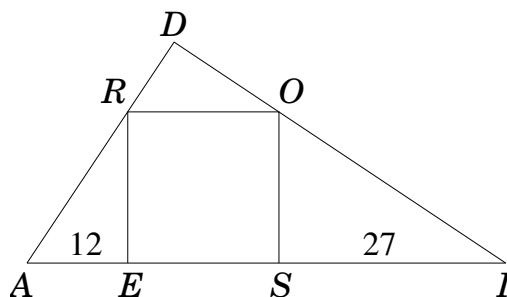# Math Field Day

Mad Hatter B sample questions - 2

1. The ratio $\dfrac{10^{2000} + 10^{2002}}{10^{2001} + 10^{2001}}$ is closest to which of the following numbers?

   (a) 0.1

   (b) 0.2

   (c) 5

   (d) None of the above

2. 2.4 is what percent of 1.6?

   (a) 50

   (b) 125

   (c) 175

   (d) None of the above

3. Solve for x: $\quad \dfrac{1}{x} + \dfrac{1}{3} = \dfrac{3}{4x} + \dfrac{1}{2}$

   (a) $\dfrac{2}{3}$

   (b) $-\dfrac{2}{3}$

   (c) $\dfrac{3}{2}$

   (d) $-\dfrac{3}{2}$

4. The angles of a hexagon have degree measures that are consecutive odd integers. What is the degree measure of the largest angle?

   (a) 119

   (b) 57

   (c) 125

   (d) None of the above

5. In a group of 30 people there are 20 women and 10 men. The average hight of the women is 66" and the average height of the men is 69". What is the average height of the 30 people?

   (a) 67"

   (b) 67.5"

   (c) 68"

   (d) 68.5"

   (e) None of the above

6. Find the area of square $ROSE$ which is inscribed in right triangle ADI, if $AE = 12$ and $SI = 27$.

   (a) 729

   (b) 144

   (c) 324

   (d) None of the above