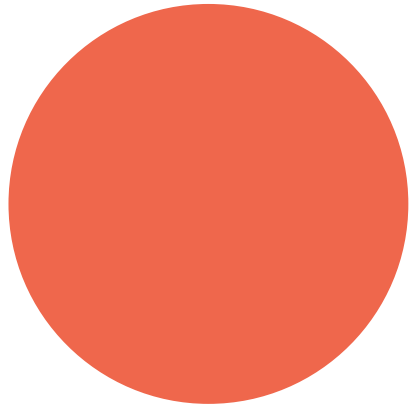


# QUANTUM COMPUTING

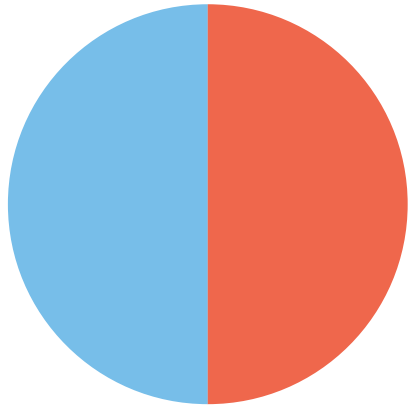
for  
babies



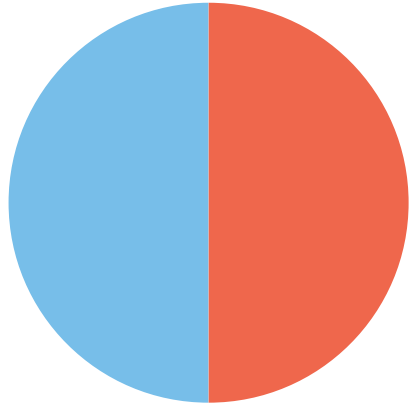
**Chris Ferrie and whurley**



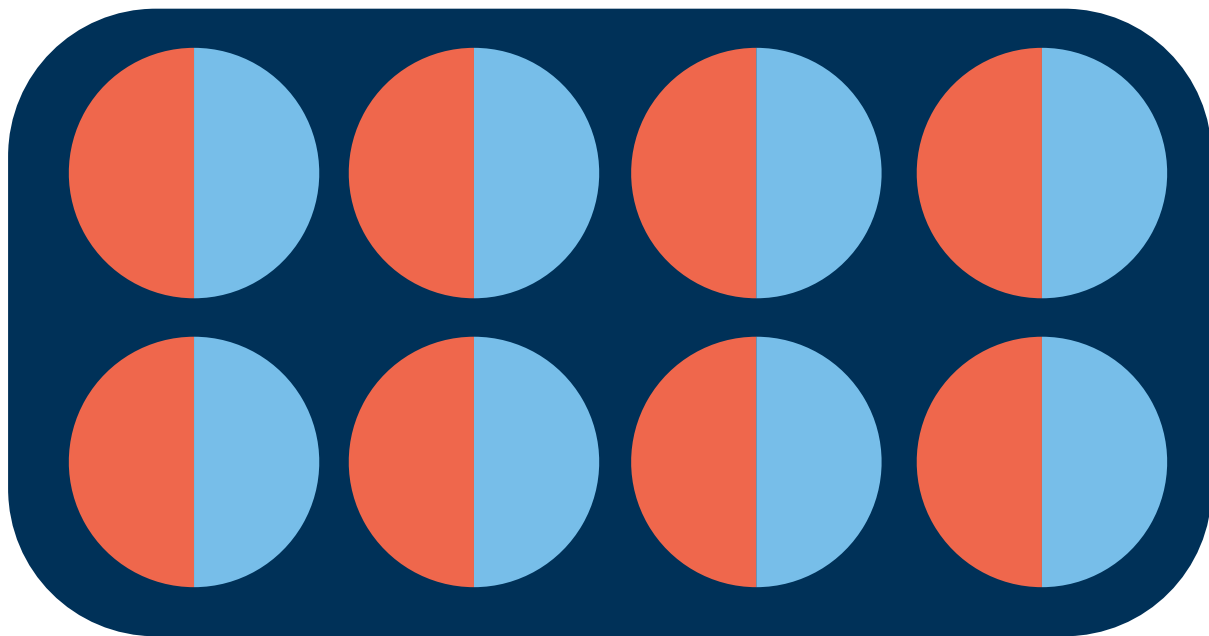
