Answer on Question #42441, Math, Analytic Geometry

Task:

Given that P = (5, 8) and Q = (6, 9), find the component form and magnitude of vector PQ.

Solution:

$$P = (5,8) \; and \; Q = (6,9)$$

$$PQ = (6-5, 9-8) = (1,1) - \text{component form}$$

$$|PQ| = \sqrt{1^2 + 1^2} = \sqrt{2} - \text{magnitude}$$

Answer:

$PQ = (1,1)$ – Component form

$|PQ| = \sqrt{2}$ – Magnitude