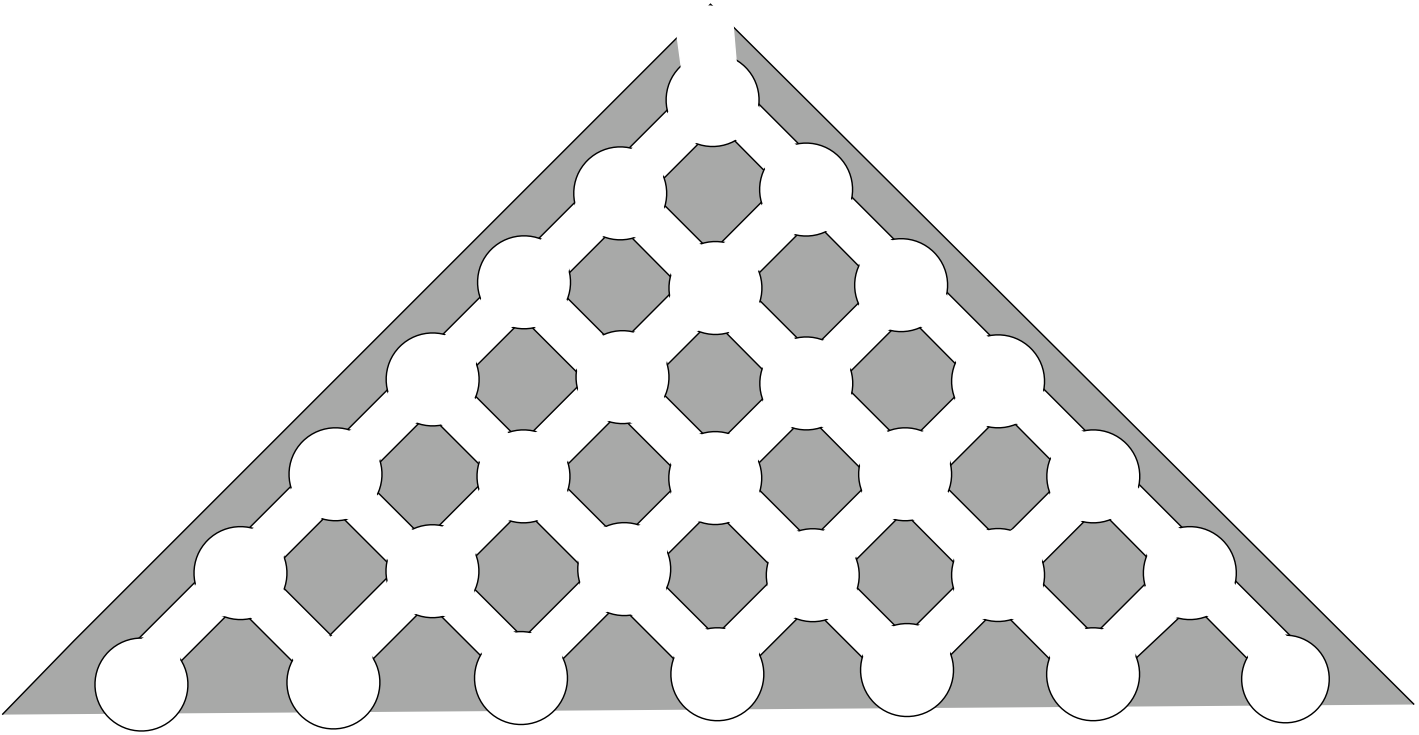