**This is a ball.**



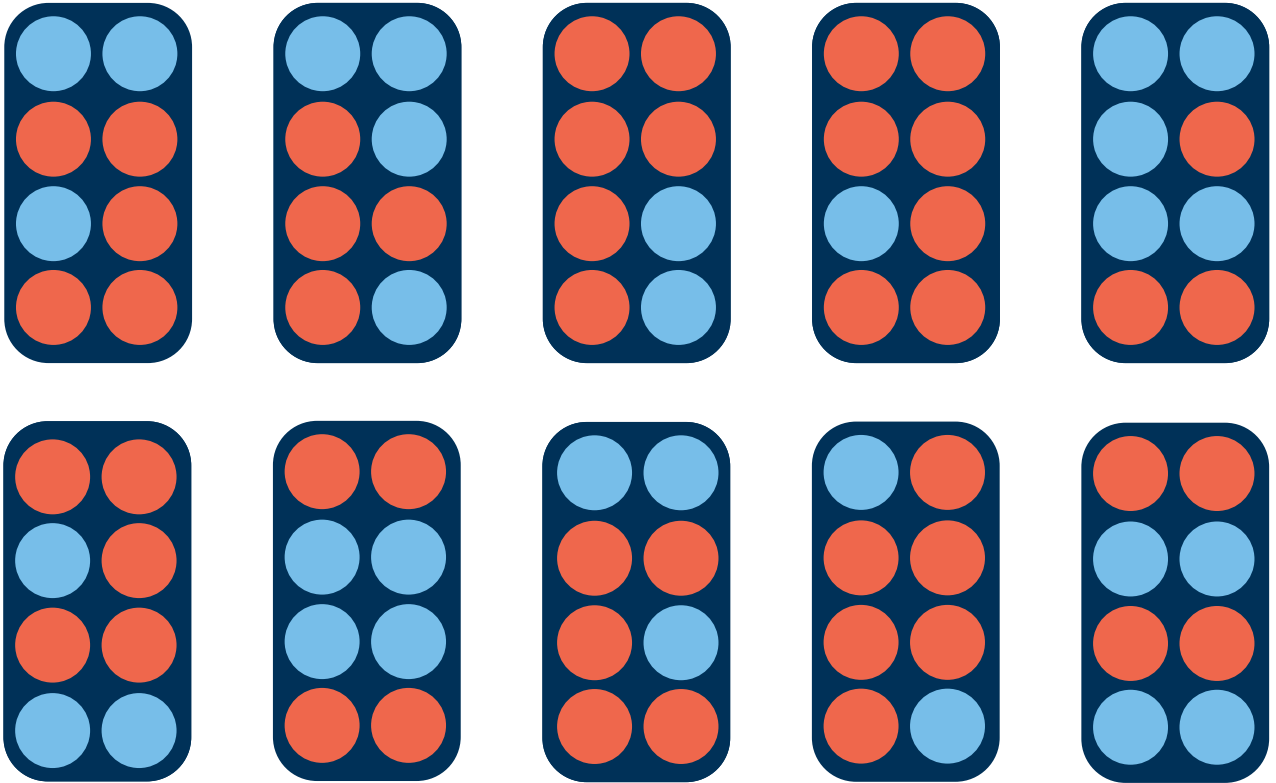
**It can be red or blue.**



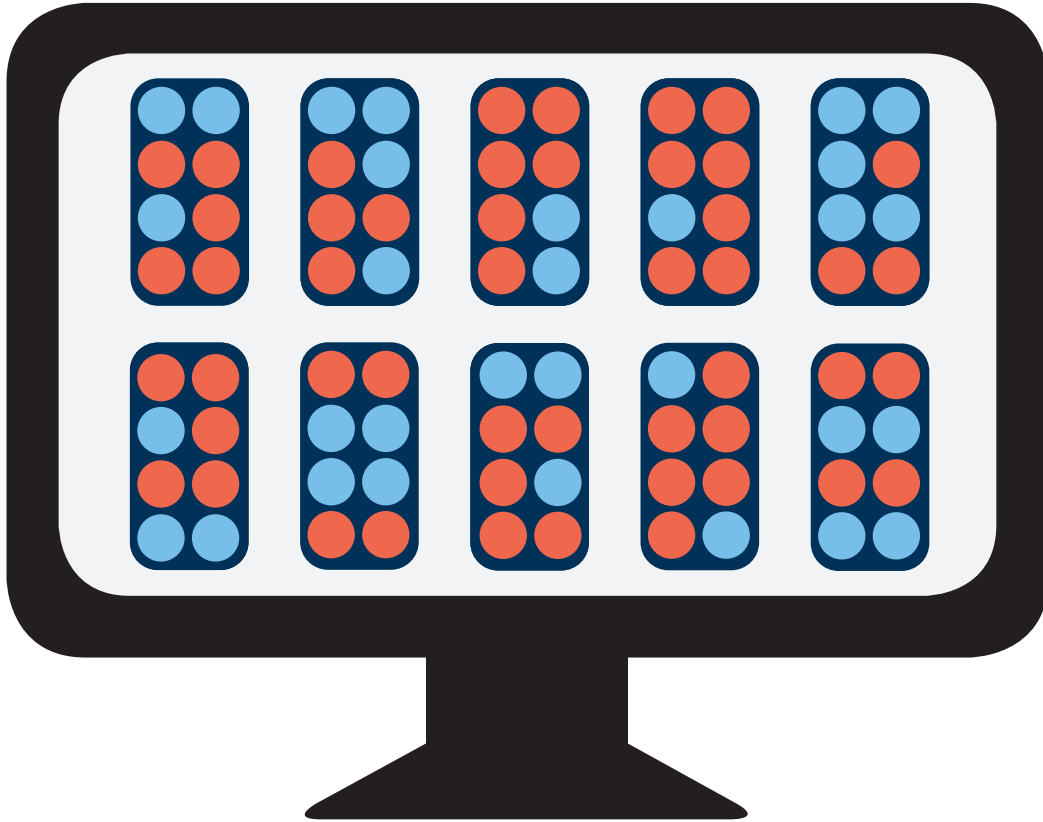
**It is one bit of information.**



**Eight bits make a byte.**

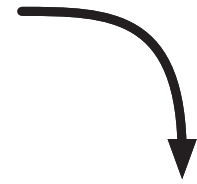
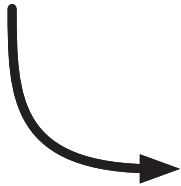


