

assignment1

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1 Problem statement

find the area of triangle whose vertices are given below:
(0,4), (3,6), (-8,-2)

2 Solution

The vertices are:

$$a = 0, 4$$

$$b = 3, 6$$

$$c = -8, -2$$

We make matrix by given coordinates

$$matrix = [[0, 4, 1], [3, 6, 1], [-8, -2, 1]]$$

Determinants of the above matrix:

$$determinants = 2$$

Now Area of triangle is given by:

Area of triangle is half of the determinants

$$Area = \frac{1}{2} * determinants$$

$$Area = 0.5 * 2$$

$$Area = 1unit$$