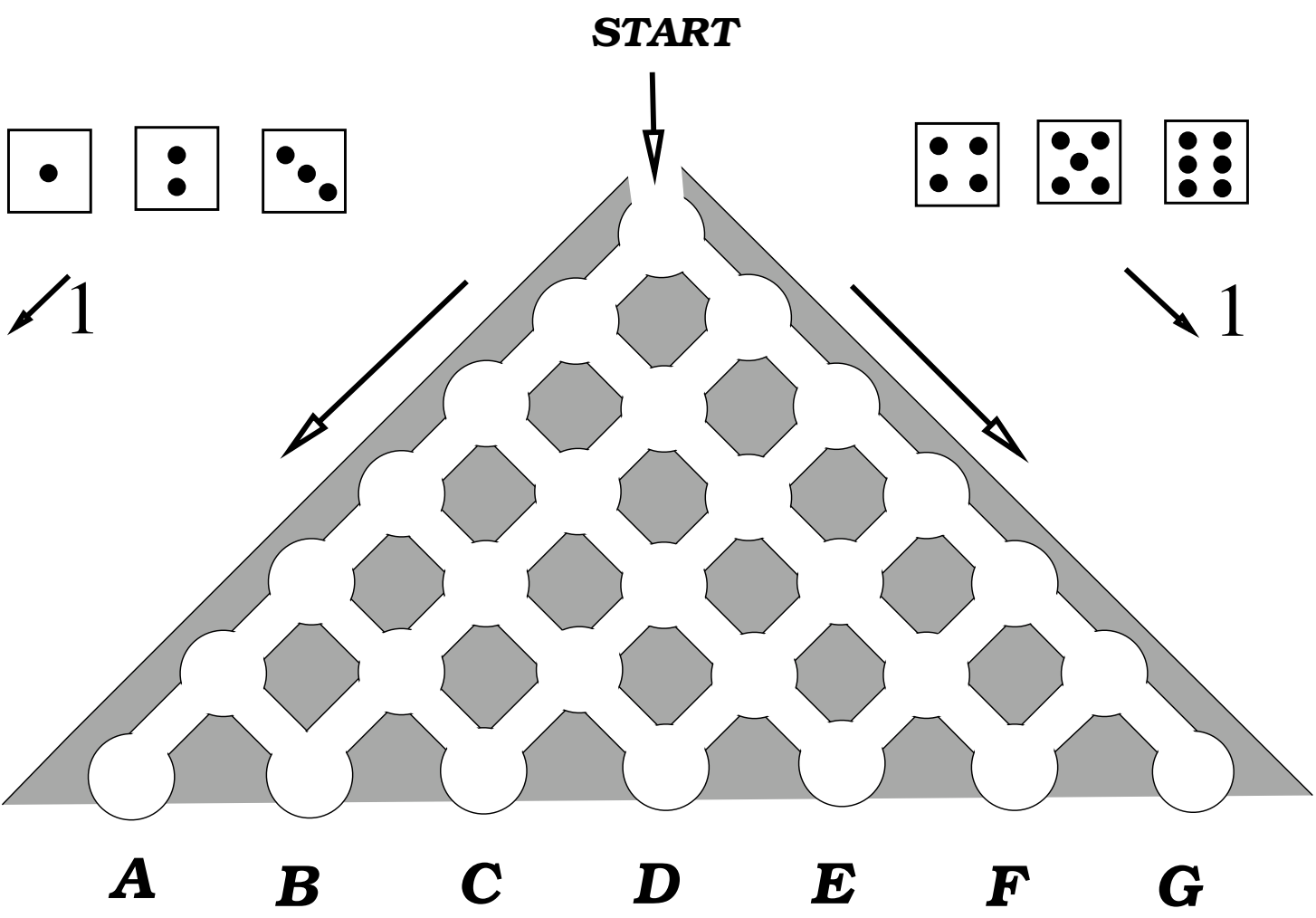
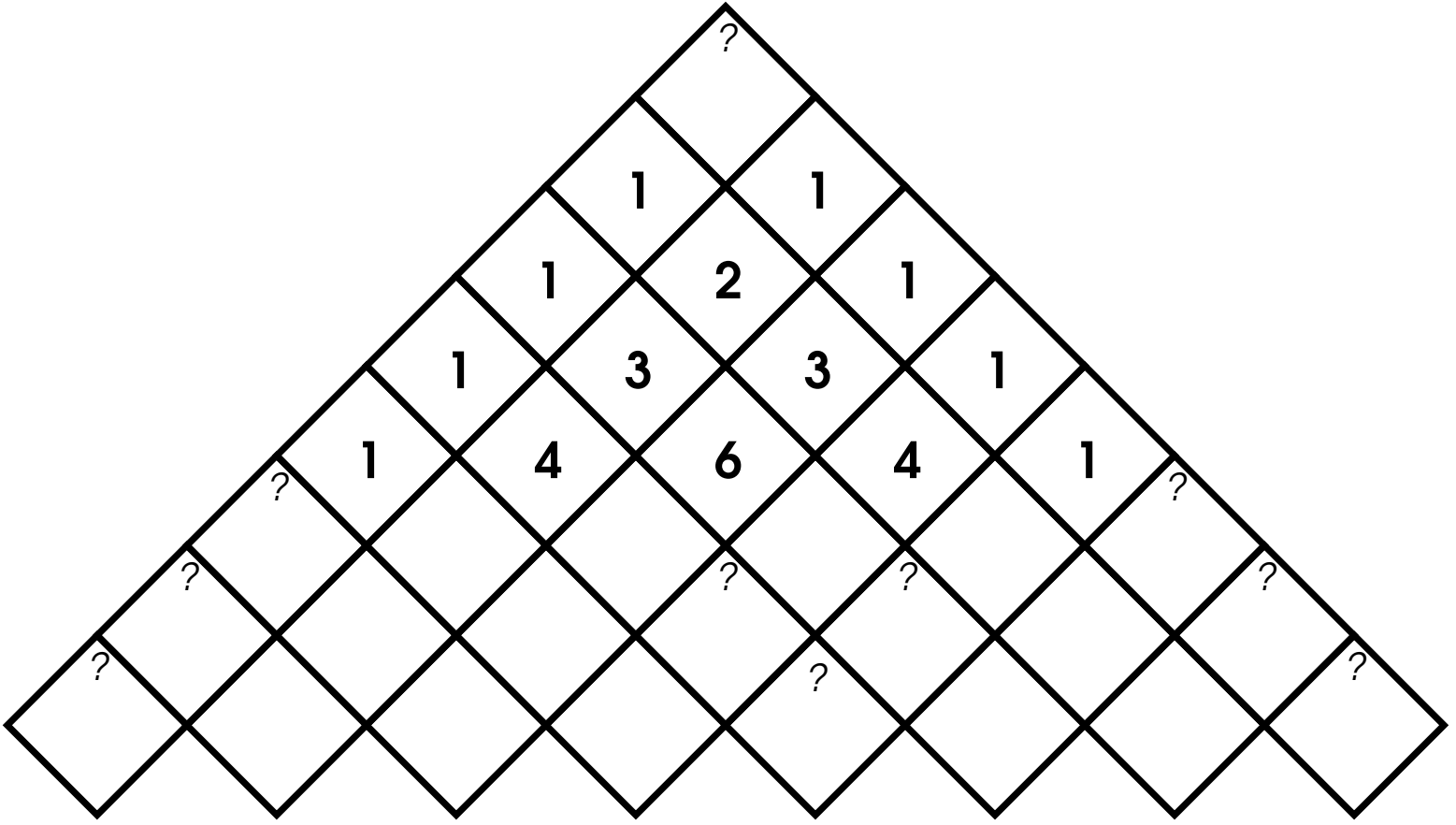