**Many bytes make data.**



**Data lives in a computer.**

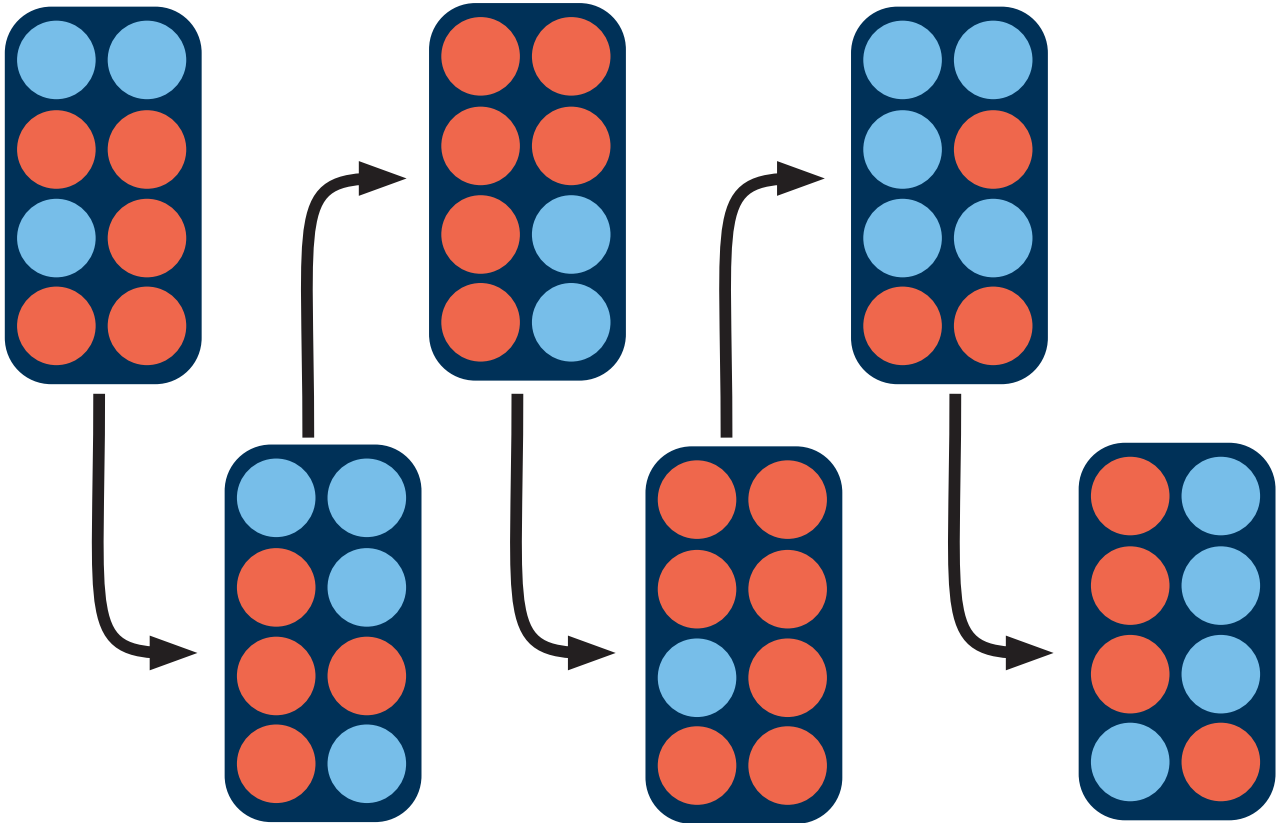
**Problem**



**Solution**

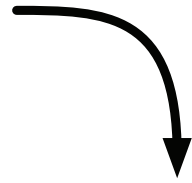
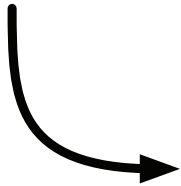
**Computers are useful. They solve problems.**





