Stage 4 ★★
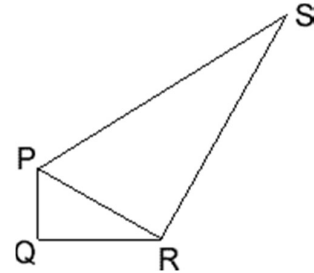**Mixed Selection 2**

1. **Two right angles**
   In the figure above, $PQ = 2\frac{1}{3}$, $PS = 6\frac{6}{7}$, PQR
   and PRS are right-angled triangles, and the
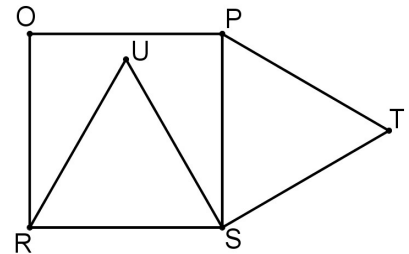   angles QPR and RPS are the same.

   How long is PR?

2. **Internal – external**
   The diagram shows a square $PQRS$ and two
   equilateral triangles RSU and PST. PQ has
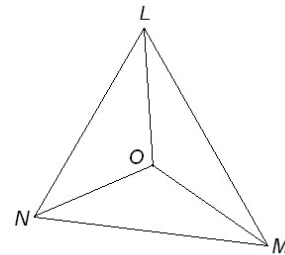   length 1.

   What is the length of TU?

3. **Incentre angle**
   The three angle bisectors of
   triangle LMN meet at a point O as
   shown. We also know $\angle LNM$ is 68°.

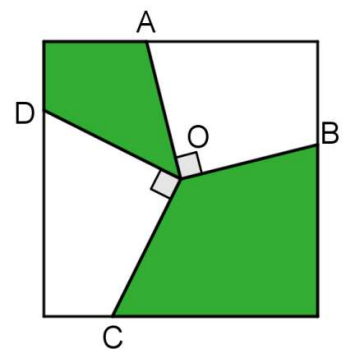   What is the size of $\angle LOM$?

4. **Shaded square**
   The diagram on the right shows a square with
   side length 2m and lines drawn to its sides from
   its centre O. The points A, B, C and D are all on
   different sides of the square.

   The lines OA and OB are perpendicular, as
   are OC and OD.

   What is the shaded area?