Discussion Problems
Step 7: Inverse Operations

National Curriculum Objectives:

Mathematics Year 5: (5C5a) Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
Mathematics Year 5: (5C6a) Multiply and divide numbers mentally drawing upon known facts

About this resource:

This resource has been designed for pupils who understand the concepts within this step. It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

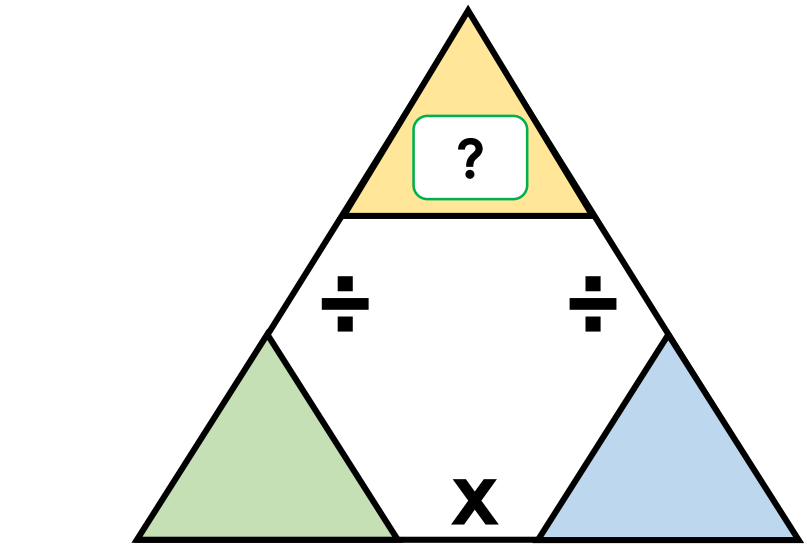
We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

More Year 5 Multiplication and Division resources.

Did you like this resource? Don't forget to review it on our website.

Inverse Operations

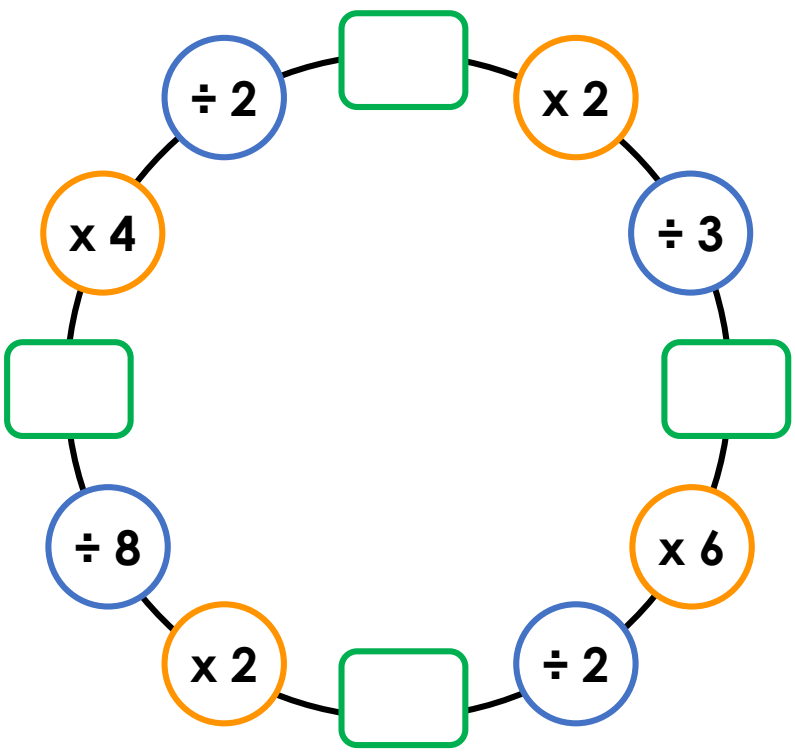
1. Investigate different ways to complete the inverse operations triangle using the given numbers along the base. Suggest the number that could be placed in the top to give the most possibilities? Is there more than one possible answer?



