Homework 2

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*Chapter_2_example_2_question*_3(1)

Problem: Show that the following triads of points form right angled triangle : (1,-3/2), (-3,- 7/2), (-4,-3/2).

Solution:

Given A(1,-1), B(-3,- 7/2), C(-4,-3/2)

Let's find distances:

Distance = underoot((x1 -x2)2 +(y1 - y2)2)

AB= underoot(16 +4) = underoot(20)

BC= underoot(1 +4) = underoot(5)

CA= underoot(25 +0) = 5

By Pythagoras :

ABC is a right triangle if and only if (CA)2 = (AB)2 + (BC)2

25 = 5 + 20

25 = 25

Hence TRUE, ABC is a right angled triangle.