

**2002 Mount Rainier Math Invitational**  
**Sixth Grade Team Pressure Round**  
written by Kjell Hansen

Reduce all fractions and answers may be left in terms of  $\pi$  or use 3.14 for  $\pi$ . You must turn in an answer to a problem at 3, 6, 9, 12 and 15 minutes. The first answer turned in is worth 3 points, the second 4 points, ..., and the fifth is worth 7 points.

1. I take  $\frac{1}{4}$  of a pizza of diameter 16" by removing a circle of pizza from the pizza's center. What is this piece's diameter?
2. Mykel is 4 years older than Carli. 8 years ago, Mykel was twice as old as Carli. How old is Carli?
3. Every 4 weeks one of my socks gets lost in the laundry. I lost a sock yesterday and now have 6 identical pairs. I'll buy new socks when I have less than two pairs left. How many weeks from now will I buy new socks?
4. It is 12:17 now. In how many minutes will the hour and minute hands be 165 degrees apart?
5. If  $28=kx^2$  when  $x=2$ , then what does  $x$  equal when  $63=kx^2$