Problem No. J3 (F.1-F.3)
In a square $ABCD$, $E$ and $F$ are points on $BC$ and $CD$ respectively such that $BE = 2$ and $CF = 3$. Furthermore, $\angle EAF = 45^\circ$. Find the length of each side of the square.

Problem No. S3 (F.4-F.7)
$ABCD$ is square, $P$ is a point inside the square such that $PA = 1$, $PB = 2$ and $PC = 3$. Find $\angle APB$.

The Mathematics Department publishes two challenging problems once a month and invites Lamwooers to submit answers. The objective of this is to stimulate and cultivate interest in mathematics among Lamwooers. Answers are due within one week from the date of publication. They must be sent by eClass email to Mr Chu LF. The names of those who submitted correct answers will be posted. Every Lamwooer who submits three correct answers will receive a book coupon of $50. A grand prize will be distributed to who have contributed at least six correct answers for the total 2010 series.