GCSE
MATHS

Virtual Communities

Engaging explanations resources booklet

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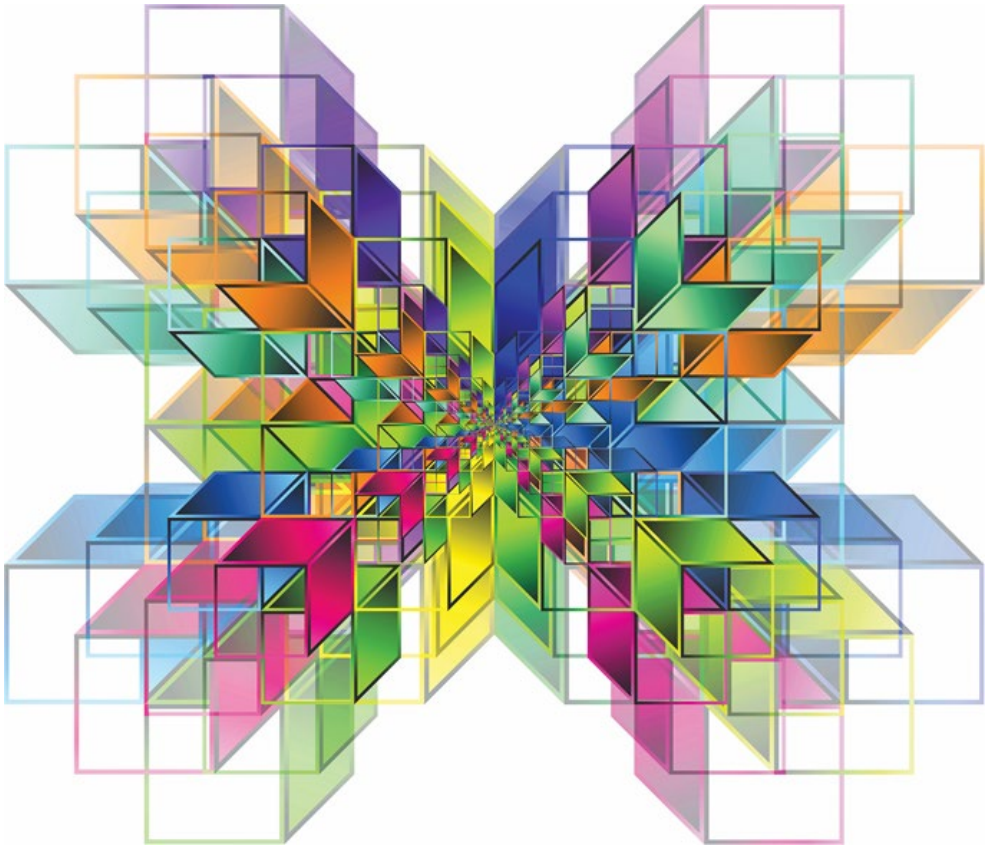


Contents

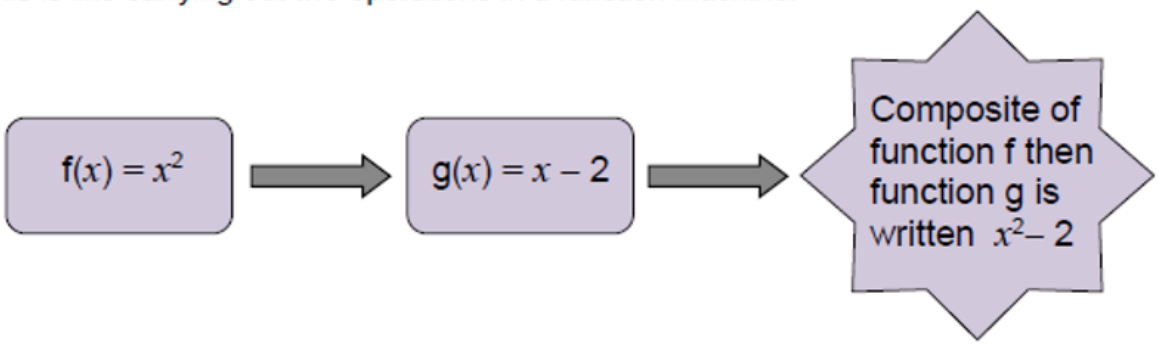
Bridging the gap

This set of AQA resources was originally designed to support teaching and learning for the cohorts of students who studied the 2007 Key Stage 3 Programme of Study and were preparing for the then new Mathematics GCSE (8300). The resources are still very useful for students in KS3-KS4. **KS3-4 Bridging the gap**.

