

Week 8

This week in a nutshell:

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Students will be seeing some abstract ideas this week along with some familiar skills from dealing with numbers. You may have students that already have techniques for dealing with missing value. These ideas could be explored, or you may wish students to use a particular strategy.

Question 1: Collecting like terms

Question 2: Removing the multiplication symbol from expressions

Question 3: Written multiplication

Question 4: Prime factors of square numbers

Question 5: Finding missing value

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: **Collecting like terms**

- How do you use the sign in front of a term? How much does this matter?

Question 2: **Removing the multiplication symbol from expressions**

- Why might multiplication symbols be a hindrance in algebra?
- What convention do we rely on for multiplication in algebra?

Question 3: **Written multiplication**

- What ways have you found to multiply more efficiently?

Question 4: **Prime factors of square numbers**

- What happens when we look at the prime factors of square numbers?
- Can you guess how this would work for cube numbers?

Question 5: **Finding missing value**

- What mental process do you follow for finding missing value?

Week 8: Day 1

- 1) Simplify the expression by collecting like terms.

$$2x + 5x + 3$$

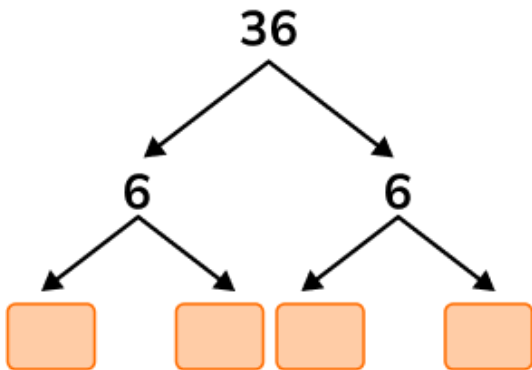
- 2) Simplify this expression.

$$3 \times 4a$$

- 3) Use a written method to evaluate

$$34 \times 107$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



Week 8: Day 1 Answers

- 1) Simplify the expression by collecting like terms.

$$2x + 5x + 3 = 7x + 3$$

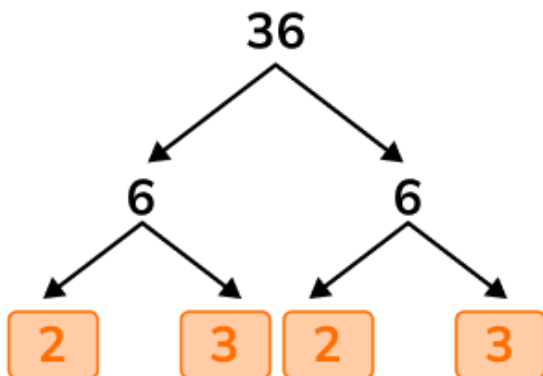
- 2) Simplify this expression.

$$3 \times 4a = 12a$$

- 3) Use a written method to evaluate

$$34 \times 107 = 3638$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



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Week 8: Day 2

- 1) Simplify the expression by collecting like terms.

$$1 + 9m + n + 4m - 2n$$

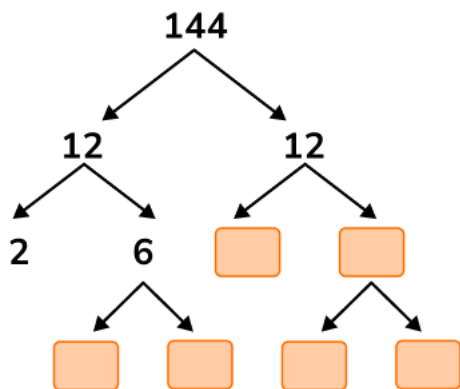
- 2) Simplify this expression.

$$5b \times 2$$

- 3) Use a written method to evaluate

$$781 \times 49$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



Week 8: Day 2 Answers

- 1) Simplify the expression by collecting like terms.

$$1 + 9m + n + 4m - 2n = 1 + 13m - n$$

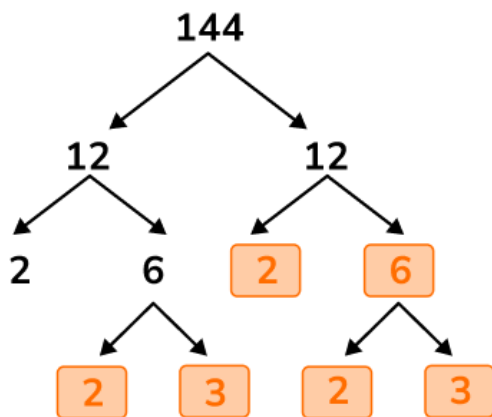
- 2) Simplify this expression.

$$5b \times 2 = 10b$$

- 3) Use a written method to evaluate

$$781 \times 49 = 38269$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



Week 8: Day 3

- 1) Simplify the expression by collecting like terms.