**Problems are solved by changing data.**

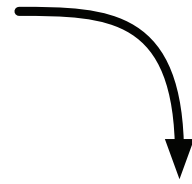
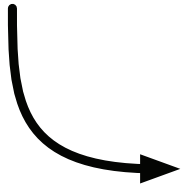
**3 x 2**



**6**

**Some problems are easy.**

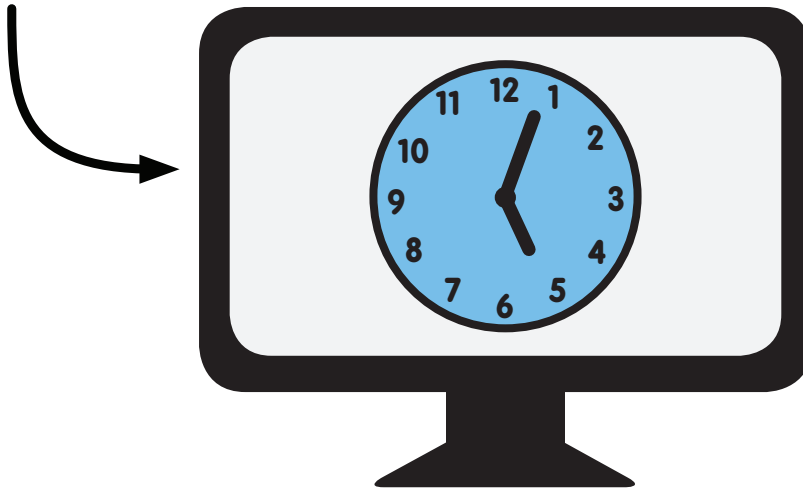
**6 = ?**



**3 x 2**

**Some problems are hard.**

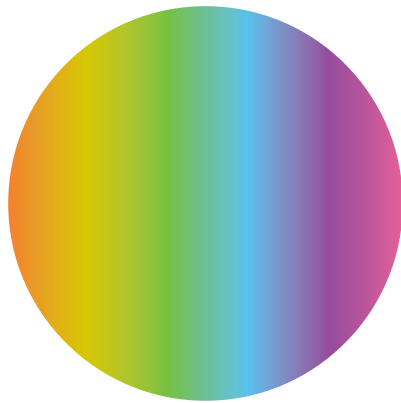
**8,777,379,184,573 = ?**



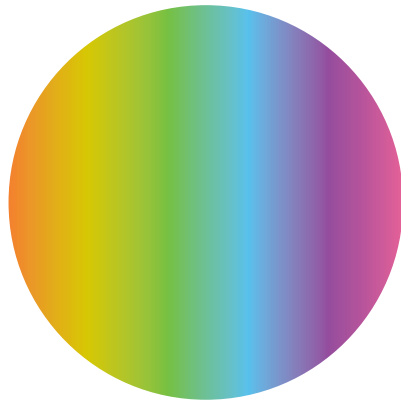
**Some problems are too hard  
for a computer using bits.**



