

I U P U I
MATH CLUB TEASER #38

February 26, 2010
(due March 5, 2010)

SOLUTION

The length of the top stroke is

$$7.5 + 6.5 \frac{5 \cos(40^\circ)}{6 + 5 \sin(40^\circ)} \approx 10.2020416 \dots,$$

and the length of the bottom stroke is

$$7.5 + 4.5 \frac{5 \cos(40^\circ)}{6 + 5 \sin(40^\circ)} \approx 9.370642 \dots$$

SOLVED BY:

Captain Nemo, Think Before you Act.