Reasoning and Problem Solving
Step 1: Multiples

National Curriculum Objectives:

Mathematics Year 5: (5C5a) Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Identify a multiple from given parameters, using multiples of 2, 3, 5 or 10.
Expected Identify a multiple from given parameters using multiples of numbers up to and including 12.
Greater Depth Identify a multiple from given parameters using multiples of numbers beyond the 12 times tables.

Questions 2, 5 and 8 (Reasoning)
Developing Find the connection between given numbers from a section of a hundred square, using multiples of 2, 3, 5 or 10.
Expected Find the connection between given numbers from a section of a hundred square, using multiples of numbers up to and including 12.
Greater Depth Find the connection between given numbers from a section of a hundred square, using multiples of numbers up to and beyond 12.

Questions 3, 6 and 9 (Reasoning)
Developing Explain why a number is the odd one out, using multiples of 2, 3, 5 or 10.
Expected Explain why a number is the odd one out, using multiples of numbers up to and including 12.
Greater Depth Explain why a number is the odd one out, using multiples of numbers up to and beyond 12.

More Year 5 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

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Multiples

1a. Florence is thinking of a number.

My number is a multiple of 5 and 10. It is even and between 35 and 55.

What could her number be?

Is there only one answer?

D

PS

Multiples

1b. Greg is thinking of a number.

My number is a multiple of 3. It is even and between 20 and 30.

What could his number be?

Is there only one answer?

D

PS

2a. Below is a section of a hundred square.

19	(20)	21	22
29	(30)	31	32
39	(40)	41	42

Why are some of the numbers shaded? Why do some of the numbers have circles around them?

D

R

2b. Below is a section of a hundred square.

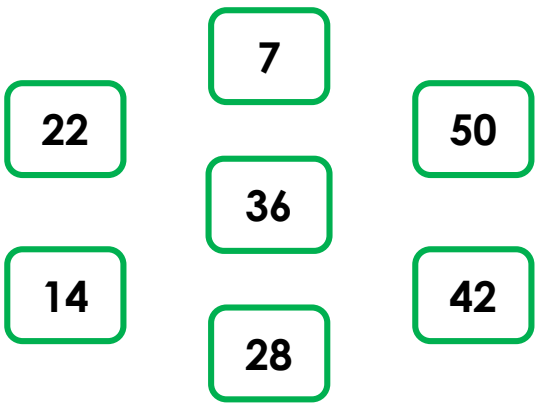
(15)	16	17	18
(25)	26	27	28
(35)	36	37	38

Why are some of the numbers shaded? Why do some of the numbers have circles around them?

D

R

3a. Which is the odd one out?

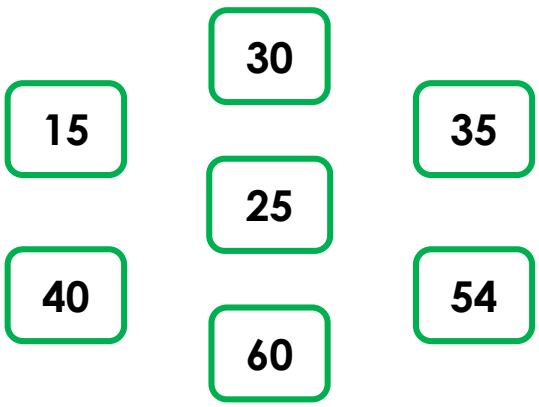


Explain how you know.

D

R

3b. Which is the odd one out?



Explain how you know.

D

R

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Multiples

4a. Mia is thinking of a number.

My number is a multiple of 9 and 3. It is even and between 50 and 60.

What could her number be?

Is there only one answer?

E PS

Multiples

4b. Alex is thinking of a number.

My number is a multiple of 11 and 2. It is even and between 20 and 50.

What could his number be?

Is there only one answer?

E PS

5a. Below is a section of a hundred square.

