

Week 3

This week in a nutshell:

This week has a mixture of topics from last year and some additional skills in relation to rounding. Throughout the term, these rounding skills will be used in different ways, so dealing with any misconceptions is key, especially when dealing with significant figures. Use of ordinal numbers is seen in question 2 (in relation to sequences) and this could be discussed in relation to other familiar contexts.

Question 1: Rounding to decimal places

Question 2: Identifying terms

Question 3: Rounding to significant figures

Question 4: Using factor trees

Question 5: Reflecting shapes

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: Rounding to decimal places

- Can a decimal go on forever?
- How do we decide the degree of accuracy needed?

Question 2: Identifying terms

- What are ordinal numbers and how do we use them?

Question 3: Rounding to significant figures

- Why do we call them significant figures?
- How do you decide which figures are significant in a number?

Question 4: Using factor trees

- Other than a factor tree, how else could you find the prime decomposition of a number?

Question 5: Reflecting shapes

- Why is symmetry an important property?

Week 3: Day 1

- 1) Round to 1 decimal place:

5.68

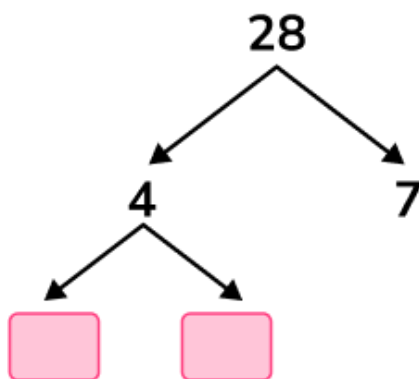
- 2) What is the next term in this sequence?

4, 7, 10, 13, 16, ...

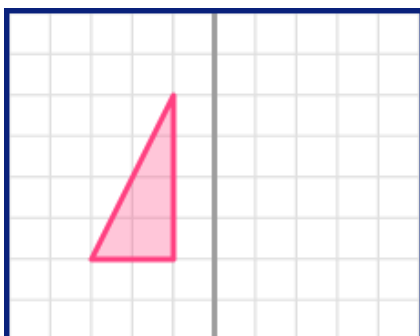
- 3 Round to 2 significant figures:

37583

- 4) Use this factor tree to express 28 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 1 Answers

- 1) Round to 1 decimal place:

5.68 5.7

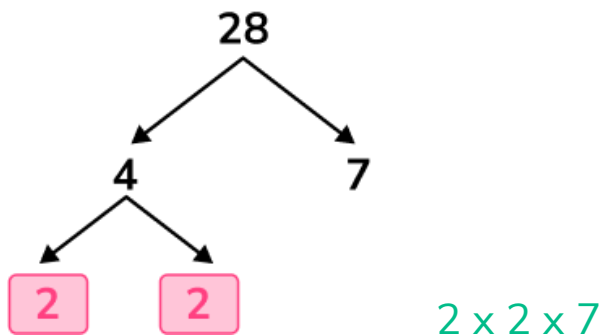
- 2) What is the next term in this sequence?

4, 7, 10, 13, 16, 19

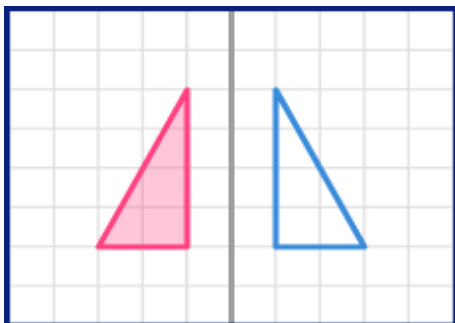
- 3 Round to 2 significant figures:

37583 38000

- 4) Use this factor tree to express 28 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 2

- 1) Round to 2 decimal places:

2.71828

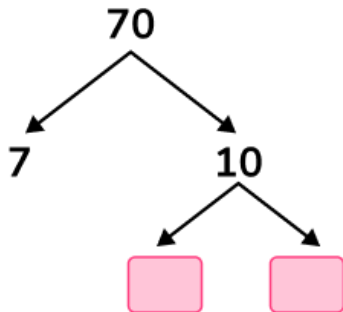
- 2) What is the next term in this sequence?

23, 19 15, 11, ...

