Year 5 Problems Summer 2 Week 5

Objective:

- Identify multiples and factors.

Here are some numbers.

2̶   3   4   5   6   8   10

Write each number on the correct cards.

The number 2 has been written on the correct cards for you.

Multiples of 5	Factors of 24	Factors of 30
	2	2

Model answer

*It would be useful to begin by reminding ourselves about the mathematical meanings of the words **multiples** and **factors**:*

*A **multiple** is a number that is in a times table. For example multiples of five are 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75 … and they carry on and on in fives.*

***Factors** are whole numbers that divide exactly into another number. The factors of 20 are 1, 2, 4, 5, 10 and 20.*

We have a list of multiples of 5 above. It could also be useful to list the factors of 24 and 30 now. I shall do this as factor pairs, as this is a useful way of making sure we do not miss any.

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24 = 1 x 24	*(1, 24)*	*30 = 1 x 30*	*(1, 30)*
24 = 2 x 12	*(2, 12)*	*30 = 2 x 15*	*(2, 15)*
24 = 3 x 8	*(3, 8)*	*30 = 3 x10*	*(3, 10)*
24 = 4 x 6	*(4, 6)*	*30 = 5 x 6*	*(5, 6)*

With a problem like this where we need to make sure we have found all the possible answers it is very important to work systematically (to a plan and in an ordered way). So I will work my way through the list of numbers starting with the next number 3.

If I look at the lists above (or use my knowledge of multiplication tables) I can see that 3 is not a multiple of 5 but is a factor of both 24 (3 x 8) and 30 (3 x 10). I record a 3 on the Factors of 24 card and the Factors of 30 card. I now put a line through the 3 in the list of numbers so I know I have finished with it. I can now think about the number 4 and the remaining numbers following the same method of working as I did for the number 3.

The answer to the problem is on the next page:

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Here are some numbers.

2̸   3̸   4̸   5̸   6̸   8̸   1̸0̸

Write each number on the correct cards.

The number 2 has been written on the correct cards for you.

Multiples of 5	Factors of 24	Factors of 30
5	2	2
10	3	3
	4	5
	6	6
	8	10

Now try these problems.

Here are some numbers.

2̶   3   4   6   8   9   12

Write each number on the correct cards.

The number 2 has been written on the correct cards for you.

Multiples of 3	Factors of 18	Factors of 48
	2	2

Space for working

Here are some numbers.

~~4~~   5   6   7   8   10   12

Write each number on the correct cards.

The number 4 has been written on the correct cards for you.

Multiples of 2	Factors of 28	Factors of 35
4	4	

Space for working

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Answers:

Here are some numbers.

2ͣ 3ͣ 4ͣ 6ͣ 8ͣ 9ͣ 12ͣ

Write each number on the correct cards.

The number 2 has been written on the correct cards for you.

Multiples of 3	Factors of 18	Factors of 48
3	2	2
6	3	3
9	6	4
12	9	6
		8
		12

Answers:

Here are some numbers.

~~4~~   ~~5~~   ~~6~~   ~~7~~   ~~8~~   ~~10~~   ~~12~~

Write each number on the correct cards.

The number 4 has been written on the correct cards for you.

Multiples of 2	Factors of 28	Factors of 35
4	4	5
6	7	7
8		
10		
12		