

Calculus Challenge Problem # 12

Results: The groups did well on this challenge. The biggest problem came from students promiscuous use of equal signs, saying things like

$$\frac{3}{2}\ln(2) = 1 + \frac{1}{3} - \frac{1}{2} - \frac{1}{5} + \frac{1}{7} - \frac{1}{4} + \frac{1}{9} + \dots = 1 - \frac{1}{2} - \frac{1}{4} + \frac{1}{3} - \frac{1}{6} - \frac{1}{8} + \frac{1}{5} - \frac{1}{10} - \frac{1}{12} + \dots = \frac{1}{2}\ln(2).$$

instead of the correct

$$\frac{3}{2}\ln(2) = 1 + \frac{1}{3} - \frac{1}{2} - \frac{1}{5} + \frac{1}{7} - \frac{1}{4} + \frac{1}{9} + \dots \text{ but } 1 - \frac{1}{2} - \frac{1}{4} + \frac{1}{3} - \frac{1}{6} - \frac{1}{8} + \frac{1}{5} - \frac{1}{10} - \frac{1}{12} + \dots = \frac{1}{2}\ln(2)$$

or saying that $1 - \frac{1}{2} - \frac{1}{4} + \frac{1}{3} - \frac{1}{6} - \frac{1}{8} + \frac{1}{5} - \frac{1}{10} - \frac{1}{12} + \dots = \frac{1}{2}\ln(2)$ so $1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \frac{1}{5} - \frac{1}{6} + \dots = \frac{1}{2}\ln(2)$.

School	Teacher	Score	Cumulative Score
Bellville High School	Trudy Durham	4.5	60
Benjamin Cardozo High School	Ken Rubel	3.5	58.5
Hickman High School	Deanna Wasman	4.5	56.5
Pine View School	Ann Hankinson	5	60

Final Scores for 2009-2010

School	Teacher	Final Score
Bellville High School	Trudy Durham	60
Benjamin Cardozo High School	Ken Rubel	58
Blessed Trinity Catholic High School	Amy Muller	15
Eagle's Landing Christian Academy	Deborah Brown	2.5
Fike High School	Christie Wuebbles	4.5
Gleneagle Secondary School	Nevena Savovic	40.5
Gray Stone Day School	Robin Dassler	8.5
Hickman High School	Deanna Wasman	56.5
Head-Royce School	Shahana Sarkar	15.5
La Habra High School A	Barbara De Roes	5
La Habra High School B	Barbara De Roes	10
North Lamar High School	Kathy Stewart	3.5
Norwalk High School	Chris Higgins	4.5
Pine View School	Ann Hankinson	60

Congratulations to *Bellville High School*, *Benjamin Cardozo High School*, *Hickman High School*, and *Pine View School* for their outstanding work throughout the year.