Answer on Question #73432-Physics-Other
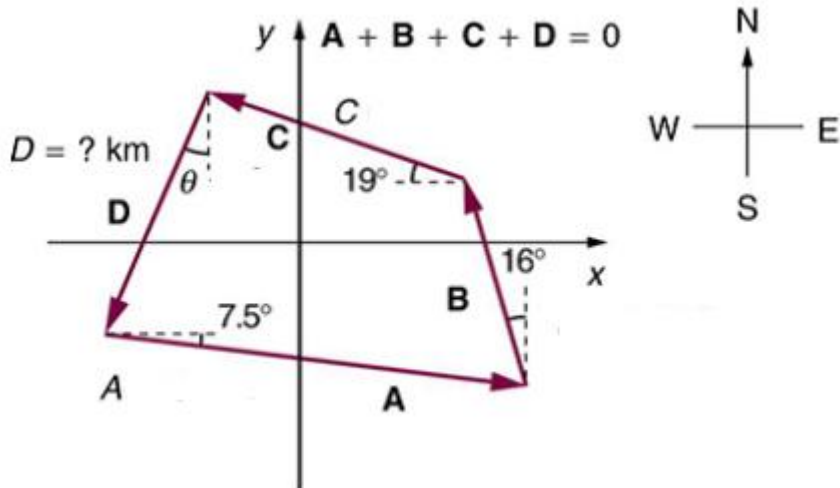
A breeder want to wall off his four-sided plot of flat land. He measures the first three sides, A, B, and C. A=4.75km, B=2.29km, and C=2.9km. What is the length of the vector D in kilometers?

Solution

$$D_x = -(A_x + B_x + C_x) = -(4.75 \cos 7.5° - 2.29 \sin 16° - 2.9 \cos 19°) = -1.336 \, km$$

$$D_y = -(A_y + B_y + C_y) = -(-4.75 \sin 7.5° + 2.29 \cos 16° + 2.9 \sin 19°) = -2.525 \, km$$

The length of the vector D is

$$D = \sqrt{(-1.336)^2 + (-2.525)^2} = 2.86 \, km.$$

Answer: 2.86 km.