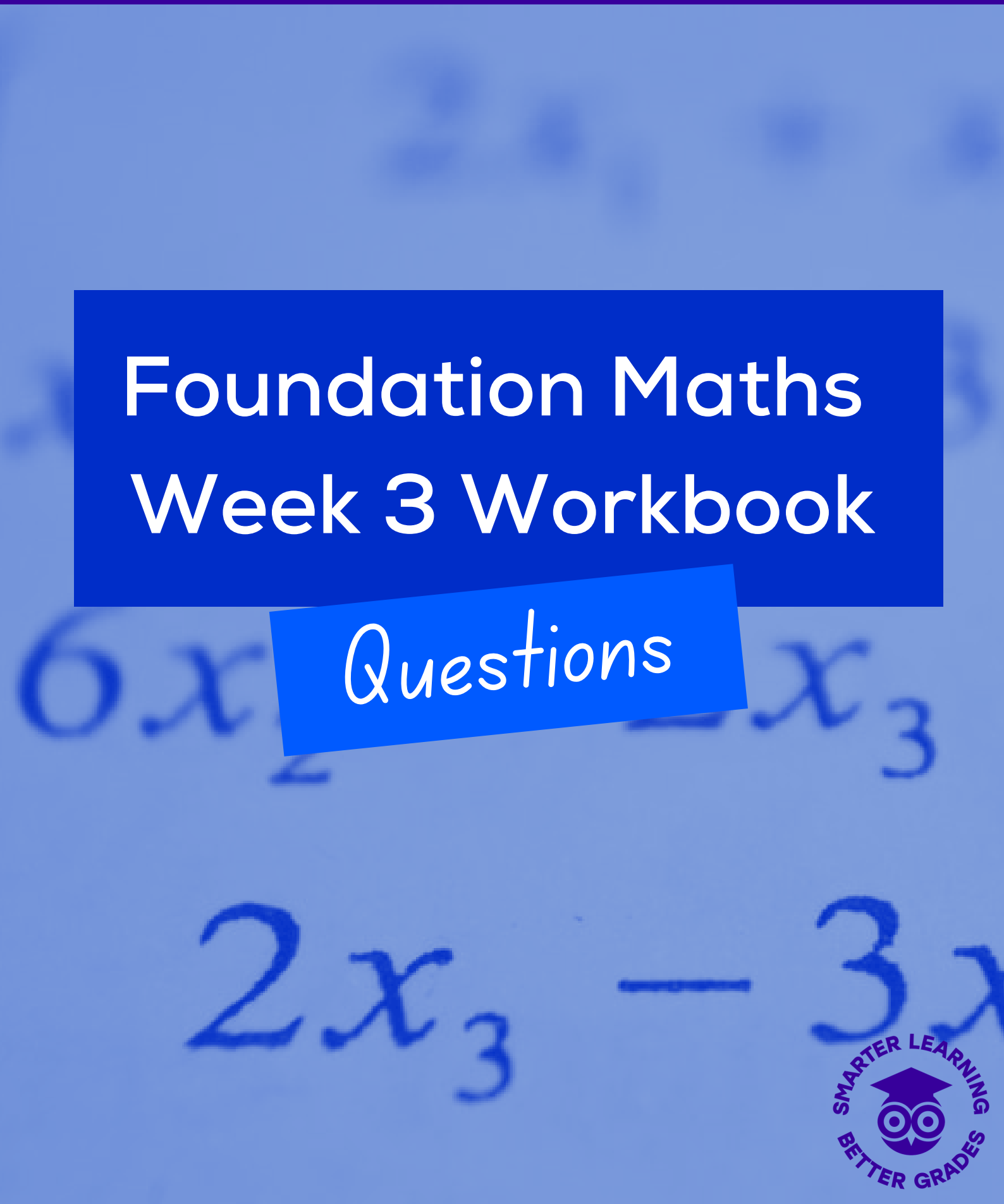
GCSE Boot Camp

Foundation Maths Week 3 Workbook

Questions



GCSE Boot Camp

Topics

Hello! Welcome to week 3 of your 8 week GCSE Boot Camp.

