## Geometry (Q 4, Paper 2)

2002
4 (a) The area of the triangle $r p t$ is $30 \mathrm{~cm}^{2}$. $r d$ is perpendicular to $p t$.
Given that $|p t|=12 \mathrm{~cm}$, calculate $|r d|$.

(b) Prove that if three parallel lines make intercepts of equal length on a transversal, then they will also make intercepts of equal length on any other transversal.
(c) The triangle $a^{\prime} b^{\prime} c^{\prime}$ is the image of the triangle $a b c$ under an enlargement.
(i) Find, by measurement, the scale factor of the enlargement.
(ii) Copy the diagram and show how to find the centre of the enlargement.
(iii) Units are chosen so that $|b c|=8$ units. How many of these units is $\left|b^{\prime} c^{\prime}\right|$ ?
(iv) Find the area of triangle $a b c$, given that the area of $a^{\prime} b^{\prime} c^{\prime}$ is 84 square units.


## Answers

4 (a) 5 cm
(c) (i) 2
(iii) 16
(iv) 21 square units

