

Week 2

This week in a nutshell:

As students see topics repeating, it is worth issuing a reminder of the need for fluency in key skill areas; for example using factors and multiples across algebra or geometry, and (with respect to question 2) being able to decode written statements to construct mathematical notation. Question 5 deals with the fundamental idea of similarity and congruence; students may need the definitions available for confidence.

Question 1: Factors and multiples

Question 2: Writing words as figures

Question 3: Handwritten calculation (+ and -)

Question 4: Angles in quadrilaterals

Question 5: Similarity and congruence

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: **Factors and multiples**

- Are factors and multiples inverses, or is there more going on?

Question 2: **Writing words as figures**

- How many representations can the same number have?

Question 3: **Handwritten calculation (+ and -)**

- What methods can you use to add and subtract?

Question 4: **Angles in quadrilaterals**

- How might the use of triangles simplify/complicate the problem solving process?

Question 5: **Similarity and congruence**

- How do you remember the difference between similarity and congruence?

Week 2: Day 1

- 1) List all prime numbers less than 20.

- 2) Write in figures:

Two thousand and eighteen

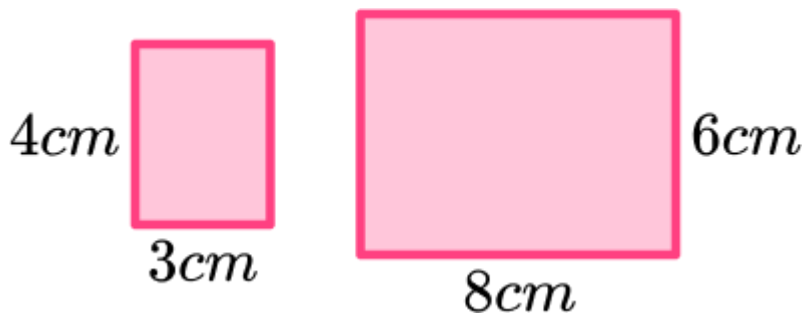
- 3) Calculate:

$$347 + 655 =$$

- 4) Work out the size of angle a .



- 5) Are these rectangles similar, congruent, or neither?



Week 2: Day 1 Answers

- 1) List all prime numbers less than 20.

2, 3, 5, 7, 11, 13, 17, 19

- 2) Write in figures:

Two thousand and eighteen

2018

- 3) Calculate:

$$347 + 655 = 1002$$

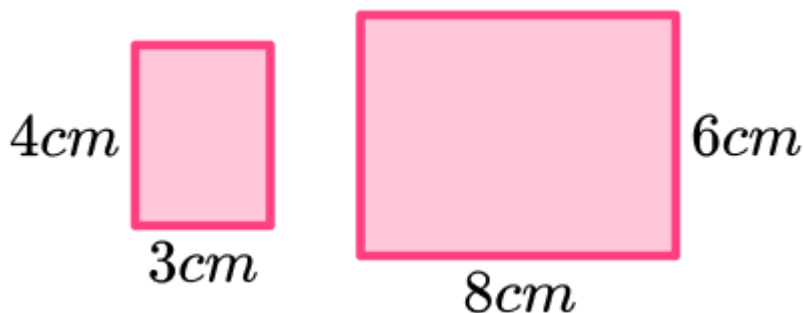
- 4) Work out the size of angle a .

124°



- 5) Are these rectangles similar, congruent, or neither?

similar



Week 2: Day 2

- 1) Write the first seven multiples of seven.

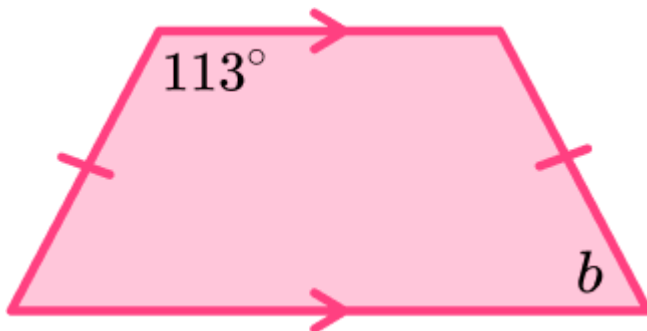
- 2) Write in figures:

Forty thousand, nine hundred

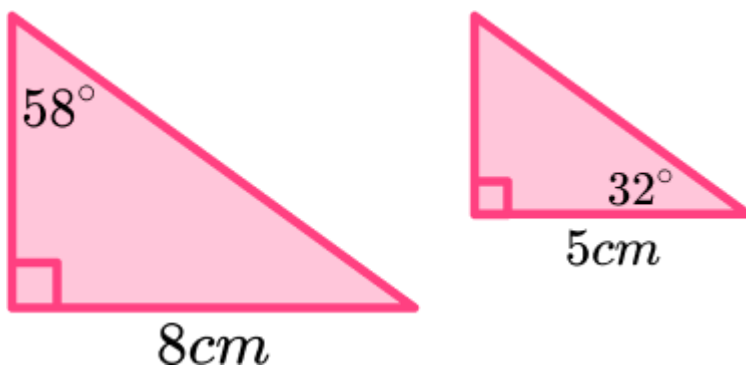
- 3) Calculate:

$$837 - 349 =$$

- 4) Work out the size of angle b .



- 5) Are these triangles similar, congruent, or neither?



Week 2: Day 2 Answers

- 1) Write the first seven multiples of seven.

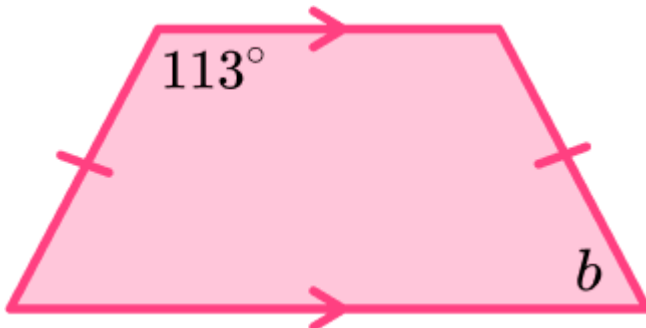
7, 14, 21, 28, 35, 42, 49

- 2) Write in figures:
Forty thousand, nine hundred
40900

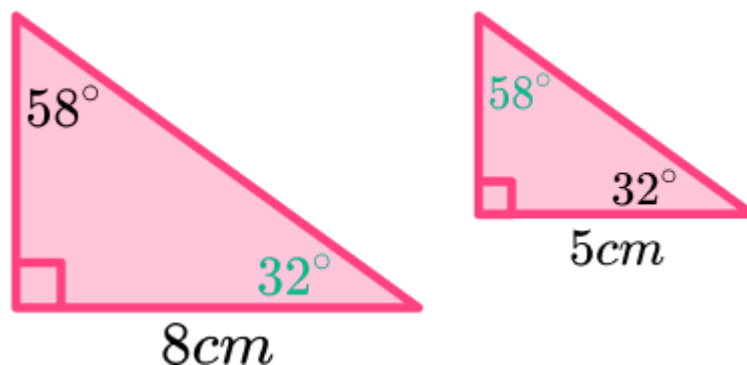
- 3) Calculate:

$$837 - 349 = 488$$

- 4) Work out the size of angle b .
67°



- 5) Are these triangles similar, congruent, or neither?
similar



Week 2: Day 3

- 1) Express 60 as a product of primes using index notation.

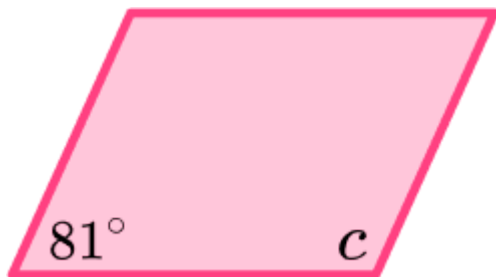
- 2) Write in figures:

Twelve thousand and fifty

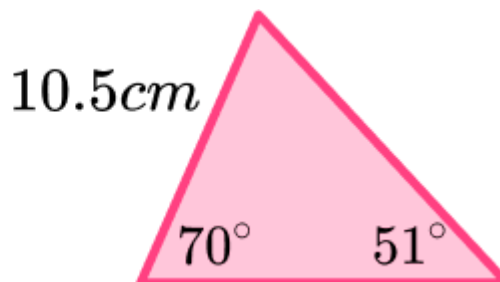
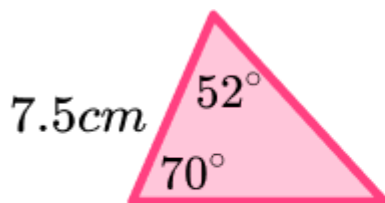
- 3) Calculate:

$$42 + 65 + 31 + 74 =$$

- 4) The shape below is a parallelogram.
Work out the size of angle c .