(42)	43	44
52	53	54
62	(63)	64

Why are some of the numbers shaded? Why do some of the numbers have circles around them?

E R

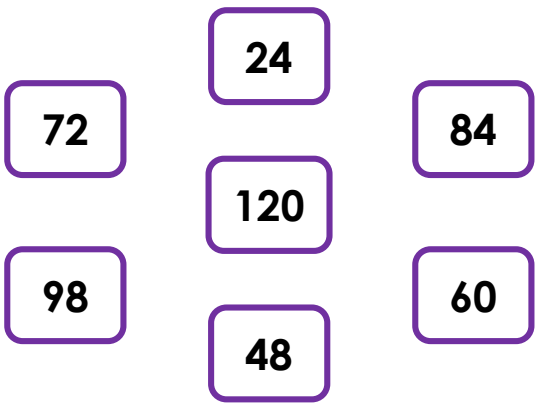
5b. Below is a section of a hundred square.

62	63	64
(72)	73	74
82	83	(84)

Why are some of the numbers shaded? Why do some of the numbers have circles around them?

E R

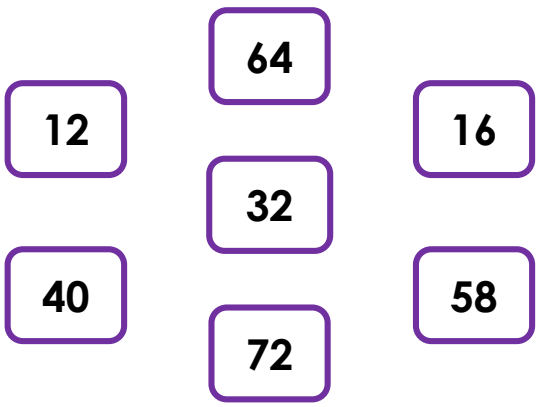
6a. Which is the odd one out?



Explain how you know.

E R

6b. Which is the odd one out?



Explain how you know.

E R

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Multiples

7a. Rachel is thinking of a number.

My number is a multiple of 3, 6 and 9. It is even and between 100 and 130.

What could her number be?

Is there only one answer?

GD PS

7b. Monty is thinking of a number.

My number is a multiple of 11 and 7. It is even and between 130 and 160.

What could his number be?

Is there only one answer?

GD PS

8a. Below is a section of a hundred square.

(104)	105	106
114	115	(116)
(124)	125	126

Why are some of the numbers shaded? Why do some of the numbers have circles around them?

GD R

8b. Below is a section of a hundred square.

(96)	97	98
106	107	(108)
116	117	118

Why are some of the numbers shaded? Why do some of the numbers have circles around them?

GD R

9a. Which is the odd one out?

96, 80, 72, 112, 88, 60, 104

Explain how you know.

GD R

9b. Which is the odd one out?

98, 63, 77, 21, 84, 70, 92

Explain how you know.

GD R

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Reasoning and Problem Solving Multiples

Developing

1a. 40 or 50

2a. Shaded – multiples of 3; Circles – multiples of 5 and 10

3a. 7 is the odd one out because it is not a multiple of 2.

Expected

4a. 54

5a. Shaded – multiples of 3; Circles – multiples of 7

6a. 98 is the odd one out because it is not a multiple of 12.

Greater Depth

7a. 108 or 126

8a. Shaded – multiples of 5; Circles – multiples of 4

9a. 60 is the odd one out because it is not a multiple of 8.

Reasoning and Problem Solving Multiples

Developing

1b. 24

2b. Shaded – multiples of 2; Circles – multiples of 5

3b. 54 is the odd one out because it is not a multiple of 5.

Expected

4b. 22 or 44

5b. Shaded – multiples of 8; Circles – multiples of 6 or 12

6b. 58 is the odd one out because it is not a multiple of 4.

Greater Depth

7b. 154

8b. Shaded – multiples of 3; Circles – multiples of 12

9b. 92 is the odd one out because it is not a multiple of 7.

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