At the beginning of the year, an investment fund was established with an initial deposit of 1000. A new deposit of 1000 was made at the end of 4 months. Withdrawals of 200 and 500 were made at the end of 6 months and 8 months, respectively. The amount in the fund at the end of the year is 1560. Calculate the dollar-weighted (money-weighted) yield rate earned by the fund during the year.

A. 18.57%  B. 20.00%  C. 22.61%  D. 26.00%  E. 28.89%

Solution.
Recall that all such problems assume simple interest. The interest earned during the year is:

\[ 1560 + 200 + 500 - 1000 - 1000 = 260. \]

The dollar-weighted yield rate is:

\[
\frac{260}{1000 \cdot 1 + 1000 \cdot \frac{8}{12} - 200 \cdot \frac{6}{12} - 500 \cdot \frac{4}{12}} = \\
\frac{260}{1000 + \frac{2000}{3} - 100 - \frac{500}{3}} = \\
\frac{260}{900 + \frac{1500}{3}} = \\
\frac{3 \cdot 260}{4200} \approx 18.57\%.
\]

Answer A.