Every week you'll get a practice workbook to work through a range of topics, taken from our GCSE Foundation Advanced course.

We've also included links to 2 of our expert tutorial videos on some of these exact questions. That way, if you get stuck, you can try watching one of our tutorial videos with our Maths expert Patricia. For full access to all of the corresponding videos sign up for a SchoolOnline subscription from £8.99 a month.

In next week's email we'll send you the answers to this workbook to download ***PLUS*** a brand new workbook to practice.

Your week 3 workbook topics are:

- Factorising
- Algebra and sequences

SMARTER LEARNING BETTER GRADES

Algebra Foundation Workbook - Factorising

Factorising

June 2017 Foundation Calc Paper 2

14 (a) Factorise $5 - 10m$

.....

(1)

(b) Factorise fully $2a^2b + 6ab^2$

.....

(2)

(Total for Question 14 is 3 marks)

Factorising

Sample A Foundation Calc Paper 2

20 (a) Factorise $3f + 9$

.....

(1)

(b) Factorise $x^2 - 2x - 15$

.....

(2)

(Total for Question 20 is 3 marks)

Prime Factors

25 Write 504 as a product of powers of its prime factors.

.....

(Total for Question 25 is 3 marks)

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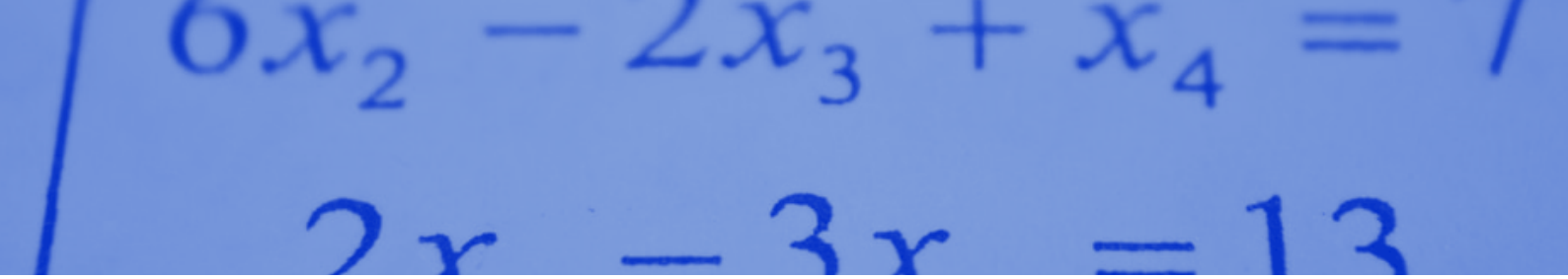
Expert tutorial

Need some extra help? That's what we're here for!

In this video Patricia will explain how to answer the last question in the factorising section of your workbook, on Prime Factors (Q25).

Grab your pen and paper and remember to take notes! If you want more access to awesome videos like this, sign up for a full SchoolOnline subscription here.



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GCSE Foundation Maths - Algebra & Sequences

Arithmetic Sequence

Sample A Foundation Calc Paper 2

25 Here are the first four terms of an arithmetic sequence.

6 10 14 18

(a) Write an expression, in terms of n, for the nth term of this sequence.

.....

(2)

The nth term of a different arithmetic sequence is $3n + 5$

(b) Is 108 a term of this sequence?
Show how you get your answer.

(2)

(Total for Question 25 is 4 marks)

Arithmetic Sequence

Sample B Foundation Calc Paper 3

21 Here are the first five terms of an arithmetic sequence.

$$-3 \qquad 1 \qquad 5 \qquad 9 \qquad 13$$

Find an expression, in terms of n, for the nth term of this sequence.

.....

