



### Why 24? Building Block A

Choose any whole number.  
What happens when you multiply the numbers either side of it?  
For example, if you choose 7, work out  $6 \times 8$ . Repeat several times.  
Notice anything interesting? Convince yourself it always happens.

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### Why 24? Building Block B

Write down three consecutive numbers, none of which is a multiple of 3. If you can't, explain why.

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### Why 24? Building Block C

Choose two factors of 120 which are **coprime** (they have a highest common factor of 1).  
Multiply them together and record the result. Repeat several times.  
Notice anything about your results?  
Start with numbers other than 120. Does the same thing always happen? Convince yourself.

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### Why 24? Building Block D

Choose any two consecutive even numbers.  
Multiply them together and record the result. Repeat several times.  
Notice anything interesting? Convince yourself it always happens.

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### Why 24? Final Challenge

Take any prime number greater than 3, square it and subtract one.  
Repeat several times.  
Notice anything interesting? Convince yourself it always happens.