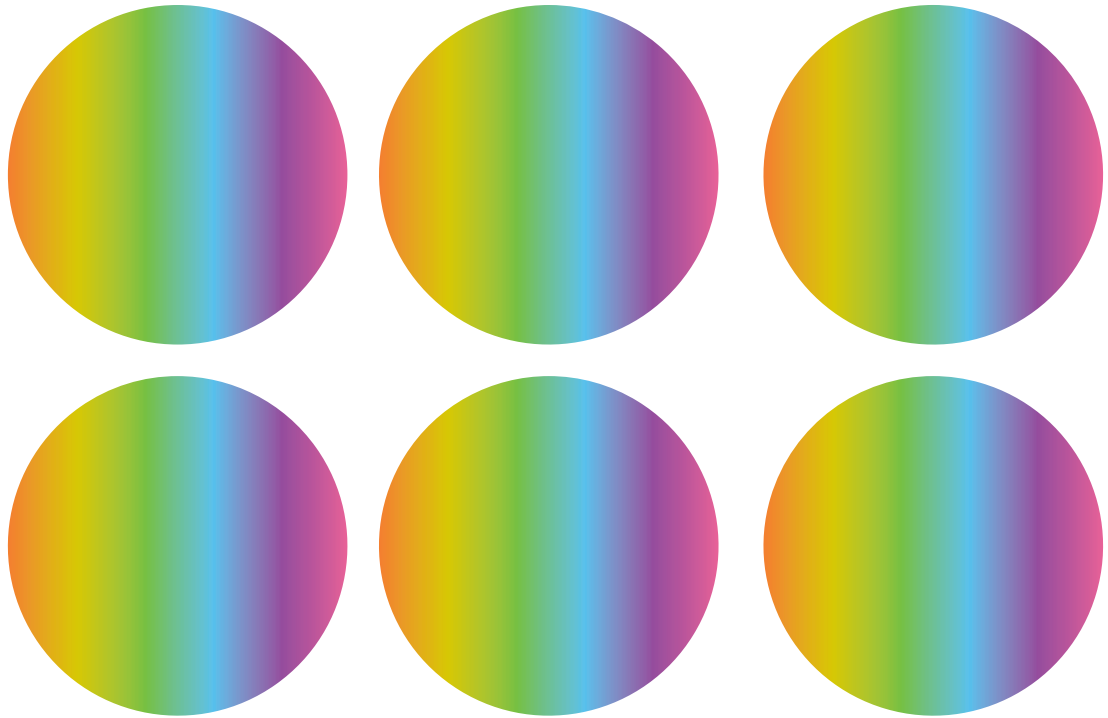
**But wait! What is this down here?**



**It's a quantum bit. A qubit!**



**It can be red or blue or anything at all.**

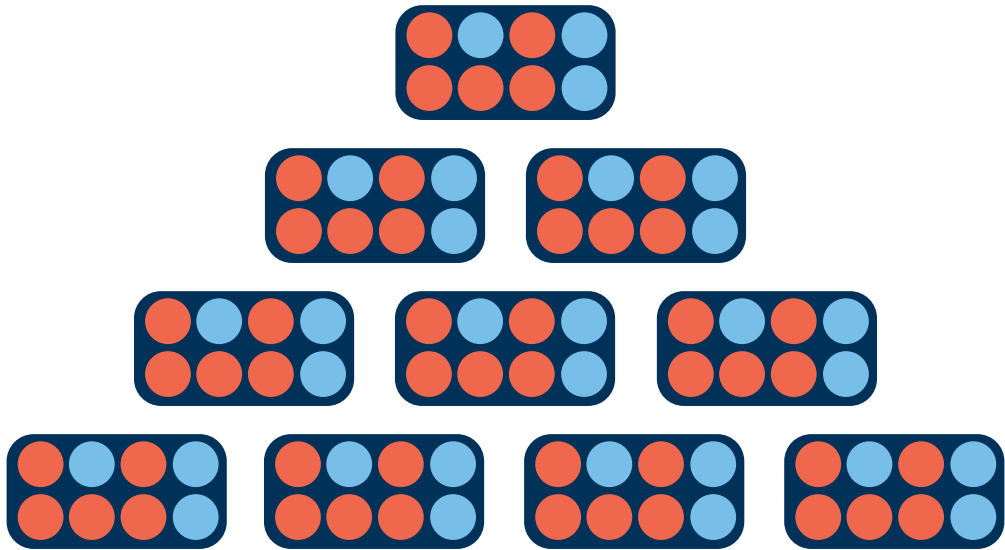


