

Answer on Question #56418, Physics - Mechanics | Relativity

Task: X- and Y- axes in the standard directions, and units in miles: A car moves from (3,4) to (4,8) on a straight line. Evaluate the distance travelled. Express the displacement very clearly!

Solution:

Let point A(3,4) and B(4,8).

The distance travelled by car is the length of AB,so

$$|AB| = \sqrt{(4-3)^2 + (8-4)^2} = \sqrt{1+16} = \sqrt{17} \approx 4.123 \text{ miles}$$

Answer: 4.123 miles