You can only move vertically and horizontally.

D

VF
HW/Ext

2. True or false?

3 and 8 are a factor pair of 18.

D

VF
HW/Ext

3. Which factor pair is the odd one out?

A. 4 and 8

B. 2 and 16

C. 6 and 5

Explain your choice.

D

RPS
HW/Ext

Factor Pairs

4. Make your way through the maze by following the factor pairs of 36.

START	1 & 36	36 & 1	2 & 22	5 & 7	8 & 4
	7 & 6	9 & 4	8 & 7	17 & 3	11 & 3
	4 & 10	18 & 2	10 & 3	9 & 4	6 & 6
	16 & 2	6 & 6	11 & 3	12 & 3	30 & 1
	12 & 3	3 & 12	2 & 18	4 & 9	14 & 4

FINISH

You can only move vertically and horizontally.

E

VF
HW/Ext

5. True or false?

3 and 8 are a factor pair of 27.

E

VF
HW/Ext

6. Which factor pair is the odd one out?

A. 6 and 9

B. 4 and 16

C. 2 and 27

Explain your choice.

E

RPS
HW/Ext

Factor Pairs

7. Create a path through the maze by following alternate factor pairs of 36 and 72.

START	2 & 18	9 & ☐	2 & 19	5 & 9	8 & 2
	7 & 8	☐ & 4	8 & 4	16 & 3	1 & 72
	4 & 18	3 & 24	☐ & 18	9 & 4	☐ & 6
	16 & 2	6 & 12	18 & 4	72 & 2	8 & 9
	12 & 6	3 & 12	3 & ☐	6 & 12	1 & ☐

FINISH

You can only move vertically and horizontally.

GD

VF
HW/Ext

8. True or false?

If 4 and 5 are a factor pair of 20, then if I double both numbers I will create a factor pair of 40.

GD

VF
HW/Ext

9. Fill in the missing numbers so that the factor pair for B becomes the odd one out.

A. 6 and ☐

B. 4 and ☐

C. 2 and ☐

Explain your choices.

GD

RPS
HW/Ext

Homework
Factor Pairs

Developing

1.

START	1 & 24	12 & 2	2 & 13	4 & 8	8 & 4
	4 & 6	6 & 4	8 & 3	12 & 3	11 & 2
	4 & 7	8 & 3	10 & 3	9 & 3	5 & 6
	13 & 2	3 & 8	4 & 6	2 & 12	24 & 1 **FINISH**
	12 & 3	3 & 12	2 & 15	4 & 9	5 & 5

2. False. 3 and 8 are a factor pair of 24. 3 and 6 are a factor pair for 18.
3. C is the odd one out because A and B are both factor pairs of 32, but C is a factor pair of 30.

Expected

4.

START	1 & 36	36 & 1	2 & 22	5 & 7	8 & 4
	7 & 6	9 & 4	8 & 7	17 & 3	11 & 3
	4 & 10	18 & 2	10 & 3	9 & 4	6 & 6 **FINISH**
	16 & 2	6 & 6	11 & 3	12 & 3	30 & 1
	12 & 3	3 & 12	2 & 18	4 & 9	14 & 4

5. False. 3 and 8 are a factor pair of 24. 3 and 9 are a factor pair for 27.
6. B is the odd one out because A and C are both factor pairs of 54, but B is a factor pair of 64.

Greater Depth

7.

START	2 & 18	9 & 8	2 & 19	5 & 9	8 & 2
	7 & 8	9 & 4	8 & 4	16 & 3	1 & 72 **FINISH**
	4 & 18	3 & 24	2 & 18	9 & 4	6 & 6
	16 & 2	6 & 12	18 & 4	72 & 2	8 & 9
	12 & 6	3 & 12	3 & 12	6 & 12	1 & 36

8. False. 8 and 10 are a factor pair of 80 not 40.
9. Various answers, for example: A = 6 and 6; B = 4 and 8; C = 2 and 18. A and C are both factor pairs of 36 but B is a factor pair of 32.