

Challenge 141: Freddy the Explorer

Freddy the mathematical fly is crawling over the surface of a regular tetrahedron with edges of length 10cm, which has been placed on a table. He starts from the midpoint of one of the edges of the base, and crawls to the midpoint of one of the other edges that he can see, taking a route that crosses all of the three sides that are not the base (he's curious to know what's on the other side of the tetrahedron!)

What is the shortest possible distance he could travel?

Can you give this distance as an exact value?