3.3.2.14

EE24BTECH11024 - G. Abhimanyu Koushik

Question:
Two sides of a triangle are of length $5cm$ and $1.5cm$. The length of the third side of the triangle cannot be

a. $3.6cm$
b. $4.1cm$
c. $3.8cm$
d. $3.4cm$

Solution:

Symbol	Description
a	side of length $5cm$
b	side of length $1.5cm$
c	length of third side

TABLE 4: Variables Used

For any triangle the difference of length of two sides should not be greater than the third side.

$$|a - b| \geq c \tag{1}$$

$$3.5cm \geq c \tag{2}$$

c cannot be $3.4cm$

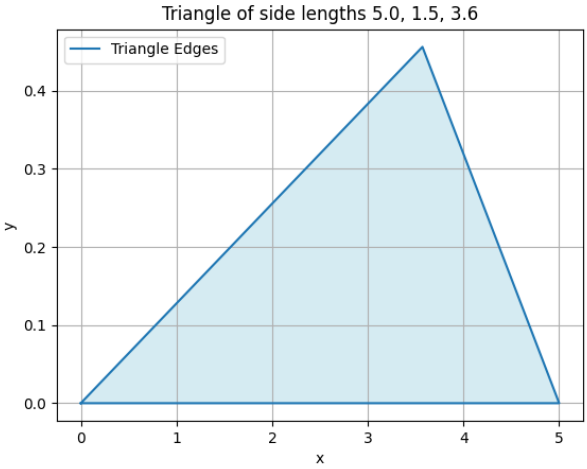

Fig. 4: Triangle with sides 5cm, 1.5cm, and 3.6cm

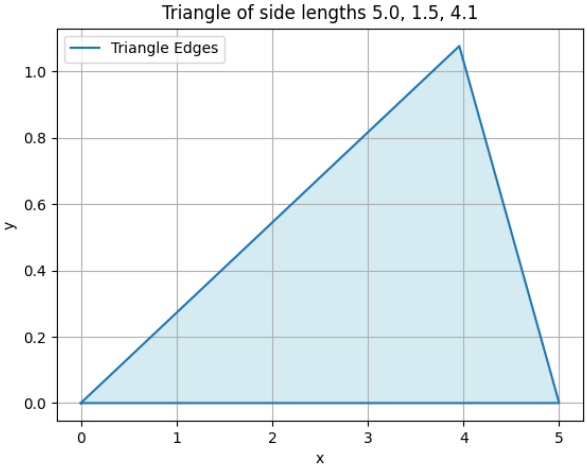

Fig. 4: Triangle with sides 5cm, 1.5cm, and 4.1cm

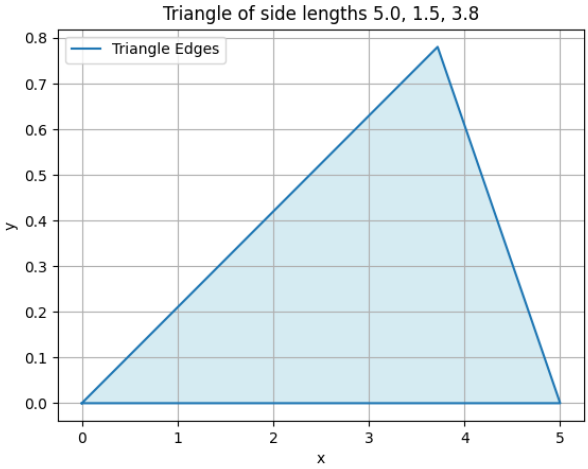

Fig. 4: Triangle with sides 5*cm*, 1.5*cm*, and 3.8*cm*

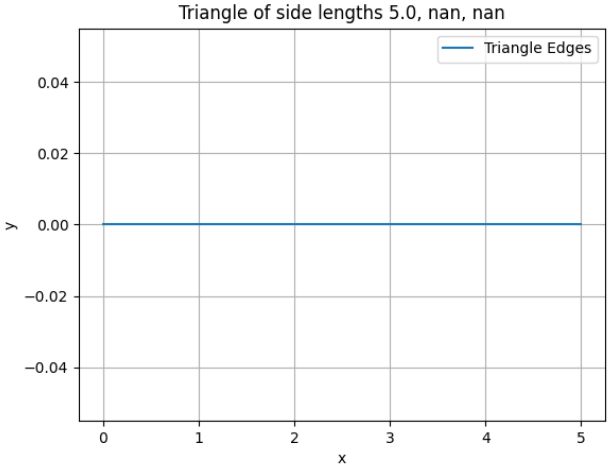

Fig. 4: Code giving an error (only a line) as the triangle cannot exist