(Total for Question 21 is 2 marks)

nth Term

June 2017 Foundation Calc Paper 2

25 Here are the first six terms of an arithmetic sequence.

3 8 13 18 23 28

(a) Find an expression, in terms of n, for the nth term of this sequence.

(2)

The nth term of a different sequence is $3n^2$
Nathan says that the 4th term of this sequence is 144

(b) Is Nathan right?
Show how you get your answer.

(1)

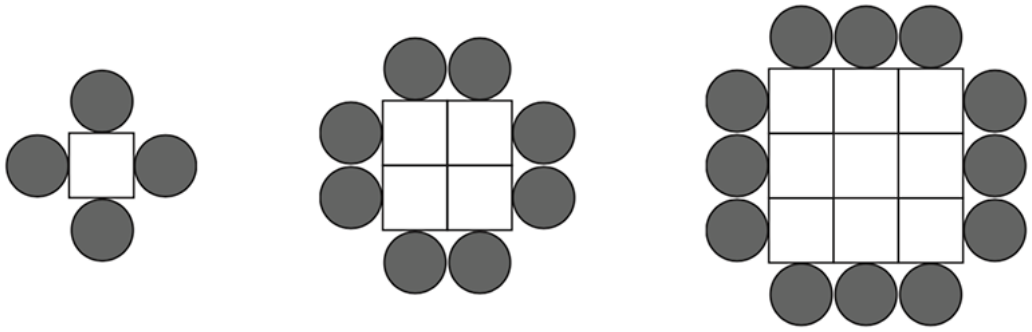
(Total for Question 25 is 3 marks)

Patterns

June 2017 Foundation Non-Calc Paper 1

11 A sequence of patterns is made from circular tiles ● and square tiles □

Here are the first three patterns in the sequence.



pattern number 1 pattern number 2 pattern number 3

(a) How many square tiles are needed to make pattern number 6?

.....

(2)

(b) How many circular tiles are needed to make pattern number 20?

.....

(2)

Derek says,

"When the pattern number is odd, an odd number of square tiles is needed to make the pattern."

(c) Is Derek right?
You must give reasons for your answer.

.....

.....

(2)

(Total for Question 11 is 6 marks)