- 5) Are these triangles similar, congruent, or neither?



Week 2: Day 3 Answers

- 1) Express 60 as a product of primes using index notation.

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

- 2) Write in figures:
Twelve thousand and fifty

12050

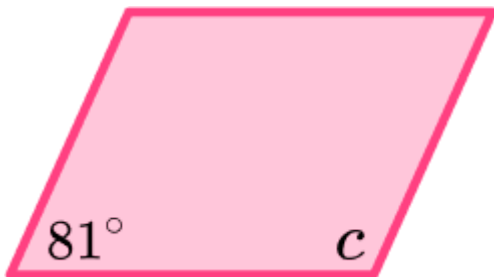
- 3) Calculate:

$$42 + 65 + 31 + 74 = 212$$

- 4) The shape below is a parallelogram.

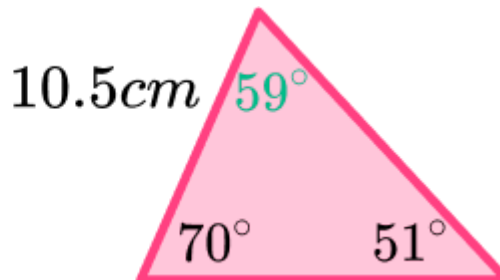
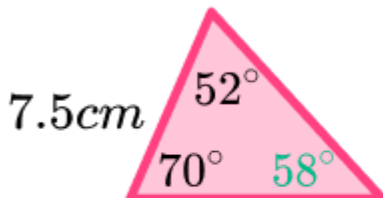
Work out the size of angle c .

99°



- 5) Are these triangles similar, congruent, or neither?

neither



Week 2: Day 4

- 1) Find the lowest common multiple of 24 and 30.

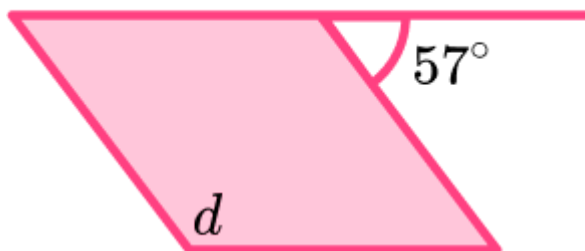
- 2) Write in figures:

Seven hundred thousand, nine hundred and ninety nine

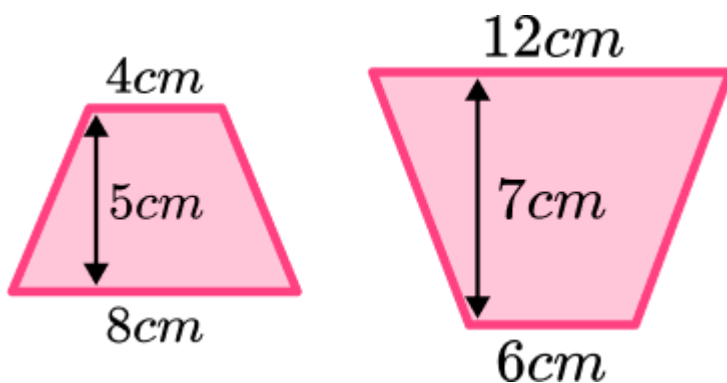
- 3) Calculate:

$$860 - 461 =$$

- 4) Given that the shape below is a rhombus, work out the size of angle d .



- 5) Are these isosceles trapezia similar, congruent, or neither?



Week 2: Day 4 Answers

- 1) Find the lowest common multiple of 24 and 30.

120

- 2) Write in figures:

Seven hundred thousand, nine hundred and ninety nine

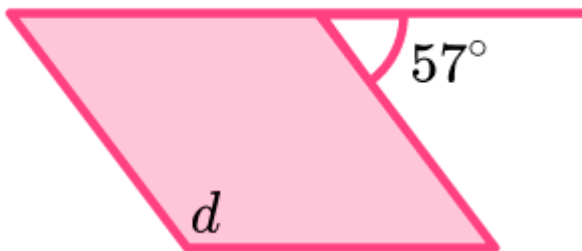
700999

- 3) Calculate:

