## Design a Logo

You need: a compass, a ruler

As part of Maths Week, your school is having a competition to design a logo. The winning design will be used on maths worksheets, tests, and newsletters and on the wall at the interclass teams' quiz.

Each entry must use at least 2 of the 3 transformations: translation, reflection, and rotation.

1. Design a logo that could be entered into the competition. It should be 20 centimetres high, 16 centimetres wide, and in colour.

2. An overhead transparency $(\mathrm{OHT})$ will be made from the logo so that it can be projected onto the stage backdrop in the hall during the teams' quiz. When projected, the logo needs to be 4 metres high.
a. What is the scale factor of this enlargement?
b. What is the width of the projected logo?
3. When used on printed material, the logo will be 5 centimetres by 4 centimetres. What is the scale factor of this enlargement?
4. Draw the reduced-sized logo. Compare its area with that of the original.
