

## Blaise Pascal

19 June 1623-19 August 1662
Born in France, Blaise Pascal was a mathematician, Christian philosopher, physicist, inventor, writer, and a child prodigy. He is credited as being one of the first inventors of a mechanical calculator. He contributed to and influenced the fields of projective geometry, probability theory, modern economics and social science.

Pascal didn't discover the pattern known as Pascal's Triangle but he did write about it and made contributions to the mathematics described by it.

Below is a rendition of Pascal's Triangle.

| $0^{\text {th }}$ row |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
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| $\begin{aligned} & 1^{\text {st }} \\ & \text { row } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline 2^{\text {nd }} \\ \text { row } \end{array}$ |  |  |  |  |  |  |  |  |  |  | 1 |  | 2 |  | 1 |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|c\|} \hline \text { 3rd } \\ \text { row } \\ \hline \end{array}$ |  |  |  |  |  |  |  |  |  | 1 |  | 3 |  | 3 |  | 1 |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { 4th } \\ & \text { row } \end{aligned}$ |  |  |  |  |  |  |  |  | 1 |  | 4 |  | 6 |  | 4 |  | 1 |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 5^{\text {th }} \\ & \text { row } \end{aligned}$ |  |  |  |  |  |  |  | 1 |  | 5 |  | 10 |  | 10 |  | 5 |  | 1 |  |  |  |  |  |  |  |
| $\begin{array}{\|c\|} \hline 6^{\text {th }} \\ \text { row } \end{array}$ |  |  |  |  |  |  | 1 |  | 6 |  | 15 |  | 20 |  | 15 |  | 6 |  | 1 |  |  |  |  |  |  |
| $\begin{gathered} 7 \text { th } \\ \text { row } \end{gathered}$ |  |  |  |  |  | 1 |  | 7 |  | 21 |  | 35 |  | 35 |  | 21 |  | 7 |  | 1 |  |  |  |  |  |
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1. Describe any patterns that you can observe.
2. Describe how the 6th row is derived from the 5 th row.
3. Continue calculating the rest of the rows in the chart.
4. At what place do you stop being able to find the next row of numbers in your head?
5. Choose a divisor; either $2,3,4$, or 5 and color in all of the multiples of that number.