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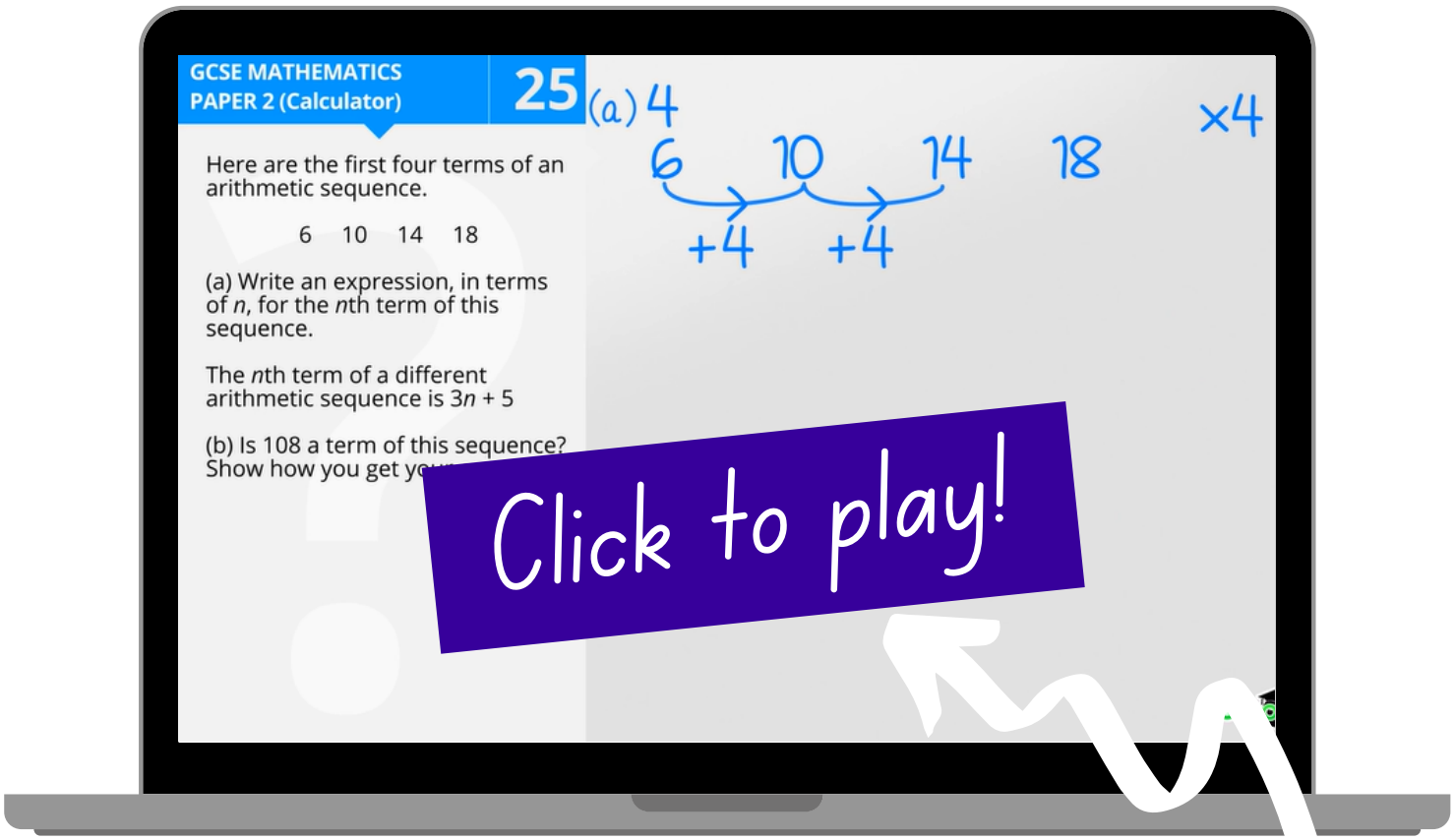
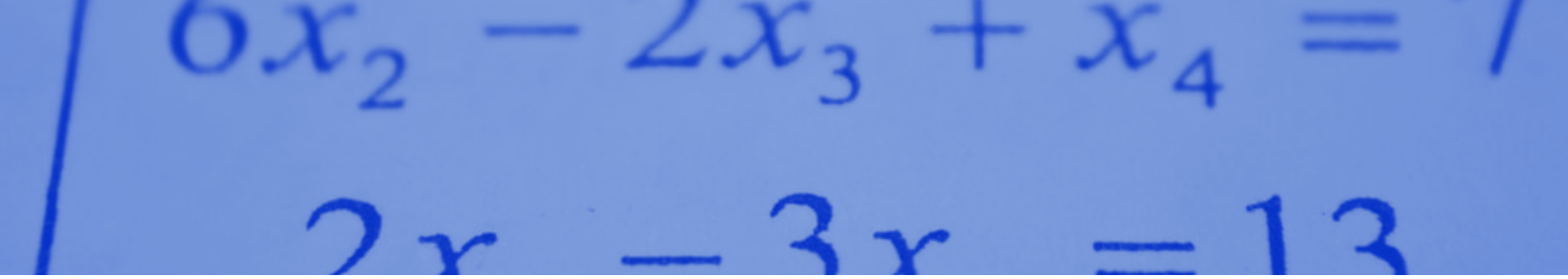


Need some extra help? That's what we're here for!

In this video Patricia will explain how to answer the first question in the algebra and sequences section of your workbook (Q25).

There's a lot of marks on offer for this question, so grab your pen and paper and remember to take notes! If you want more access to awesome videos like this, sign up for a full SchoolOnline subscription here.



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