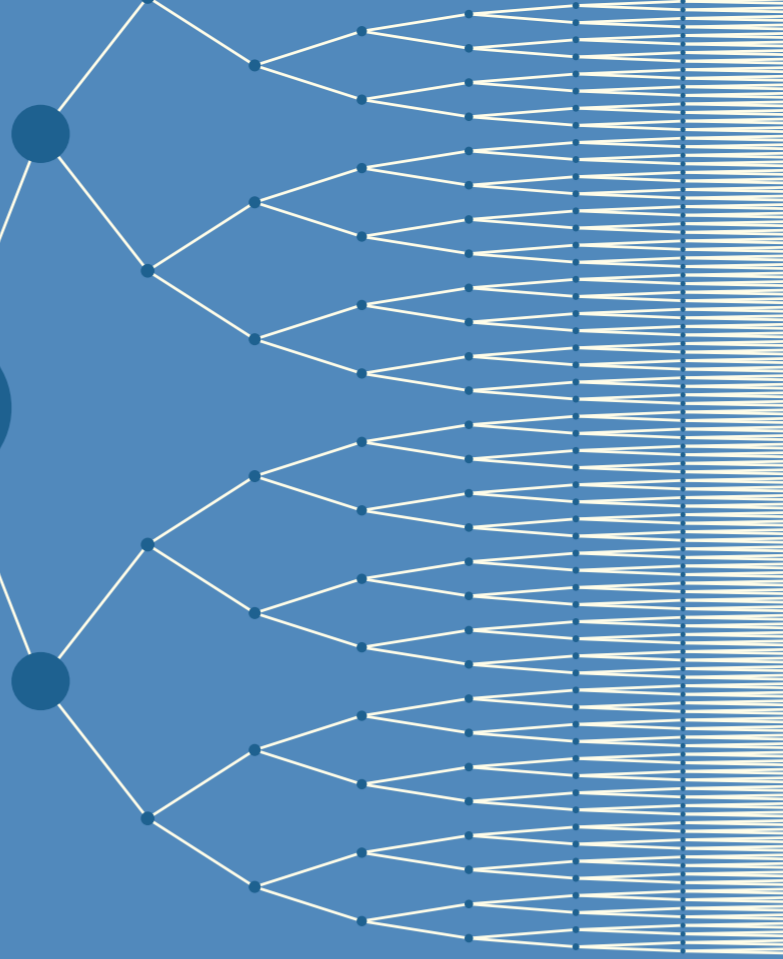


# MEGA MATHS



## VIRAL POSTS

**?** Imagine you put a post on social media and in a minute two people see it and repost it. Then in another minute each of those posts are reposted by two more people. If this goes on for 10 minutes, how many people will have seen the post?

**A** **2,047**  
(including yourself)

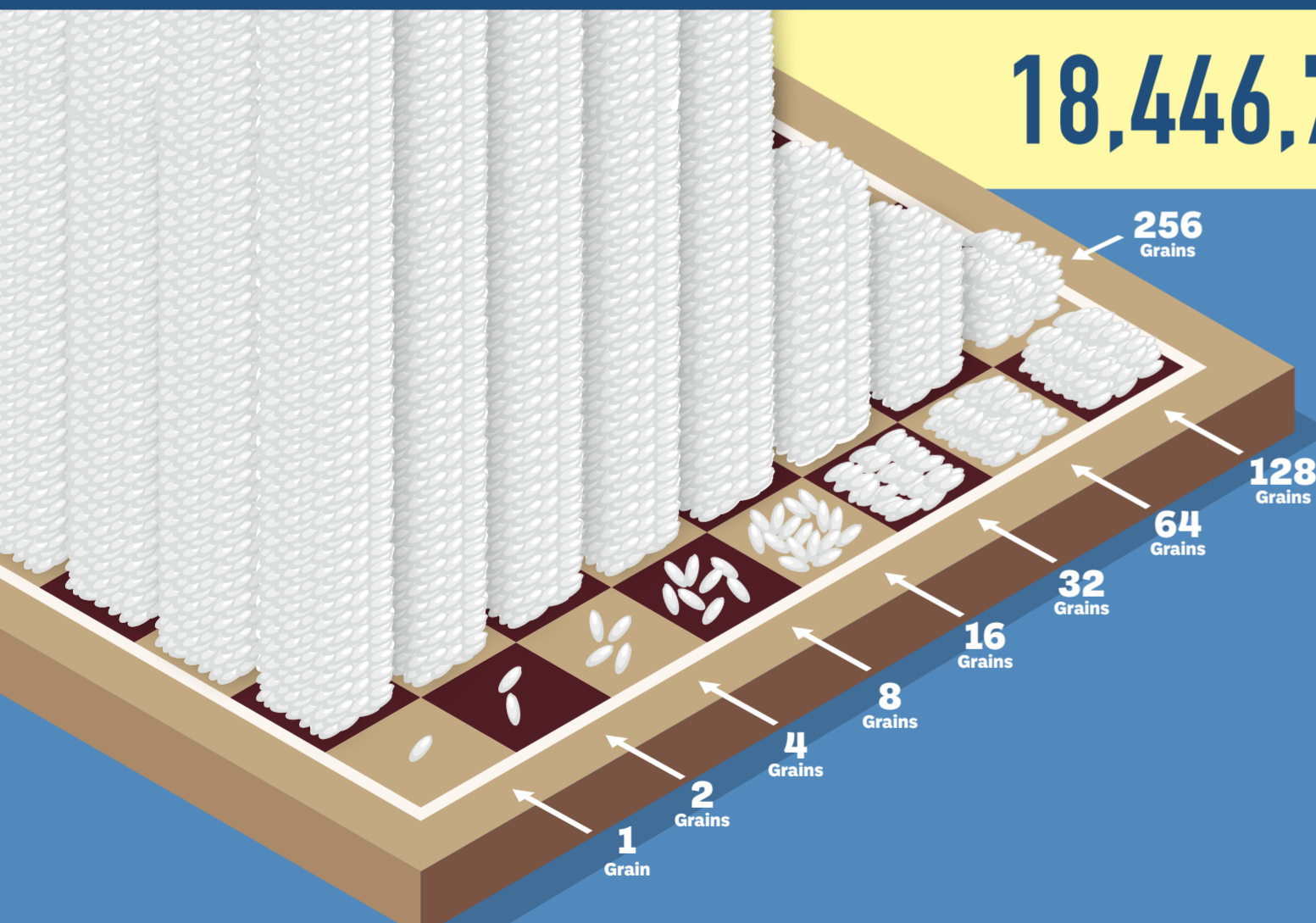
(1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024)



## CHESSBOARD AND GRAIN

An ancient story tells us that a king wanted to reward the inventor of chess. The inventor asked the king to put one grain on the first square, two on the second square, four on the third square, doubling every time through all the squares on the chessboard. The king thought he had a bargain until his **chief mathematician told him he would need more grain than there was in the whole world.**

**18,446,744,073,709,551,615**



(That's: eighteen quintillion, four hundred forty-six quadrillion, seven hundred forty-four trillion, seventy-three billion, seven hundred nine million, five hundred fifty-one thousand, six hundred and fifteen)

## HOW MANY FLOWERS?

**?** Imagine that you plant one seed to grow a flower. That flower grows and releases **10 seeds** which blow away and then the flower dies. These seeds all grow to produce flowers the following summer and each of those flowers release 10 seeds which grow. The next summer each of these new flowers release 10 seeds and they all grow. **If this happens every year how many flowers would there be after 5 years?**

**A** **100,000**

