Hence, $EB = BF$.
Thus $\triangle BE\cancel{B}$ is right isosceles at B.

b) $(\sqrt{6}+\sqrt{2})^2 = 8+4\sqrt{3} = 4(2+\sqrt{3})$

then, $\frac{(\sqrt{6}+\sqrt{2})^2}{4} = 2+\sqrt{3}$ radical both sides

Thus $\sqrt{2+\sqrt{3}} = \sqrt{\frac{(\sqrt{6}+\sqrt{2})^2}{4}}$

$2+\sqrt{3} = \frac{\sqrt{6}+\sqrt{2}}{2}$.

c) $A_1 = \frac{leg_1 \times leg_2}{2} = \frac{BE \times BF}{2}$

1 $= \frac{\sqrt{(2+\sqrt{3})}\sqrt{(2+\sqrt{3})}}{2}$

$A_1 = \left(\frac{2+\sqrt{3}}{2}\right) cm^2$

$A_d = A_{rect} - A_1 = 12\sqrt{3} - \left(\frac{2+\sqrt{3}}{2}\right)$

$= 12\sqrt{3} - 1 - \frac{\sqrt{3}}{2}$

½ $= \frac{23\sqrt{3}-2}{2}$ cm^2

$A_d =$

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