**Many qubits make quantum data.**

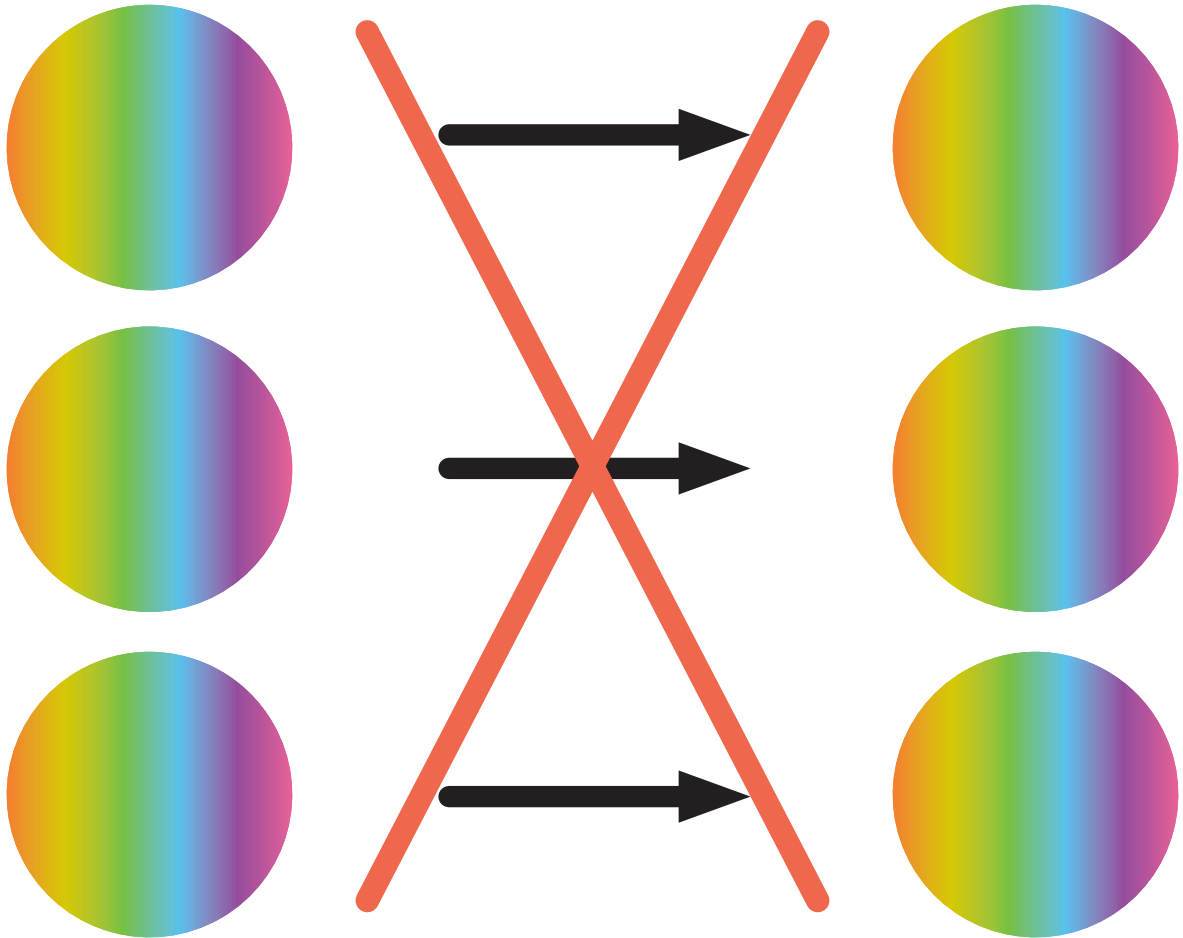




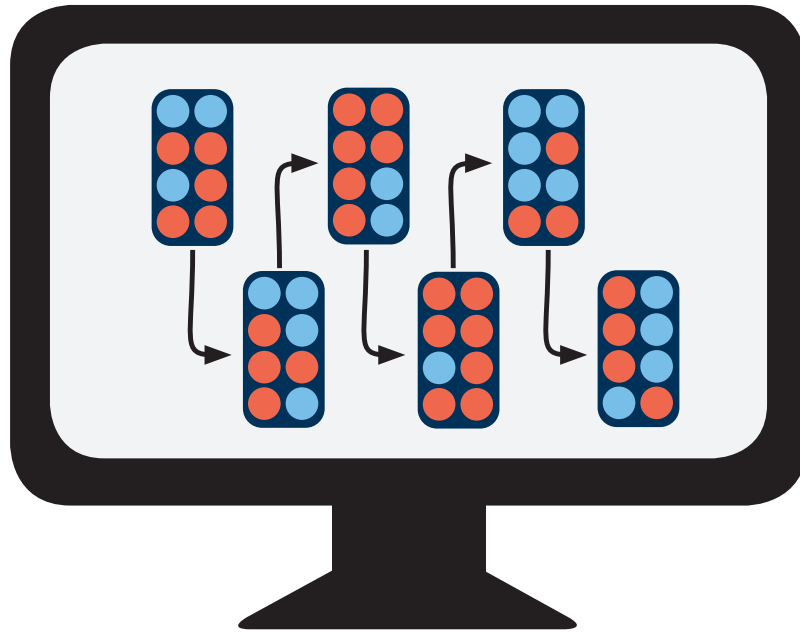
**Quantum data lives in a quantum computer.**



