



Area of triangle =  $\frac{1}{2} b \cdot c \cdot \sin A$ , therefore  $(\text{Area PBQ}/\text{Area ABC}) = \frac{5 \cdot 2}{7 \cdot 7} = \frac{10}{49}$ , because  $\frac{1}{2}$  and  $\sin B$  was reduced. We compute the areas of another triangles.

$(\text{Area CQR}/\text{Area ABC}) = \frac{5 \cdot 2}{7 \cdot 7} = \frac{10}{49}$

$(\text{Area APR}/\text{Area ABC}) = \frac{5 \cdot 2}{7 \cdot 7} = \frac{10}{49}$ , therefore,  $(\text{Area PQR}/\text{Area ABC}) = 1 -$

$(\frac{10}{49} + \frac{10}{49} + \frac{10}{49}) = \frac{19}{49}$  - ratio of the areas of the triangle ABC and triangle PQR.

Answer:  $\frac{19}{49}$