

A digital watch displays hours and minutes with AM and PM. What is the largest possible sum of the digits in the display?

- (A) 17 (B) 19 (C) 21 (D) 22 (E) 23

2006 AMC 10 A, Problem #4—

2006 AMC 12 A, Problem #4—

“What is the largest possible sum of the minutes digits?”

Solution (E) The largest possible sum of the two digits representing the minutes is $5 + 9 = 14$, occurring at 59 minutes past each hour. The largest possible single digit that can represent the hour is 9. This exceeds the largest possible sum of two digits that can represent the hour, which is $1 + 2 = 3$. Therefore, the largest possible sum of all the digits is $14 + 9 = 23$, occurring at 9:59.

Difficulty: Medium-easy

NCTM Standard: Problem Solving Standard: apply and adapt a variety of appropriate strategies to solve problems

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