A **composite function** is a function that is made up of two other functions.

The order of the functions is important.

This is like carrying out two operations in a function machine.



Notice that if we did function $g(x)$ followed by $f(x)$ the answer would be $(x-2)^2$

Key stage 3 tests

This series of termly tests covers Years 7, 8 and 9 and can be used to check understanding as well as showing younger students what GCSE papers look and feel like. Extension tests are included and analysers are available for all tests.

AQA Key Stage 3 tests for Years 7, 8 and 9.

There are 600 fish in a lake.

The fish are bream, tench, perch and carp.

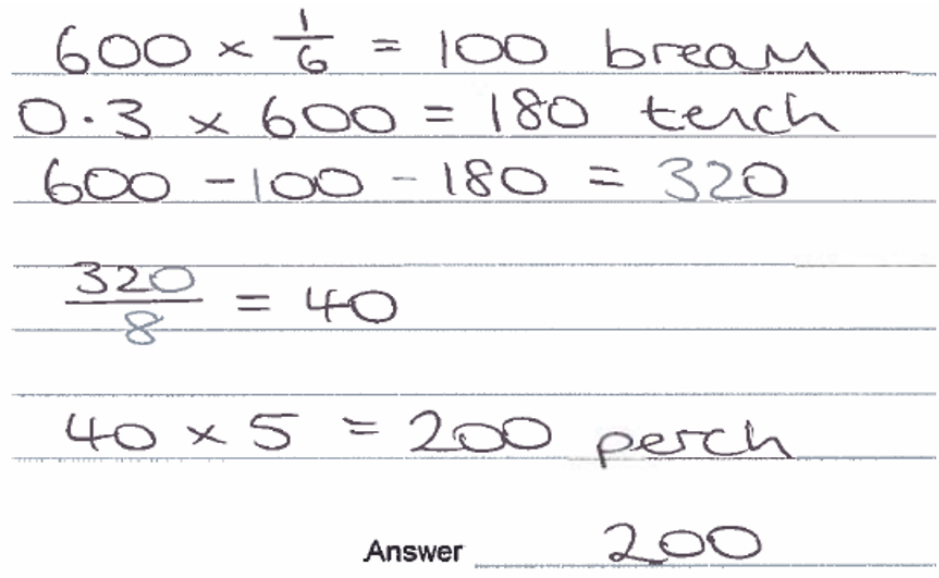
One-sixth of the fish are bream.

30% of the fish are tench.

The ratio of perch to carp is 5 : 3

How many perch are there?

