

1. Find two two-digit numbers which product would be as big as possible but not less than 1000. (2)
2. The last day (December 31) of year 2008 will be Wednesday. What day of the week was the 1st day (January 1) of year 2008 ? (2)
3. A rectangle is inscribed in a right triangle which sides are 18, 24 and 30 linear units in such a way that one of its angles coincides with one of the angles of the triangle. (3)
 - a) Mark the length of one of the sides of the rectangle x . Make sure that the length of another side will be $18 - 0,75x$. (3)
 - b) Find what should the length of the sides of the rectangle be, so that its area was the biggest.
4. Solve the equation: $\cos(2008\pi x) = x^2 - 4x + 5$. (3)
5. Solve the inequality: $(x - 1 - x^2)^2 \leq (x^2 - 3x + 4)^2$. (4)
6. The size of the angle of the triangle ABC is 80° . AM and CN are the bisectors of the triangle. What is the angle of the intersection of the bisectors? (3)