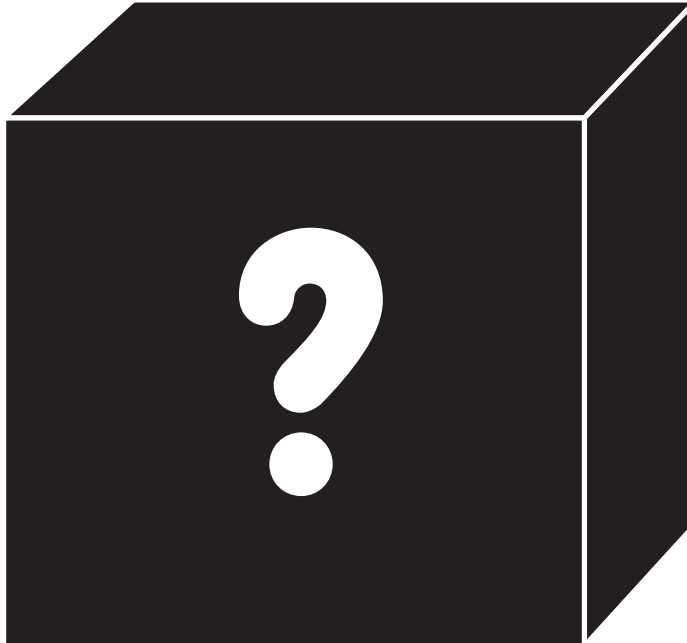
**Data can be copied.**



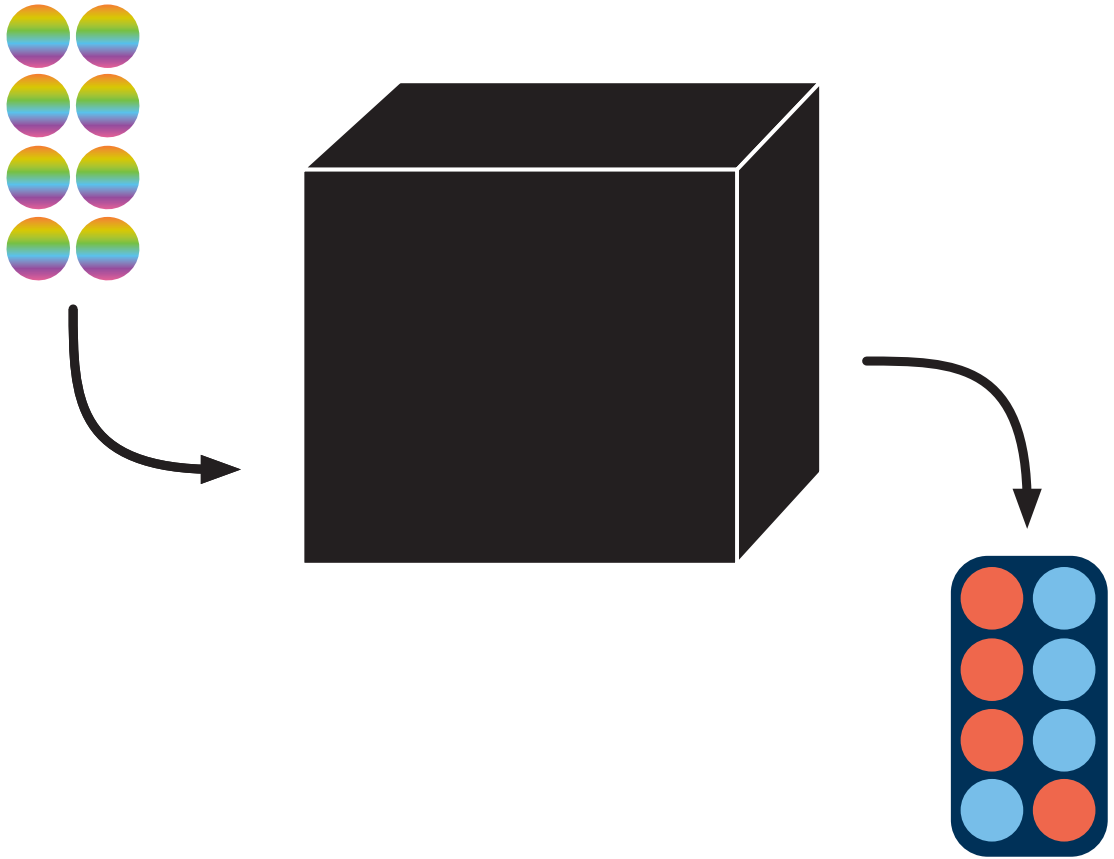
**Quantum data cannot be copied.**



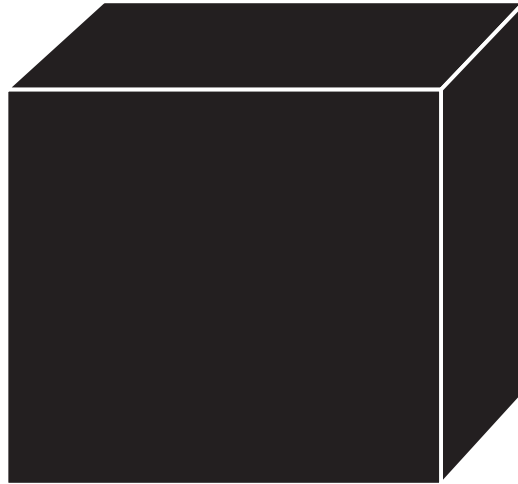
**We can watch a computer at work.**



**But we cannot watch  
a quantum computer at work.**

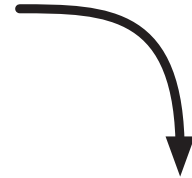
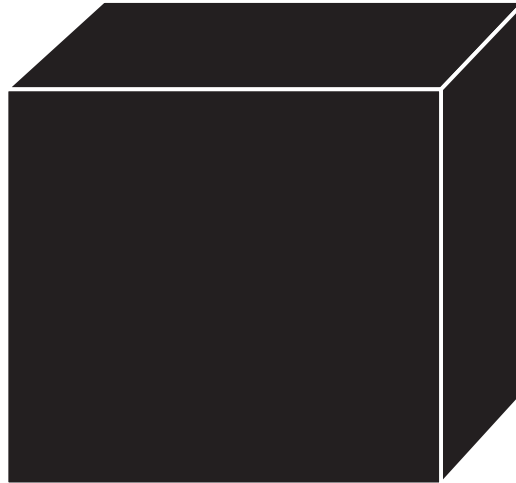
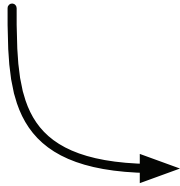


**We can only see the answer it gives.**



**So why do we want a quantum computer?**

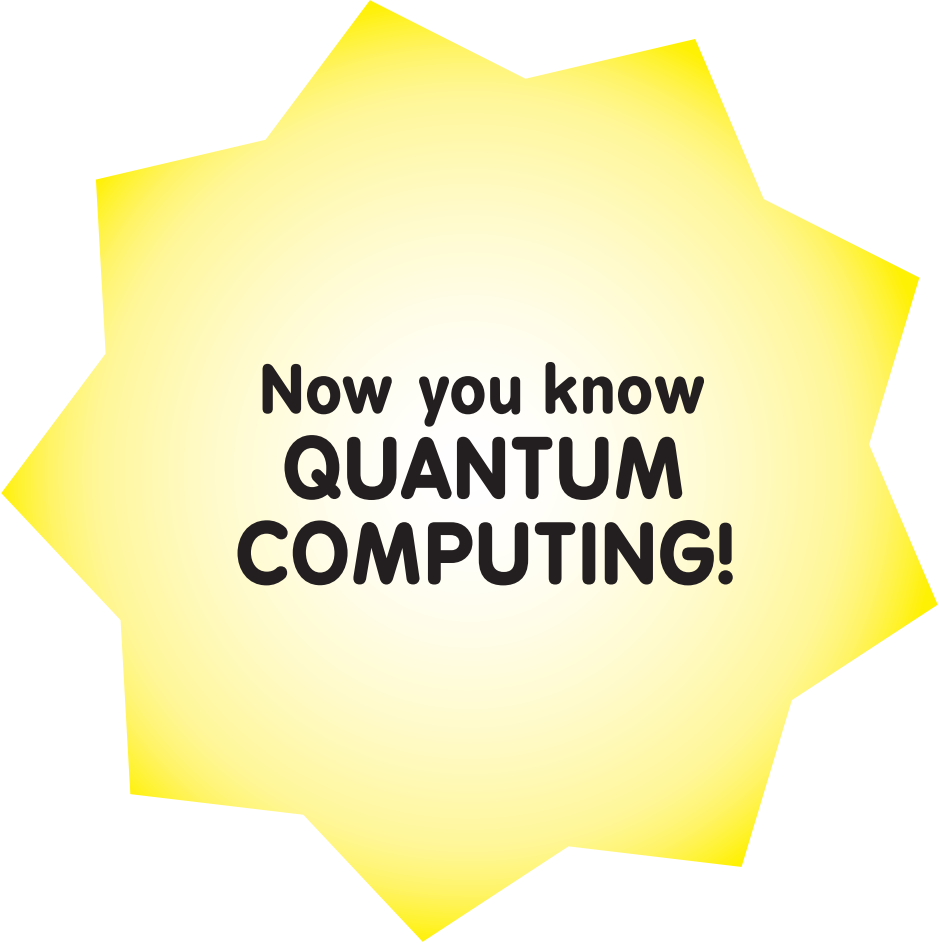
**8,777,379,184,573 = ?**



**5,026,183 x 1,746,331**

**Because quantum computers  
can solve hard problems!**



A yellow starburst shape with a gradient, containing the text "Now you know QUANTUM COMPUTING!".

Now you know  
**QUANTUM  
COMPUTING!**

# Simple explanations of complex ideas FOR YOUR FUTURE GENIUS!



*It only takes  
a small spark to  
ignite a child's mind.*

**Chris Ferrie** is a physicist, mathematician, and father of four budding young scientists. He believes it is never too early to introduce small children to big ideas!

**whurley** is a scientist, entrepreneur, and father of three amazing boys. He believes all children are scientists at heart and the key to our future.

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