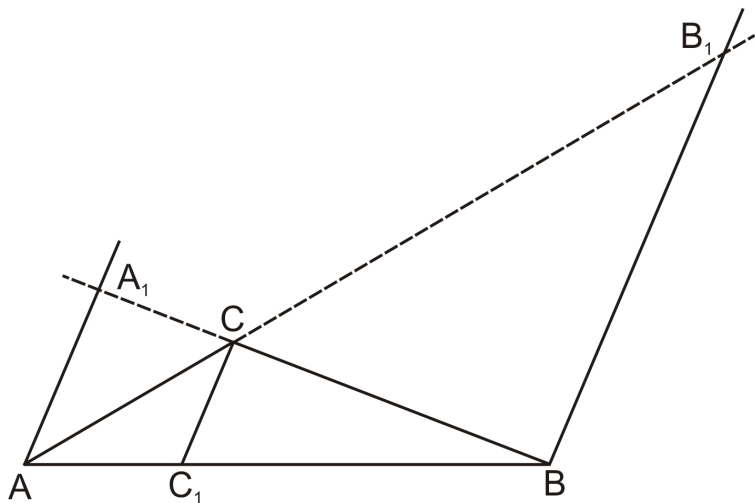


Let  $ABC$  be an arbitrary triangle. Choose a point  $C_1$  on side  $AB$ , and draw the line  $CC_1$ . Draw the line through  $B$  parallel to  $CC_1$  and extend  $AC$  until it crosses this line. Call the intersection point  $B_1$ . Draw the line through  $A$  parallel to  $CC_1$  and extend  $BC$  until it crosses this line. Call the intersection point  $A_1$ .



Show that  $\frac{1}{|AA_1|} + \frac{1}{|BB_1|} = \frac{1}{|CC_1|}$ .