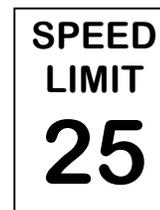
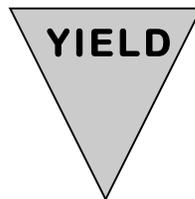


2006 Washington State Math Championship

Unless a particular problem directs otherwise, give an exact answer or one rounded to the nearest thousandth.

Individual Test FR - Grade 7

11. What is the remainder of the division of the largest prime from 180 to 190 and the largest prime from 30 to 40?
12. When 6 is subtracted from a number and the result is divided by -4 the result is 17. What is the original number?
13. What is 2006% of 2006 ?
14. DJ Dynamo was going to rip a CD of 7 different songs. She has already decided which song will be fourth and which one will be last. How many different ways are there to arrange the order of the rest of the songs?
15. On a recent car ride, Jimmy and Jenny counted all the Stop signs, Yield signs and Speed Limit signs they passed on the trip. They saw more than one of each and the signs they saw had a total of 42 sides all together. How many different combinations could they have seen?



16. Stan wanted to stack 5 cases of soup cans into a solid square pyramid. Using as many as possible, how many cans are left over if there are 24 in a case?
17. Shaunita has a deal with her parents. She can go to Music Summer Camp if she can save \$140. She had eight months and planned to save \$3 more than the month before. If she saved \$7 the first month, how much does she have after 5 months?
18. What is the next number in the sequence? ...16, 31, 51, 76, _____
19. $58 = \frac{4}{7}n + 23$ Find the value of n .
20. If the numbers 6,7,8,9 are used to replace the letters a,b,c,d , what is the greatest value of the following expression? (Answer in the form of a reduced improper fraction.)

$$-a \frac{b+c}{d}$$

21. If Sean can read 40 pages in $1\frac{1}{2}$ hours, how many minutes would it take him to read 90 pages?
22. Tasleem interviewed $\frac{3}{8}$ of the 352 students at Fermat Middle School. Three out of eleven of those interviewed said they like Classic Rock music. How many of all the students at Fermat **do not** like Classic Rock?
23. What day of the week will it be 3256 hours from nine in the morning on Saturday, March 24, 2006?
24. How many squares that are also cubes are there between 2 and 2006?
25. What is the difference between the sum of the first thirty positive integers and the sum of the first twenty positive integers?
26. The product of four consecutive even integers is 190,080. What is the mean of the four integers?
27. What is $0.01\bar{3}$ as a common fraction?
28. How many dots are in the 9th figure?



Figure 1

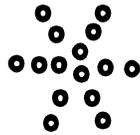


Figure 3

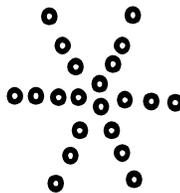


Figure 4

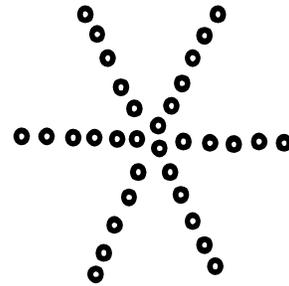


Figure 6

29. If $(k, l) \oplus (m, n) = \left(\frac{l^m + n^k}{l^m - n^k}, nl^{k-m} \right)$, then find $(3, 5) \oplus (4, 5)$. Express your answer as reduced fractions.
30. Ashley's new car gets 18mi/gal in the city and 24 mi/gal on the highway. She drove 249 miles on 12 gallons of gas. How many of those miles did she drive in the city?