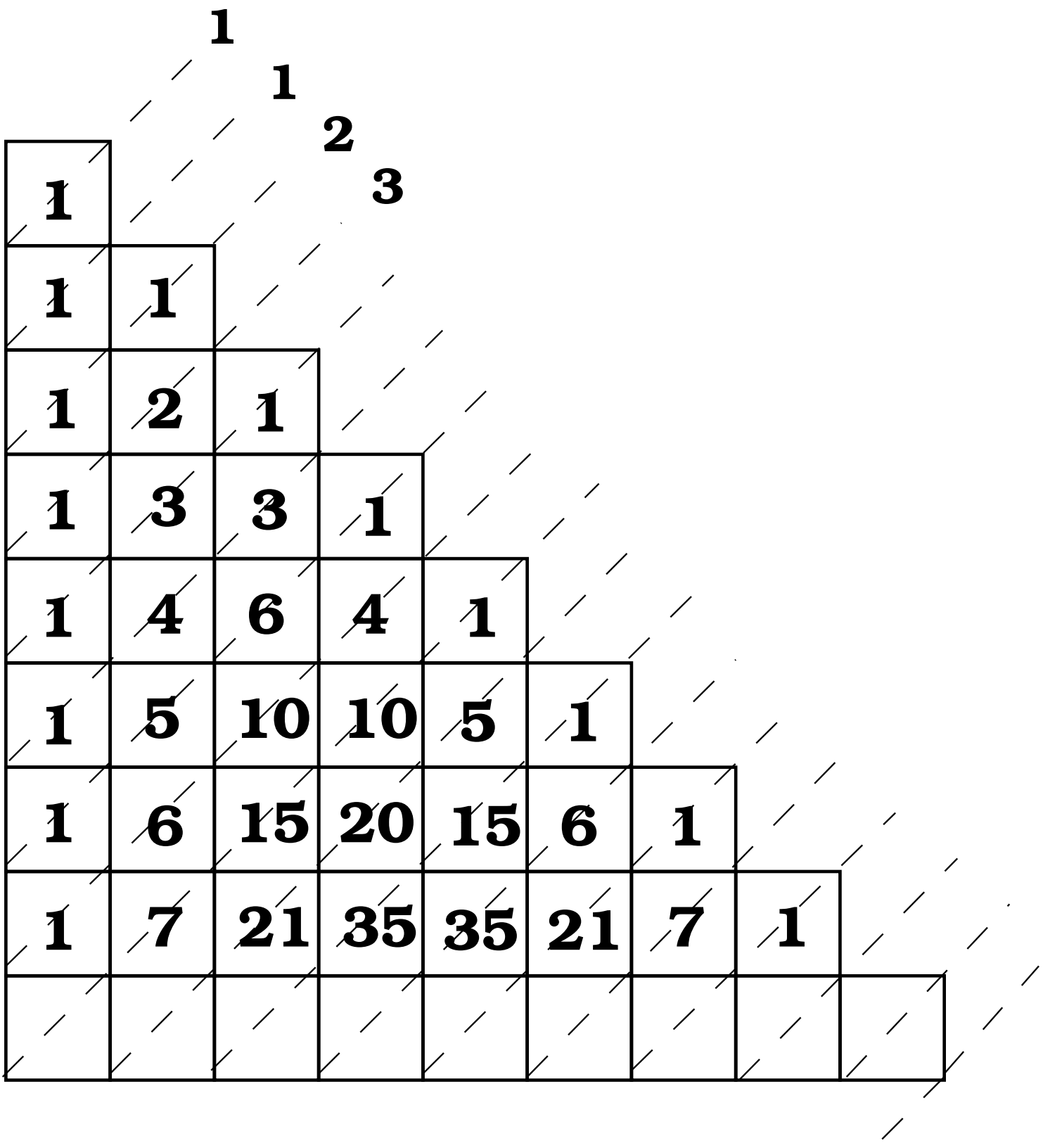




