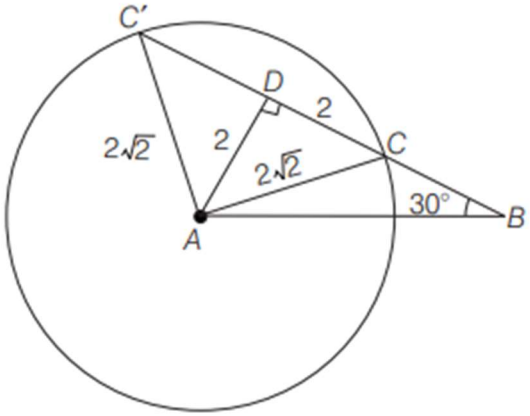
Question: -

Let ABC and ABC' be two non-congruent triangles with sides $AB = 4$, $AC = AC' = 2\sqrt{2}$ and angle $B = 30°$. The absolute value of the difference between the areas of these triangles is **(2009)**

Solution: -



Here, $AD = 2$, $DC = 2$

Difference of areas of ΔABC and $\Delta ABC'$

$$= \text{Area of } \Delta ACC'$$

$$= \frac{1}{2} AD \times CC' = \frac{1}{2} \times 2 \times 4 = 4 \text{ sq units}$$