**Problem Solving with Surds**

Find the area and perimeter of these rectangles.

(a)



(b)



(c)

Find the area of these triangles.

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(a) Given that $\left(3+\sqrt{a}\right)\left(4+\sqrt{a}\right)=17+b\sqrt{a}$ find the values of $a$ and $b$.

(b) Given that $(5-\sqrt{x})^{2}=y-20\sqrt{2}$ find the values of $x$ and $y$.

(a) The perimeter of this rectangle is $8\sqrt{2}$. Find the area of the rectangle.

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