Random Paths


?
1 1
1 2 1
1 3 3 1
1 4 6 4 1
? ? ? ? ? ?
? ? ? ? ?

Pascal and Fibonacci



Blaise Pascal (1623-1662)

"Renaissance men" are people equally gifted and very successful in many different areas. Blaise Pascal was the last of them.

He was a great inventor and a great writer. Imagine: even now, 350 years after he died: in a French bus (which was invented by Pascal!) you can see people reading his books, "Letters" and "Thoughts". He was also a philosopher, mathematician and physicist.

When Pascal was 10, he got interested in the sounds a china plate makes when tapped. He had invented a series of physical experiments and had showed that sound is vibrations of air.

Blaise was a sick child. A family legend claims he was cursed by a witch. To protect his health, his father did not want Blaise to study math. But father was forced to change his mind: when Blaise was 12, he found by himself the most basic geometric fact about the sum of the angles of a triangle. (This fact was discovered 2000 years before in Ancient Greece.)

When he was 16, Blaise became the first to develop geometry beyond what was known in Ancient Greece. Later he became famous for his studies of the math of randomness, the nature of "the void", how liquids and air behave under pressure. His studies in physics resulted in inventions of barometer and weather forecasting. The unit of pressure, ***pascal***, is named after him.

He was publishing his "Letters" under a secret name. The government banished them, and for many years the police was trying to find the author. Blaise outsmarted them all.

Pascal constructed the first calculator, called the Pascaline. It was built using gears. Today we know that many people had ideas how to make mechanical calculators, and we know why their ideas would not work. Pascal's calculator worked; many machines were built and sold.