The sum of two vectors $F_1$ and $F_2$ could be found by using the parallelogram law of vector addition:

recall from trigonometry:

- cosine law: $R = \sqrt{F_1^2 + F_2^2 - 2F_1 F_2 \cos c}$
- sine law: $\frac{F_1}{\sin a} = \frac{F_2}{\sin b} = \frac{R}{\sin c}$

When dealing with several concurrent forces the method based on the parallelogram law is not very practical. Using vector algebra (summation of components) usually leads to a much simpler solution.