An answer worth full marks



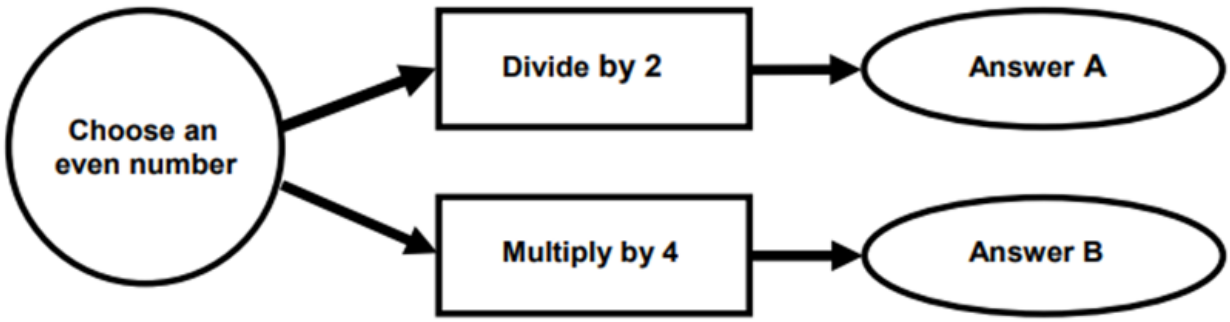
90 maths problem solving questions

This supports the problem solving requirement (AO3) of GCSE Mathematics. Very useful summary lists link questions to process skills and to content areas. Full commentaries are given on 30 of the problems.

GCSE Mathematics: 90 maths problem solving questions.

Flow Chart

Here is a flow chart.

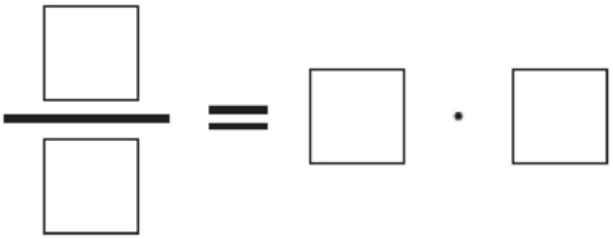


Explain why (B – A) is always a multiple of 7

GCSE examination questions

AQA GCSE Assessment Resources
AQA legacy GCSE question papers

Put the numbers 2, 4, 5 and 9 in the boxes to make the fraction equal to the decimal.



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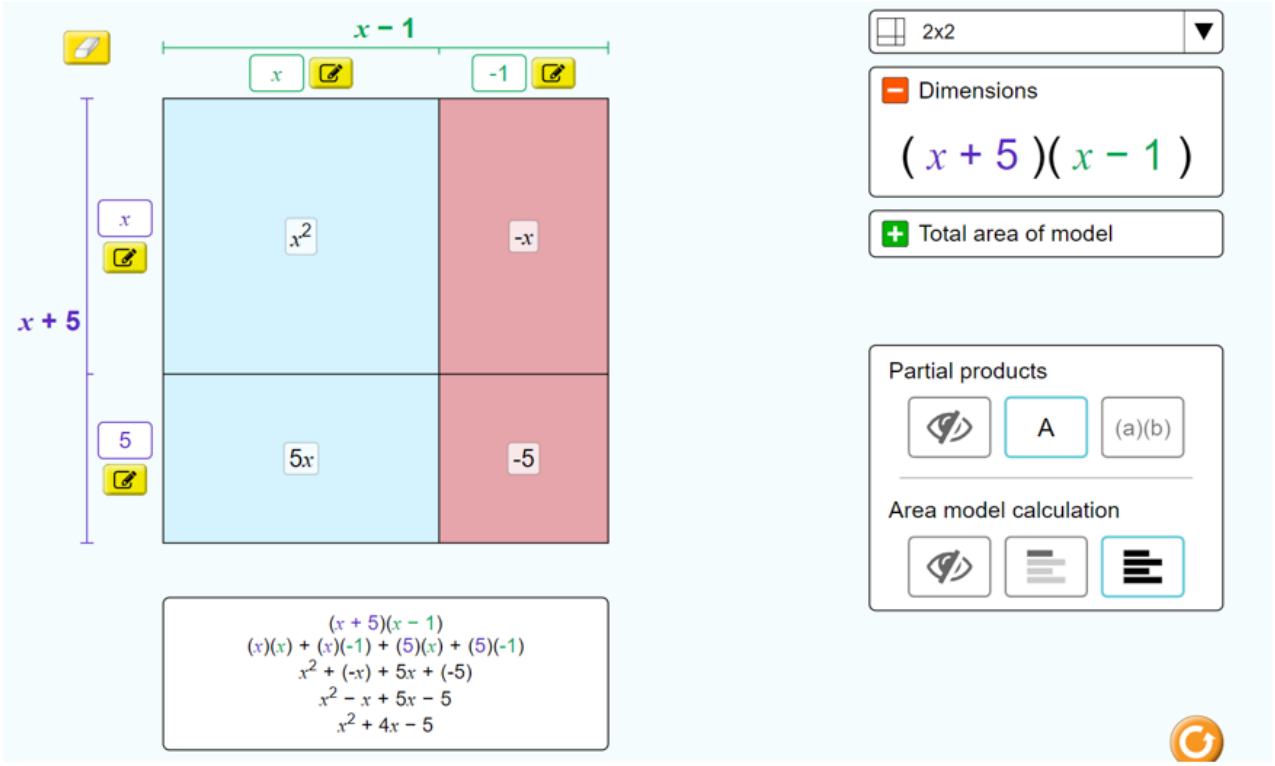
PhET interactive simulations

