

Week 7

This week in a nutshell:

Topics seen in the previous half term are developed further in order for students to become fluent in a broader range of applications of the skills covered. This week sees the introduction of algebraic concepts, which may be new territory for some students. At this point, fluency with terminology and meaning is highly important and time to answer any questions from students post exercise should be taken.

Question 1: Product of prime factors

Question 2: Numbers as figures and words

Question 3: Like terms

Question 4: Column addition/subtraction

Question 5: Letters as numbers

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: **Product of prime factors**

- Why is it useful to write a number in this way?

Question 2: **Numbers as figures and words**

- How important is it to write numbers in more than one way?
- What situations are we thinking about when we write numbers as figures or words?

Question 3: **Like terms**

- What do we look at to determine like terms?

Question 4: **Column addition/subtraction**

- Have you found any strategies to make your methods even more effective?

Question 5: **Letters as numbers**

- Are letters used in algebra actually letters?
- Could algebra be considered a convenience or a tool or a discipline?

Week 7: Day 1

1) Write 18 as a product of prime factors.

2) Write one thousand and eighty nine using figures.

3 Identify the like terms:

$$2x + y + 3x$$

4) Complete the column addition.

$$\begin{array}{r} 3 \quad 4 \quad 9 \\ + \quad 2 \quad 5 \quad 6 \\ \hline \\ \hline \end{array}$$

5) Write an expression that means the same as

“A number added to seven”

Week 7: Day 1 Answers

- 1) Write 18 as a product of prime factors.

$$2 \times 3 \times 3$$

- 2) Write one thousand and eighty nine using figures.

1089

- 3 Identify the like terms:

$$2x + y + 3x$$

- 4) Complete the column addition.

$$\begin{array}{r} 3 \quad 4 \quad 9 \\ + \quad 2 \quad 5 \quad 6 \\ \hline 6 \quad 0 \quad 5 \end{array}$$

- 5) Write an expression that means the same as

“A number added to seven”

$$7 + n$$

(allow $n + 7$)

Week 7: Day 2

1) Write 56 as a product of prime factors.

2) Write 2055 using words.

3) Identify the like terms:

$$5a + 2ab - 3ab + 7b$$

4) Complete the column subtraction.

$$\begin{array}{r} 5 \quad 0 \quad 7 \\ - 1 \quad 1 \quad 8 \\ \hline \\ \hline \end{array}$$

5) Write an expression that means the same as

“The difference between a number and five”

Week 7: Day 2 Answers

- 1) Write 56 as a product of prime factors.

$$2 \times 2 \times 2 \times 7$$

- 2) Write 2055 using words.

Two thousand and fifty five

- 3) Identify the like terms:

$$5a + 2ab - 3ab + 7b$$

- 4) Complete the column addition.

$$\begin{array}{r} 507 \\ - 118 \\ \hline 389 \end{array}$$

- 5) Write an expression that means the same as

“The difference between a number and five”

$$5 - n \quad \text{or} \quad n - 5$$

Week 7: Day 3

1) Write 36 as a product of prime factors.

2) Write sixty thousand and sixty three using figures.

3) Identify the like terms:

$$8xy - 6yx + yz - zx$$

4) Complete the column addition. #

$$\begin{array}{r} 54.88 \\ + 27.22 \\ \hline \\ \hline \end{array}$$

5) Write an expression that means the same as

“Seventy divided by a number”

Week 7: Day 3 Answers

- 1) Write 36 as a product of prime factors.

$$2 \times 2 \times 3 \times 3$$

- 2) Write sixty thousand and sixty three using figures.

60063

- 3) Identify the like terms:

$$8xy - 6yx + yz - zx$$

- 4) Complete the column addition.

$$\begin{array}{r} 54.88 \\ + 27.22 \\ \hline 82.10 \\ \hline \end{array}$$

- 5) Write an expression that means the same as

“Seventy divided by a number”

$$70/n \quad \text{or} \quad 70 \div n$$

Week 7: Day 4

1) Write 105 as a product of prime factors.

2) Write 816 using words.

3) Identify the like terms:

$$2m + 2m^2 + 2m^3 - 5m$$

4) Complete the column subtraction.

$$\begin{array}{r} 37.23 \\ - 12.31 \\ \hline \\ \hline \end{array}$$

5) Write an expression that means the same as

“Two lots of a number subtracted from nine”

Week 7: Day 4 Answers

- 1) Write 105 as a product of prime factors.

$$3 \times 5 \times 7$$

- 2) Write 816 using words.

Eight hundred and sixteen

- 3) Identify the like terms:

$$2m + 2m^2 + 2m^3 - 5m$$

- 4) Complete the column subtraction.

$$\begin{array}{r} 37.23 \\ - 12.31 \\ \hline 24.92 \end{array}$$

- 5) Write an expression that means the same as

“Two lots of a number subtracted from nine”

$$9 - 2n$$

Week 7: Day 5

1) Write 144 as a product of prime factors.

2) Write thirteen thousand, nine hundred and two using figures.

3) Identify the like terms:

$$x^3 - y^2 + 3x^2 - 5x^3$$

4) Complete the column subtraction.

$$\begin{array}{r} 8 \quad . \quad 0 \quad 0 \quad 3 \\ - 3 \quad . \quad 1 \quad 1 \quad 4 \\ \hline \\ \hline \end{array}$$

5) Write an expression that means the same as

“Eight plus a number, all divided by three”

Week 7: Day 5 Answers

- 1) Write 144 as a product of prime factors.

$$2 \times 2 \times 2 \times 2 \times 3 \times 3$$

- 2) Write thirteen thousand, nine hundred and two using figures.

13902

- 3) Identify the like terms:

$$x^3 - y^2 + 3x^2 - 5x^3$$

- 4) Complete the column subtraction.

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

- 5) Write an expression that means the same as

“Eight plus a number, all divided by three”

$$\frac{8 + n}{3} \quad \text{or} \quad \frac{n + 8}{3}$$

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