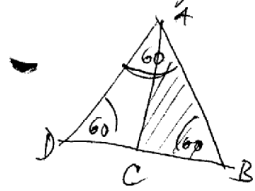
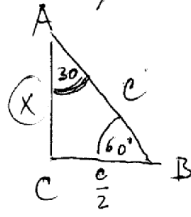


Right-angled  $\triangle ABD \Rightarrow$  provide  $\triangle ABC$



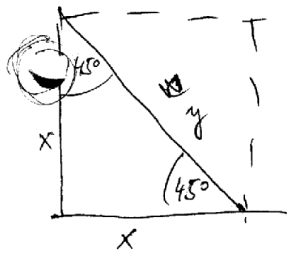
$\Rightarrow$



$$x = \sqrt{c^2 - \left(\frac{c}{2}\right)^2} = \sqrt{c^2 - \frac{c^2}{4}} = \sqrt{\frac{4c^2 - c^2}{4}} = \sqrt{\frac{3c^2}{4}} = \frac{c\sqrt{3}}{2} \quad (= c \cdot \frac{\sqrt{3}}{2})$$

$$\cos 30^\circ = \frac{x}{c} = \frac{\frac{c\sqrt{3}}{2}}{c} = \frac{\sqrt{3}}{2}$$

$$\cos 60^\circ = \frac{\frac{c}{2}}{c} = \frac{1}{2}$$



$$y = \sqrt{x^2 + x^2} = \sqrt{2x^2} = x \cdot \sqrt{2}$$

$$\cos 45^\circ = \frac{x}{y} = \frac{x}{x \cdot \sqrt{2}} = \frac{1}{\sqrt{2}} = \frac{1 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}} = \frac{\sqrt{2}}{2}$$