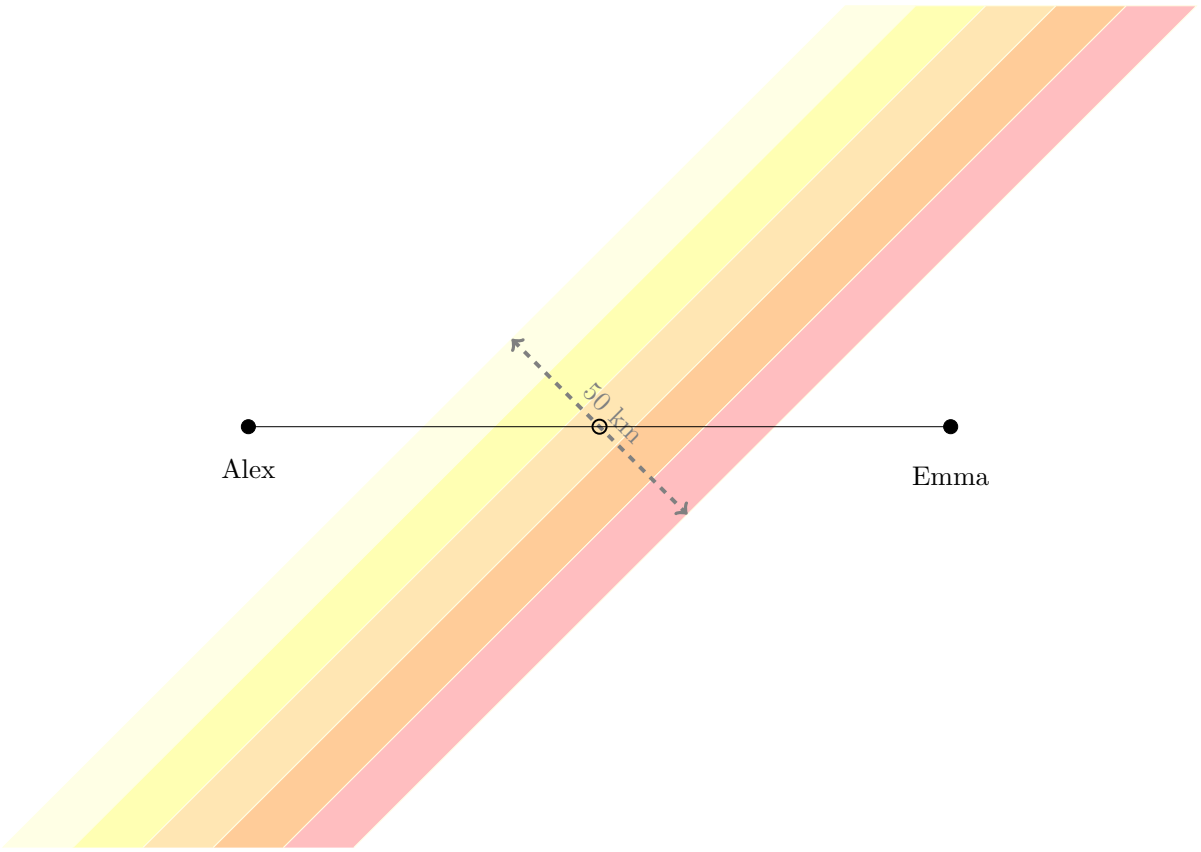
Linear Swamp of Delay

Alex and Emma are on a daring rescue mission! They're part of an elite team, but a sudden malfunction has left them stranded far apart. Alex is at point $P = (0, 0)$, and Emma is at point $F = (100, 0)$. The problem? Between them lies the infamous Linear Swamp of Delay, a treacherous obstacle that slows down even the fastest operatives.

Alex, known for his long stride and relentless pace, can march across normal terrain at 10 km/h. If the ground were clear, he'd reach Emma in just 10 hours. But the swamp complicates things: it stretches diagonally from southwest to northeast, is 50 km wide everywhere, and the midpoint of PF lies right in its center. Crossing the swamp is much slower than marching on solid ground, so Alex needs to figure out the fastest route to reach Emma. A diagram of the situation is shown in the figure below:



The swamp consists of five zones, each 10 km wide, as shown in the diagram. The zone closest to Alex is relatively easy to traverse, and his strong legs allow him to maintain a pace of 9 km/h there. Each subsequent zone becomes increasingly difficult, so Alex's speed drops to 8, 7, 6, and finally only 5 km/h in the last zone before reaching Emma. Once Alex escapes the swamp, he feels much more relieved, and with renewed energy, he resumes his normal pace of 10 km/h on solid ground.

If Alex walks in a perfectly straight line toward Emma, his route will be 100 km long, and it will take him approximately 13.4738 hours. However, he can reach Emma much faster if he chooses a smarter route. How many hours does Alex's fastest route take?

A. 13.1265108886
B. 13.1265801586
C. 13.1265108856
D. 13.1265085186
E. 13.1265088561
F. 13.1260851586
G. 13.1265581086
H. 13.1268551086
I. 13.1265100586
J. 13.1265608586
K. 13.1265018586
L. 13.1265108586
M. 13.1265108580
N. 13.1265010586
O. 13.1265188588
P. 13.1208651586
Q. 13.1255651056
R. 13.1266610886
S. 13.1265000506
T. 13.1265105585
U. 13.1255651586
V. 13.1265198586
W. 13.1165108583
X. 13.1265105868
Y. 13.1265103536
Z. The correct answer is not there.