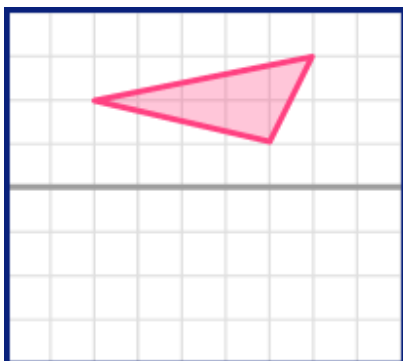
- 3 Round to 3 significant figures:

2.603444

- 4) Use this factor tree to express 28 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 2 Answers

- 1) Round to 2 decimal places:

2.71828 2.72

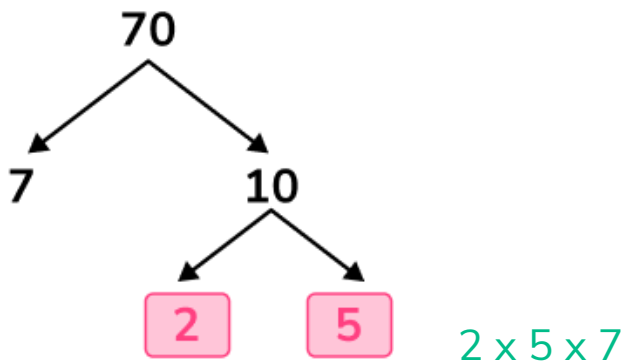
- 2) What is the next term in this sequence?

23, 19 15, 11, 7,

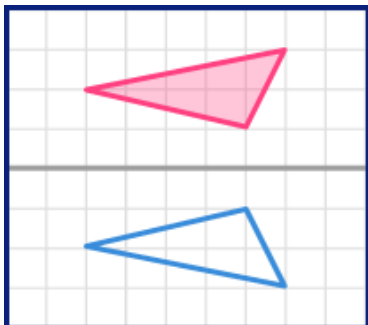
- 3 Round to 3 significant figures:

2.603444 2.60

- 4) Use this factor tree to express 28 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 3

- 1) Round to 2 decimal places:

0.5555

- 2) What is the sixth term in this sequence

9, 7, 5, 3...

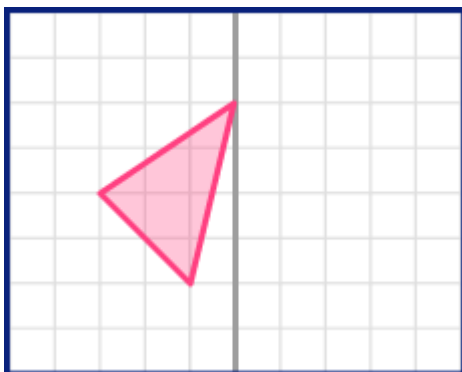
- 3) Round to 1 significant figures:

3.141

- 4) Use a factor tree to express 48 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 3 Answers

- 1) Round to 2 decimal places:

0.5555 0.56

- 2) What is the sixth term in this sequence

9, 7, 5, 3, 1, -1

- 3) Round to 1 significant figures:

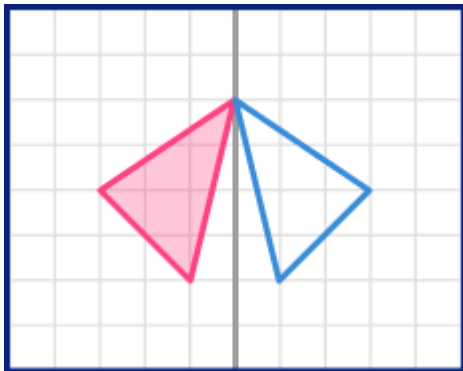
3.141 3

- 4) Use a factor tree to express 48 as a product of primes.

$$\begin{array}{c} 2 \times 2 \times 2 \times 2 \times 3 \\ \text{or } 2^4 \times 3 \end{array} \quad \begin{array}{c} 48 \\ \swarrow \quad \searrow \end{array}$$

There are various products with which to start, eg 2×24 , 6×8 etc

- 5) Reflect across the given line of symmetry.



Week 3: Day 4

- 1) Round to 2 decimal place:

1.039

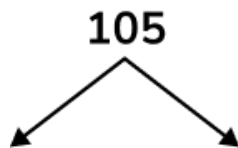
- 2) What is the sixth term in this sequence

2, 4, 8, 16, ...

