

Name: _____

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1. A carpenter sells armchairs, book cases and cabinets. A person buys **8** armchairs, **11** bookcases and **2** cabinets and pays **RM875**. Another person buys **3** armchairs, **2** bookcases and **5** cabinets and pays **RM343**. Find the total cost of **1** armchair, **1** bookcase and **1** cabinet.

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2. A square whose sides are of integral length is cut into 25 small squares whose sides are also of integral lengths. Exactly 24 of these smaller squares are unit squares. Find the area of the original square.

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3. Let 2007 even consecutive natural numbers be given.
Prove that among any 42 numbers, chosen arbitrarily from these numbers, there exist two numbers, the positive difference of which is less than 100.

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4. In an isosceles triangle ABC ($AB=BC$), $\angle ABC = 80^\circ$.
Let P be an interior point of the triangle, so that $\angle PAC = 40^\circ$ and $\angle ACP = 30^\circ$.
Find $\angle BPC$.

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5. Let 25 pieces of cheese be given. Is it possible to cut of piece of the cheeses into two parts and pack up all the cheese into two packets, so that the cut parts are in different packets and both packets have the same numbers of pieces of cheese and the same weight?

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