6 9 12 8 4 3

DP

2. Investigate which numbers will complete the chain in a clockwise direction.



Is there more than one solution?

DP

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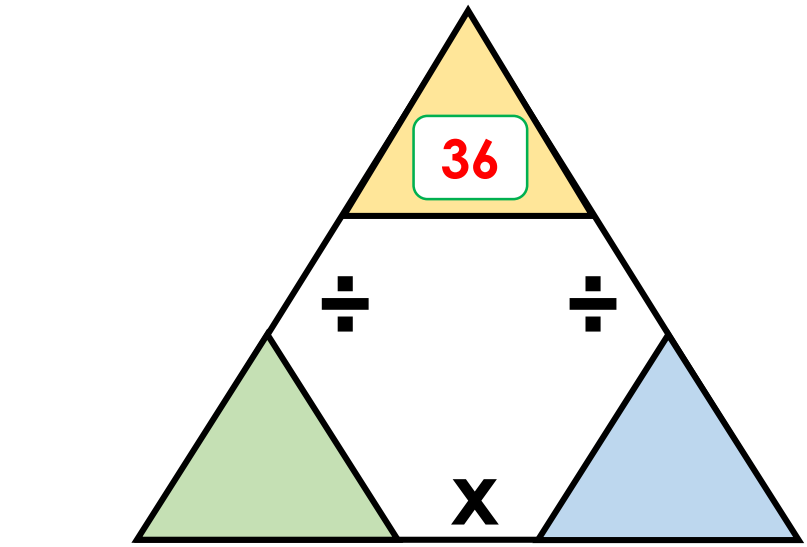
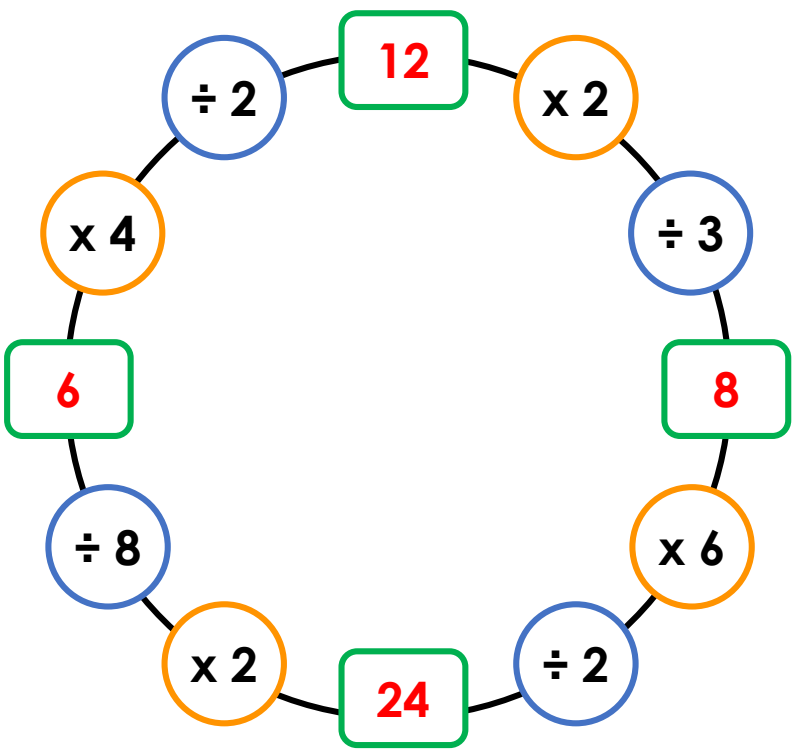


6 | 9 | 12 | 8 | 4 | 3

Various answers, for example: 36 would be the best number to place in the top because it can be used with 3 different calculations: 6 x 6 = 36; 9 x 4 = 36; 12 x 3 = 36. 72 or 48 could each be used with 2 calculations.

DP

2. Investigate which numbers will complete the chain in a clockwise direction.



Is there more than one solution?

Yes, for example, clockwise from top: 6, 4, 12 and 3 or 24, 16, 48 and 12

DP