**II SZKOLNY KONKURS**

**“MATEMATYKA PO ANGIELSKU”**

**30.05.2014. GODZ. 9.00–10.00**

1. A student read a 480-page book. Every day, he read the same number of

pages. If he had read 8 pages more every day, he would have finished the

book 3 days earlier. Calculate how many days the student took to read the

whole book.

1. A car travels 210 km in a certain amount of time. If the car had travelled

with an average speed of 10 km/h more than it actually did, its travelling

time would be shorter by half an hour. Calculate the car's average

speed.

1. Solve the quadratic function f, whose shape is a parabola with its vertex

at (1, –9), crossing the point (2, ­–8). Show this function in canonical form. Calculate its roots and sketch its curve.

1. A square has sides of length a. In the rectangle ABCD, the side AB is 2

times longer than a, and the side AD is 2 cm shorter than a. The area of

the rectangle is 12 square centimetres greater than the area of the square.

Calculate a.

1. The owner of a cinema notices that by setting the price of a ticket at 16

zł, he can expect on average 100 customers, while every 1 zł increase in

price leads to 5 fewer customers. What ticket price should he set, so that

the cinema's profits are maximised?