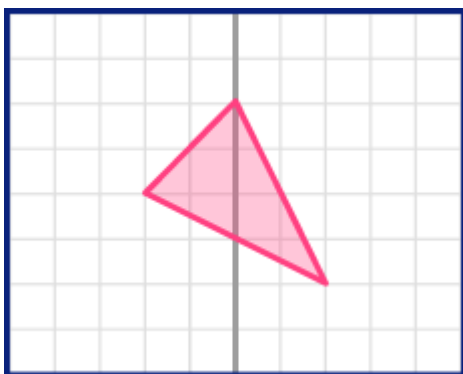
- 3) Round to 2 significant figures:

9.842

- 4) Use a factor tree to express 105 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 4 Answers

- 1) Round to 2 decimal place:

1.039 1.04

- 2) What is the sixth term in this sequence

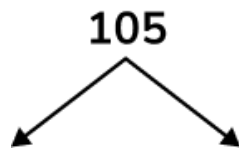
2, 4, 8, 16, 32, 64

- 3) Round to 2 significant figures:

9.842 9.8

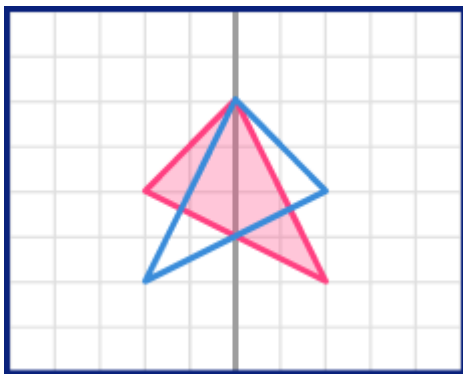
- 4) Use a factor tree to express 105 as a product of primes.

$3 \times 5 \times 7$



There are various products with which to start, eg 3×35 , 5×21 etc

- 5) Reflect across the given line of symmetry.



Week 3: Day 5

- 1) Round to 1 decimal place:

10.0461

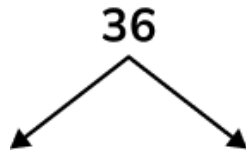
- 2) What is the first negative number in this sequence?

19, 15, 11, 7...

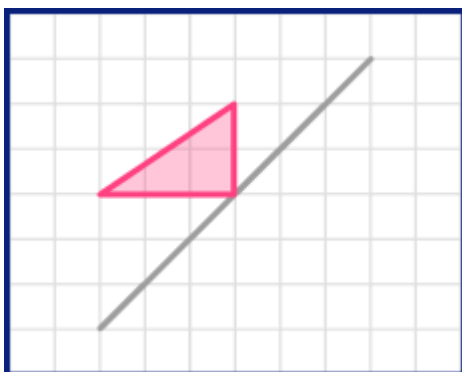
- 3) Round to 1 significant figures:

0.0025

- 4) Use a factor tree to express 36 as a product of primes.



- 5) Reflect across the given line of symmetry.



Week 3: Day 5 Answers

- 1) Round to 1 decimal place:

10.0461 10.0

- 2) What is the first negative number in this sequence?

19, 15, 11, 7, 3, -1

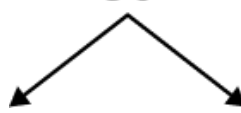
- 3) Round to 1 significant figures:

0.0025 0.003

- 4) Use a factor tree to express 36 as a product of primes.

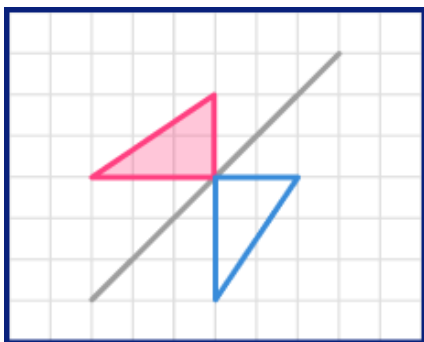
$2 \times 2 \times 3 \times 3$
or $2^2 \times 3^2$

36



There are various products with which to start, eg 2×18 , 6×6 etc

- 5) Reflect across the given line of symmetry.



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