

## Math History for Precalculus

### Joseph Fourier

1. When did Joseph Fourier (foor YAY) live? *1768–1830*
2. Where was he from? *France (Auxerre)*
3. From what religious group did he obtain his education? *Benedictines*
4. Fourier accompanied Napoleon to Egypt. How long was he there, and what did he do?  
*He stayed 4 years (1798–1801) and was in charge of education at the Egyptian Institute.*
5. After Fourier returned to France, what area of physics did he study? *heat conduction*
6. Name his most famous work, which he wrote in Paris on the subject above. *Théorie analytique de la chaleur*
7. When was this published? *1822*

In this work, Fourier made use of a series such as you studied in this chapter. His most useful series, however, involved calculus concepts.

8. Identify which trig functions are used in finding a Fourier series. *cosine, sine*

Two other men developed important series that involve series. Give the time and place that each of them lived.

9. Brook Taylor, who studied the Taylor series. *1685–1731, England (London area); famous work: Methodus Incrementorum Directa et Inversa (1715)*
10. Colin Maclaurin, who studied the Maclaurin series. *1698–1746, Scotland (Kilmodan); famous work: Treatise on Fluxions (1742)*