$$860 - 461 = 399$$

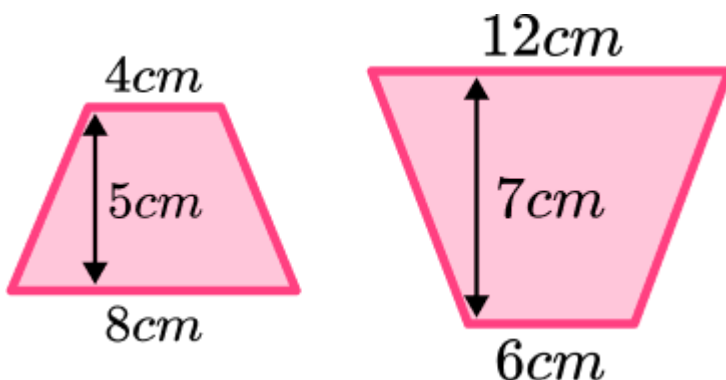
- 4) Given that the shape below is a rhombus, work out the size of angle d .

123°



- 5) Are these isosceles trapezia similar, congruent, or neither?

neither



Week 2: Day 5

- 1) Find the highest common factor of 42 and 54.

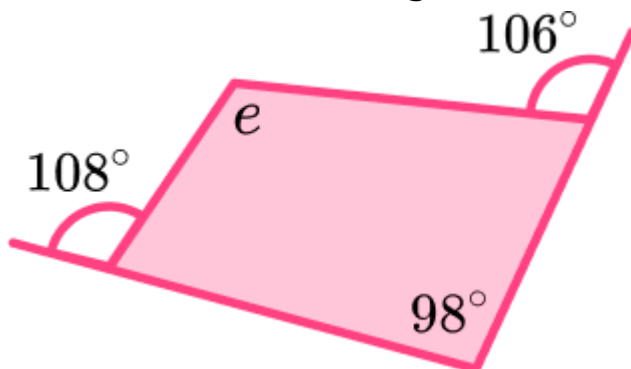
- 2) Write in figures:

Sixty thousand, four hundred and eleven

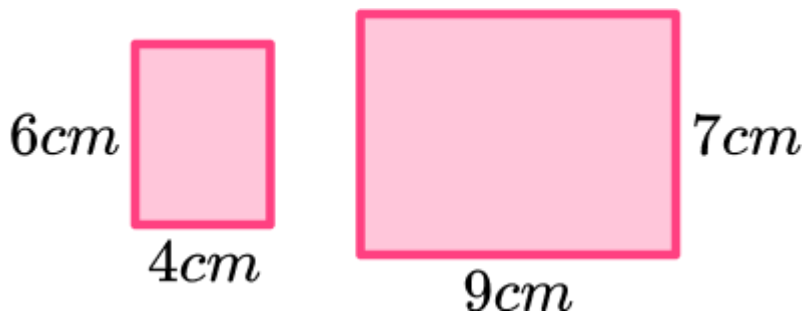
- 3) Calculate:

$$128 - 264 + 513 =$$

- 4) Work out the size of angle e .



- 5) Are these rectangles similar, congruent, or neither?



Week 2: Day 5 Answers

- 1) Find the highest common factor of 42 and 54.

6

- 2) Write in figures:

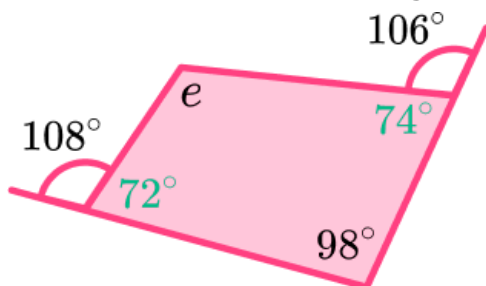
Sixty thousand, four hundred and eleven

60411

- 3) Calculate:

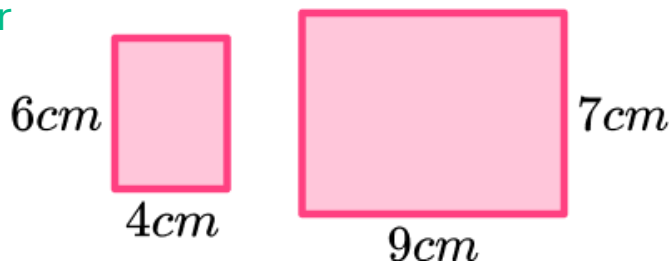
$$128 - 264 + 513 = 377$$

- 4) Work out the size of angle e . 116°



- 5) Are these rectangles similar, congruent, or neither?

Neither



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