Polyominoes

Polyominoes are plane geometric figures formed by connecting sets of congruent squares.

1. Tetrominoes
   - How many different (noncongruent) shapes can you make with four congruent squares? (Squares must share at least one entire side.) Here is one.

2. Pentominoes
   A pentomino is formed by connecting 5 unit squares. Draw the 10 different pentominoes. Here are two.

Win the 2011-2012 Stematician Award
Every time you send in solutions we keep track of your score.
Solutions for this issue due November 1, 2011.

3 ways to submit:
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Fax: 480-727-0910
Mail: Dixit Patel, Editor at PRIME MATHgazine
      PO Box 875703
      Tempe, AZ 85287-5703
The four by four square is composed of 16 unit squares. How many different ways can you cut the square into four congruent pieces? No unit square can be broken.

Polygon Points

Triangles score 3 points each.
Quadrilaterals score 4 points each.
Pentagons score 5 points each.

Which figure has the greatest number of points? What is its score?

1. 
2. 
3.

Which of these figures has the greatest number of points?
How many points

1. 
2. 
3.
What do all of the following numbers have in common?
242, 10601, 4456544, 11, 878

They’re all palindromes!!!

What is a palindrome you say?
A palindrome is a word or number that reads the same backwards as forwards. The words noon and dad are palindromes. The word mood is not a palindrome.
The number 100001 is a palindrome. The number 10000 is not.

Try these!

1. A 3-digit palindrome that is also a square number.
   __________

2. Two 4-digit palindromes whose digits sum to 18 and all digits are cubic numbers.
   __________ and __________

3. Three 4-digit palindromes whose digits sum to 18 and all digits are cubic numbers.
   ______ and ______ and ______

4. Two 5-digit palindromes whose digits sum to 41.
   __________ and __________

5. Three 6-digit palindromes whose digits sum to 4.
   ______ and ______ and ______
### Arrangement

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