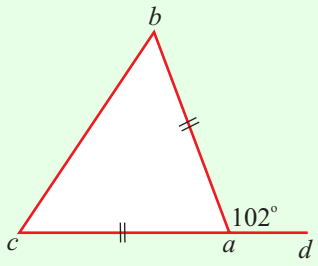
GEOMETRY (Q 4, PAPER 2)

2000

4 (a) In the diagram, $|ab| = |ac|$ and $|\angle prq| = 50^o$.

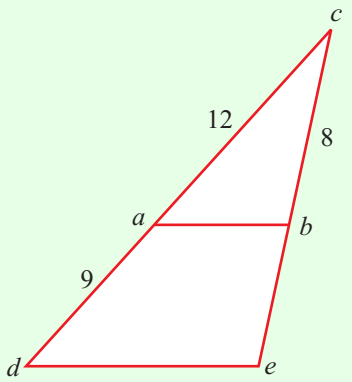


(i) Find $|\angle pqr|$

(ii) Find $|\angle psr|$.

(b) Prove that in a right-angled triangle, the square of the length of the side opposite to the right-angle is equal to the sum of the squares of the lengths of the other two sides.

(c) The triangle *cde* is the image of the triangle *cab* under an enlargement with centre *c*.
$|ca| = 12$, $|ad| = 9$ and $|cb| = 8$.



(i) Find the scale factor of the enlargement.

(ii) Find $|be|$.

(iii) The area of the triangle *cde* is 98 square units. Find the area of the triangle *cab*.

ANSWERS

4 (a) (i) 78^o (ii) 51^o

(c) (i) 1.75 (ii) 6 (iii) 32 square units