Problem of the Week Problem C Stargazing

In a distant solar system, four different comets: Hypatia, Fibonacci, Lovelace, and Euclid, passed by the planet Ptolemy in 2023. On Ptolemy, it is known that the Hypatia comet appears every 3 years, the Fibonacci comet appears every 6 years, the Lovelace comet appears every 8 years, and the Euclid comet appears every 15 years.

When is the next year that all four comets will pass by Ptolemy?