$$7g + 3 - 2h - 5 + 2h$$

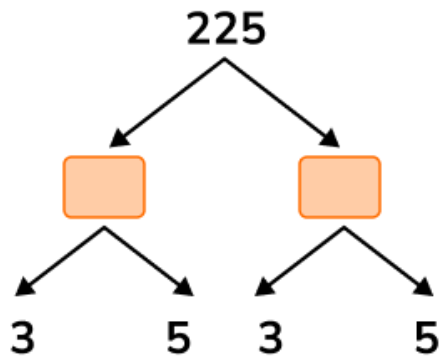
- 2) Simplify this expression.

$$3m \times 5n$$

- 3) Use a written method to evaluate

$$2.3 \times 5.2$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



Week 8: Day 3 Answers

- 1) Simplify the expression by collecting like terms.

$$7g + 3 - 2h - 5 + 2h = 7g - 2$$

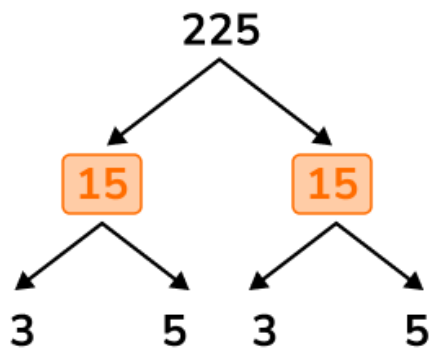
- 2) Simplify this expression.

$$3m \times 5n = 15mn$$

- 3) Use a written method to evaluate

$$2.3 \times 5.2 = 11.96$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



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Week 8: Day 4

- 1) Simplify the expression by collecting like terms.

$$7a + 4ab - 2a + b$$

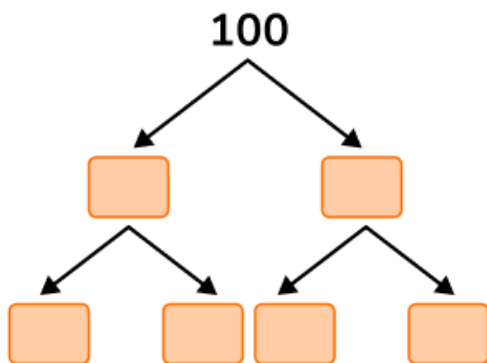
- 2) Simplify this expression.

$$5 \times g \times 4h$$

- 3) Use a written method to evaluate

$$2.02 \times 1.3$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



Week 8: Day 4 Answers

- 1) Simplify the expression by collecting like terms.

$$7a + 4ab - 2a + b = 5a + 4ab + b$$

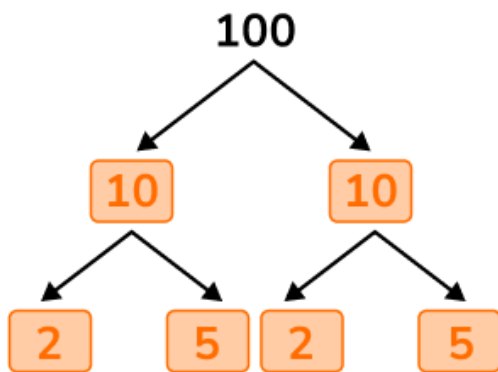
- 2) Simplify this expression.

$$5 \times g \times 4h = 20gh$$

- 3) Use a written method to evaluate

$$2.02 \times 1.3 = 2.626$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



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Week 8: Day 5

- 1) Simplify the expression by collecting like terms.

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

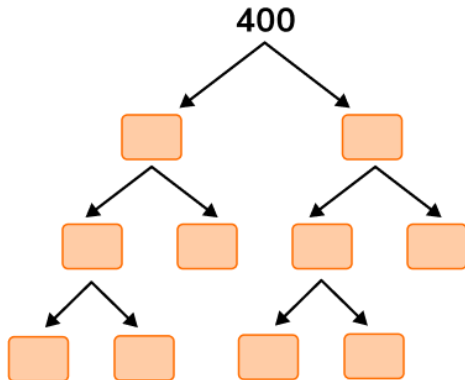
- 2) Write down the first five multiples of 15.

$$3a \times 4a$$

- 3) Use a written method to evaluate

$$132 \times 4.52$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



Week 8: Day 5 Answers

- 1) Simplify the expression by collecting like terms.

$$3x^2 - 5x + 2 - x^2 - 2x = 2x^2 - 7x + 2$$

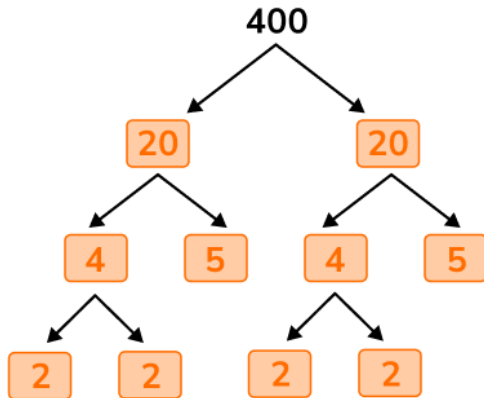
- 2) Write down the first five multiples of 15.

$$3a \times 4a = 12a^2$$

- 3) Use a written method to evaluate

$$132 \times 4.52 = 596.64$$

- 4) Complete this diagram for prime factors.



- 5) If the value of each star is the same, how much is each star worth?



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