

## Week 3

### This week in a nutshell:

Students will encounter topics they are aware of, but may not have explicit experience of dealing with. Questions are accessible, and progressive in nature. Encouraging students to use results from previous days, and remembering how previous questions could be dealt with will foster an enquiring mindset and a fluency with important methods.

**Question 1:** Multiples (verification)

**Question 2:** Square and cube numbers

**Question 3:** Factors

**Question 4:** Column addition

**Question 5:** Column subtraction

The questions aim to develop and deepen understanding over the week. Due to the necessity of the topics covered this week, there is an emphasis on the interchangeability of command words, and language flexibility. It may be worth taking some extra time this week to make sure your students are developing their mathematical literacy.

### This week's ideas for class discussion include:

**Question 1: Multiples (verification)**

- Why is it so important to be able to verify multiples?
- How many ways can you think of to verify a multiple?

**Question 2: Square and cube numbers**

- How might square and cube numbers relate to objects of the same names?

**Question 3: Factors**

- How does the size of a factor compare to the number we are given?

**Question 4: Column addition**

- Why do you think we use column addition?

**Question 5: Column Subtraction**

- How would you describe the method of regrouping? How does it work?

## Week 3: Day 1

1) Is 35 a multiple of 7?

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2) Fill in the missing numbers:

a)  $5^2 = \underline{\quad}$

b)  $2^3 = \underline{\quad}$

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3 List the factors of 24.

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4) Complete the column addition.

$$\begin{array}{r} 273 \\ + 105 \\ \hline \\ \hline \end{array}$$


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5) Complete the column subtraction.

$$\begin{array}{r} 586 \\ - 362 \\ \hline \\ \hline \end{array}$$


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## Week 3: Day 1 Answers

- 1) Is 35 a multiple of 7?

Yes, because  $5 \times 7 = 35$

- 2) Fill in the missing numbers:

a)  $5^2 = \underline{25}$

b)  $2^3 = \underline{8}$

- 3 List the factors of 24.

1, 2, 3, 4, 6, 8, 12, 24

- 4) Complete the column addition.

$$\begin{array}{r} 2 \quad 7 \quad 3 \\ + \quad 1 \quad 0 \quad 5 \\ \hline 3 \quad 7 \quad 8 \end{array}$$

- 5) Complete the column subtraction.

$$\begin{array}{r} 5 \quad 8 \quad 6 \\ - \quad 3 \quad 6 \quad 2 \\ \hline 2 \quad 2 \quad 4 \end{array}$$

## Week 3: Day 2

1) Is 42 a multiple of 4?

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2) Fill in the missing numbers:

a)  $7^2 = \underline{\quad}$

b)  $4^3 = \underline{\quad}$

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3) List the factors of 54.

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4) Complete the column addition.

$$\begin{array}{r} 306 \\ + 455 \\ \hline \\ \hline \end{array}$$

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5) Complete the column subtraction.

$$\begin{array}{r} 392 \\ - 173 \\ \hline \\ \hline \end{array}$$

## Week 3: Day 2 Answers

- 1) Is 42 a multiple of 4?

No

- 2) Fill in the missing numbers:

a)  $7^2 = \underline{49}$

b)  $4^3 = \underline{64}$

- 3) List the factors of 54.

1, 2, 3, 6, 9, 18, 27, 54

- 4) Complete the column addition.

$$\begin{array}{r} 306 \\ + 455 \\ \hline 761 \end{array}$$

- 5) Complete the column subtraction.

$$\begin{array}{r} 392 \\ - 173 \\ \hline 219 \end{array}$$

## Week 3: Day 3

1) Is 97 a multiple of 3?

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2) Fill in the missing numbers:

a)  $8^2 = \underline{\quad}$

b)  $5^3 = \underline{\quad}$

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3) List the factors of 32.

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4) Complete the column addition.

$$\begin{array}{r} 8 \quad 5 \quad 7 \\ + \quad 2 \quad 5 \\ \hline \\ \hline \end{array}$$

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5) Complete the column subtraction.

$$\begin{array}{r} 9 \quad 1 \quad 6 \\ - 6 \quad 5 \quad 2 \\ \hline \\ \hline \end{array}$$

## Week 3: Day 3 Answers

- 1) Is 97 a multiple of 3?

No

- 2) Fill in the missing numbers:

a)  $8^2 = \underline{64}$

b)  $5^3 = \underline{125}$

- 3) List the factors of 32.

1, 2, 4, 8, 16, 32

- 4) Complete the column addition.

$$\begin{array}{r} 8 \quad 5 \quad 7 \\ + \quad \quad 2 \quad 5 \\ \hline 8 \quad 8 \quad 2 \\ \hline \end{array}$$

- 5) Complete the column subtraction.

$$\begin{array}{r} 9 \quad 1 \quad 6 \\ - 6 \quad 5 \quad 2 \\ \hline 2 \quad 6 \quad 4 \\ \hline \end{array}$$

## Week 3: Day 4

1) Is 78 a multiple of 6?

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2) Fill in the missing numbers:

a)  $10^2 = \underline{\quad}$

b)  $\square^3 = 27$

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3) List the factors of 31.

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4) Complete the column addition.

$$\begin{array}{r} 726 \\ + 284 \\ \hline \\ \hline \end{array}$$

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5) Complete the column subtraction.

$$\begin{array}{r} 432 \\ - 178 \\ \hline \\ \hline \end{array}$$



## Week 3: Day 4 Answers

- 1) Is 78 a multiple of 6?

Yes, because  $13 \times 6 = 78$

- 2) Fill in the missing numbers:

a)  $10^2 = \underline{100}$

b)  $3^3 = 27$

- 3) List the factors of 31.

1, 31

- 4) Complete the column addition.

$$\begin{array}{r} 7 \quad 2 \quad 6 \\ + \quad 2 \quad 8 \quad 4 \\ \hline 1 \quad 0 \quad 1 \quad 0 \\ \hline \end{array}$$

- 5) Complete the column subtraction.

$$\begin{array}{r} 4 \quad 3 \quad 2 \\ - \quad 1 \quad 7 \quad 8 \\ \hline 2 \quad 5 \quad 4 \\ \hline \end{array}$$

## Week 3: Day 5

1) Is 82 a multiple of 4?

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2) Fill in the missing numbers:

a) <sup>2</sup> = 144

b)  $10^3$  = \_\_\_\_\_

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3) List the factors of 81.

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4) Complete the column addition.

$$\begin{array}{r} 4 \quad 9 \quad 9 \\ + \quad 3 \quad 1 \quad 1 \\ \hline \\ \hline \end{array}$$

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5) Complete the column subtraction.

$$\begin{array}{r} 4 \quad 0 \quad 1 \\ - \quad 1 \quad 5 \quad 5 \\ \hline \\ \hline \end{array}$$

## Week 3: Day 5 Answers

- 1) Is 82 a multiple of 4?

No

- 2) Fill in the missing numbers:

a)  $12^2 = 144$

b)  $10^3 = 1000$

- 3) List the factors of 81.

1, 3, 9, 27, 81

- 4) Complete the column addition.

$$\begin{array}{r} 4 \quad 9 \quad 9 \\ + \quad 3 \quad 1 \quad 1 \\ \hline 8 \quad 1 \quad 0 \end{array}$$

- 5) Complete the column subtraction.

$$\begin{array}{r} 4 \quad 0 \quad 1 \\ - \quad 1 \quad 5 \quad 5 \\ \hline 2 \quad 4 \quad 6 \end{array}$$

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