PhET Interactive Simulations, University of Colorado, Boulder is a collection of interactive, research-based science and mathematics simulations.

All simulations available at https://phet.colorado.edu are open educational resources available under the Creative Commons Attribution license (CC-BY).

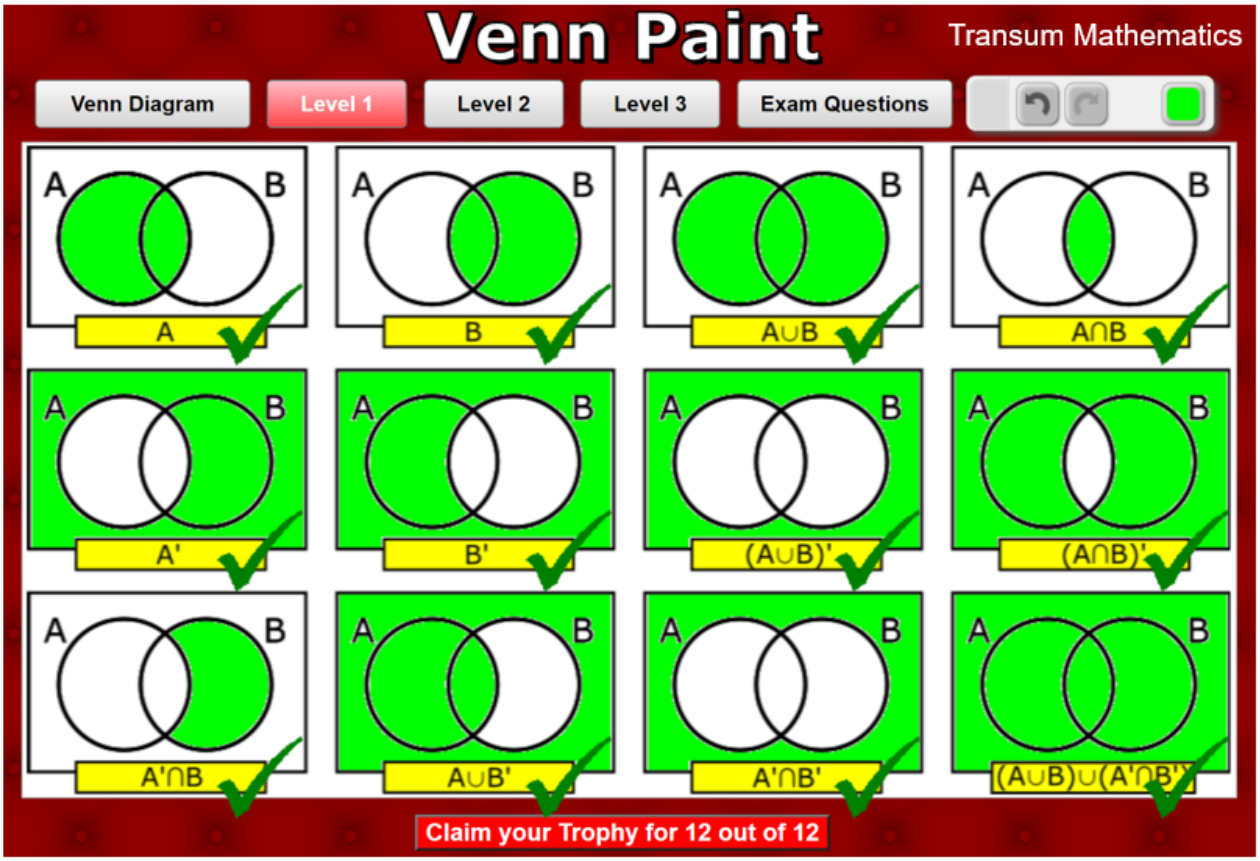


PhET Sims, Area Model Algebra

Transum mathematics

From John Tranter, Transum Mathematics is an extensive collection of excellent resources, including many which are useful for student self-study as answers can be checked.

Transum Mathematics. See the Mathematics Curriculum section for suggested resources for Key Stage 4. Learners can use the Maths Map to help find topics.

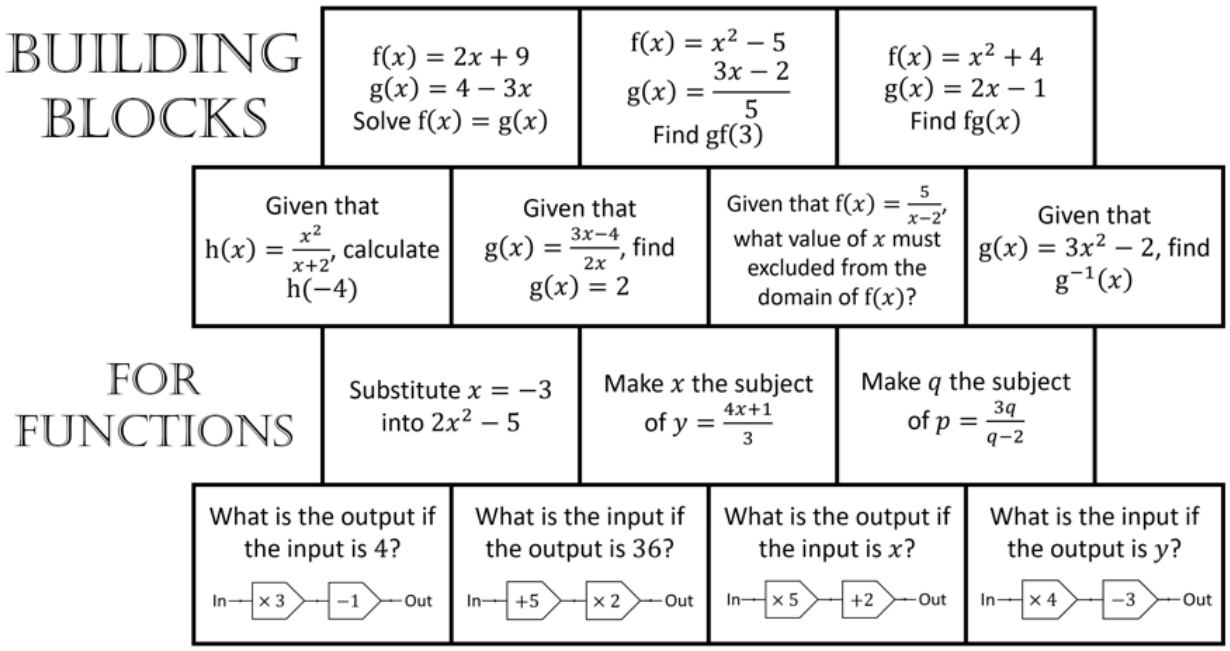


www.transum.org

Building blocks resources

These resources start with basic questions and progress to more challenging GCSE type questions. This example on functions goes from simple function machines through to composite functions. A resource like this helps teachers consider the small steps for a topic.

From Andy Lutwyche on TES, Building Blocks resources



Also from Andy Lutwyche, see his **Clumsy Clive resources** where students must identify and correct the errors Clive has made in his homework and his What was the question? series which provide sets of four questions that have the same answer; students must provide the missing information in the questions.

Contact us

Our friendly team will be happy to support you between 8am and 5pm, Monday to Friday.

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