Geometry practice

1. Compute the area of a triange with sides of length 8, 11 and 13.
2. A convex polygon has 170 diagonals. How many sides does it have?
3. Compute the measure of each interior angle of a regular polygon with 24 sides.
4. A regular hexagon is inscribed in a circle with radius 5. Compute the area of the hexagon.
5. A regular dodecagon (12 sides) is inscribed in a circle with radius 8. Compute the area of the dodecagon.
6. In triangle ABC, AB=5, BC=6, AC=8. BD bisects angle B. Compute AD.
7. Compute the volume of a tetrahedron (pyramid with 4 congruent equilateral triangle sides) whose edge is 6.
8. Compute the volume of a right circular cone with slant height 7 and radius of base 4.
9. The volume of a sphere is 36π. Compute its surface area.
10. How many non-congruent obtuse triangles exist which have sides of integral length, 2 of which are 7 and 10?
11. Compute $\sqrt{20 \times 21 \times 22 \times 23 + 1}$ $\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+\ \ldots\ldots\ldots}}}}$