

Week 5

This week in a nutshell:

This week follows from skills developed over the previous four weeks so you may wish to offer students a brief reminder of what they have covered so far. Students could make use of mnemonics to help them to remember the order of operations. Asking students to use given information encourages a good mathematical mindset and develops the use of logic.

Question 1: Written multiplication with decimals

Question 2: Square roots

Question 3: Dividing decimals

Question 4: Products of primes with information given

Question 5: Using the order of operations

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: **Written multiplication with decimals**

- How do methods for multiplying decimals compare to those for integers?

Question 2: **Square roots**

- Can you think of an efficient method for finding a square root?

Question 3: **Dividing decimals**

- Name some practical applications of dividing decimals.

Question 4: **Products of primes with information given**

- How does the information given affect your approach to finding an answer to these questions?

Question 5: **Using the order of operations**

- Why do we have an order of operations?
- What would happen if the order of operations was different?

Week 5: Day 1

1) Use a written method to calculate 2.8×6.1

2) Find the square root of 36.

3 What is 4.5 divided by 9?

4) Given that

$21 = 3 \times 7$ as a product of prime factors,

what is 42 as a product of prime factors?

5) Use the rules for the order of operations to calculate

$$2 \times 9 + 3 \times 4$$

Week 5: Day 1 Answers

- 1) Use a written method to calculate 2.8×6.1

17.08

-
- 2) Find the square root of 36.

6

-
- 3 What is 4.5 divided by 9?

0.5

-
- 4) Given that

$21 = 3 \times 7$ as a product of prime factors,

what is 42 as a product of prime factors?

$2 \times 3 \times 7$

-
- 5) Use the rules for the order of operations to calculate

$$2 \times 9 + 3 \times 4 = 18 + 12$$

$$= 30$$

Week 5: Day 2

1) Use a written method to calculate 5.8×4.11

2) Find the square root of 16.

3) Share £1.05 into 7 equal parts.

4) Given that

$22 = 2 \times 11$ as a product of prime factors,

what is 66 as a product of prime factors?

5) Use the rules for the order of operations to calculate

$$3 \times (9 + 3) - 4$$

Week 5: Day 2 Answers

- 1) Use a written method to calculate 5.8×4.11

23.838

- 2) Find the square root of 16.

4

- 3) Share £1.05 into 7 equal parts.

15p or £0.15

- 4) Given that

$22 = 2 \times 11$ as a product of prime factors,

what is 66 as a product of prime factors?

$2 \times 3 \times 11$

- 5) Use the rules for the order of operations to calculate

$$3 \times (9 + 3) - 4 = 3 \times 12 - 4$$

$$= 36 - 4$$

$$= 32$$

Week 5: Day 3

1) Use a written method to calculate 1.01×0.9

2) Find the square root of 81.

3) Divide 82.26 by 4

4) Given that

$25 = 5 \times 5$ as a product of prime factors,

what is 150 as a product of prime factors?

5) Use the rules for the order of operations to calculate

$$(99 - 7^2) \div 5$$

Week 5: Day 3 Answers

- 1) Use a written method to calculate 1.01×0.9

0.909

- 2) Find the square root of 81.

9

- 3) Divide 82.26 by 4

20.565

- 4) Given that

$25 = 5 \times 5$ as a product of prime factors,

what is 150 as a product of prime factors?

$2 \times 3 \times 5 \times 5$

- 5) Use the rules for the order of operations to calculate

$$(99 - 7^2) \div 5 = (99 - 49) \div 5$$

$$= 50 \div 5$$

$$= 10$$

Week 5: Day 4

1) Use a written method to calculate 5.5×55.55

2) Find the square root of 121.

3) What is 3.028 divided by 5?

4) Given that

$8 = 2^3$ as a product of prime factors,

write 32 as a product of prime factors using
index notation.

5) Use the rules for the order of operations to calculate

$$45 \div 9 + (17 - 3 \times 4)$$

Week 5: Day 4 Answers

- 1) Use a written method to calculate 5.5×55.55

305.525

- 2) Find the square root of 121.

11

- 3) What is 3.028 divided by 5

0.6056

- 4) Given that

$8 = 2^3$ as a product of prime factors,

write 32 as a product of prime factors using index notation.

2^5

- 5) Use the rules for the order of operations to calculate

$$45 \div 9 + (17 - 3 \times 4) = 5 + (17 - 12)$$

$$= 5 + 5$$

$$= 10$$

Week 5: Day 5

1) Use a written method to calculate 10.05×20.07

2) Find the square root of 225.

3) Divide 259.33 by 25

4) Given that

$10 = 2 \times 5$ as a product of prime factors,

write 1000 as a product of prime factors
using index notation.

5) Use the rules for the order of operations to calculate

$$(3 + 2)^2 - 16 \div 4$$

Week 5: Day 5 Answers

- 1) Use a written method to calculate 10.05×20.07

201.7035

- 2) Find the square root of 225.

15

- 3) Divide 259.33 by 25

10.3732

- 4) Given that

$10 = 2 \times 5$ as a product of prime factors,

write 1000 as a product of prime factors
using index notation.

$2^3 \times 5^3$

- 5) Use the rules for the order of operations to calculate

$$(3 + 2)^2 - 16 \div 4 = 5^2 - 4$$

$$= 25 - 4$$

$$= 21$$

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