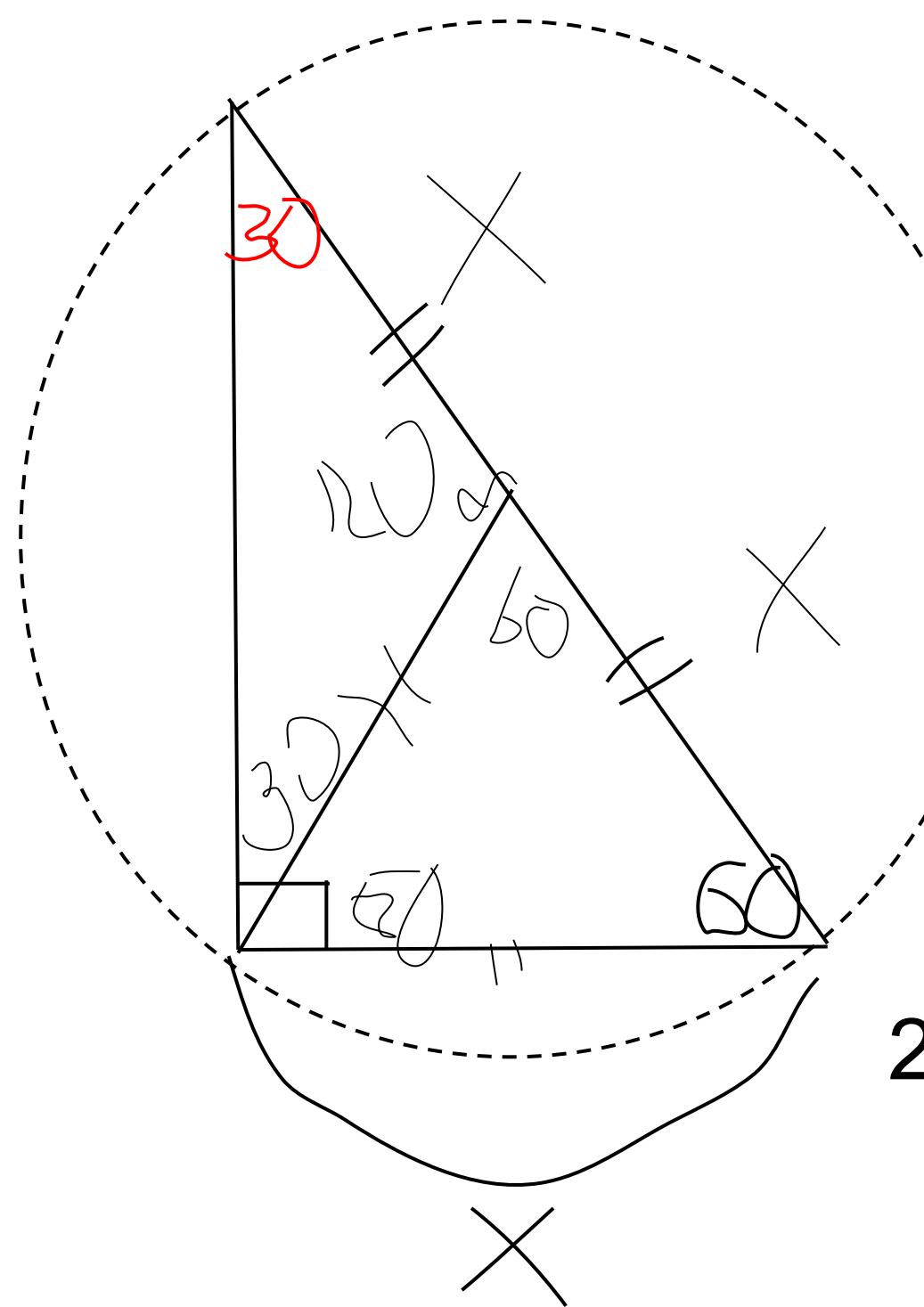


0,30,45,60,90

18,36,72



$$\sin 30 = \cos 60 = x/2x = \frac{1}{2}$$

2-ой катет=?

$$(2x)^2 = x^2 + c^2$$

$$(2x)^2 - x^2 = c^2$$

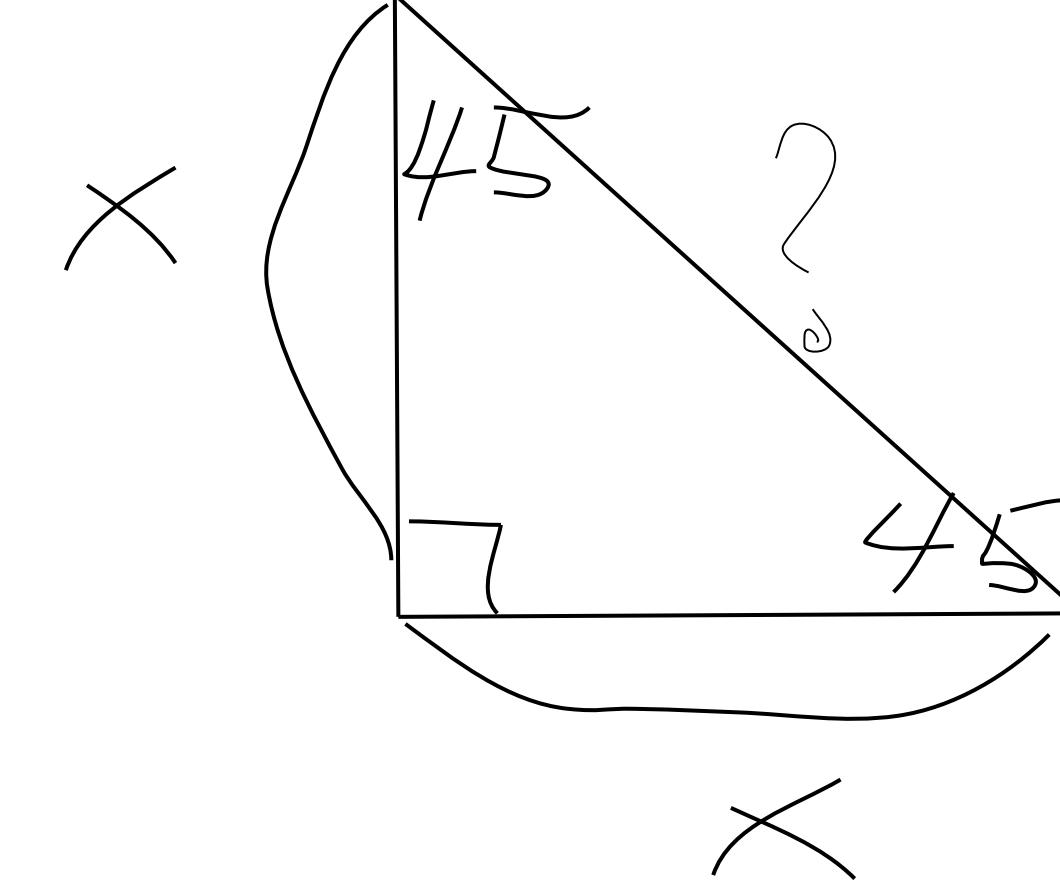
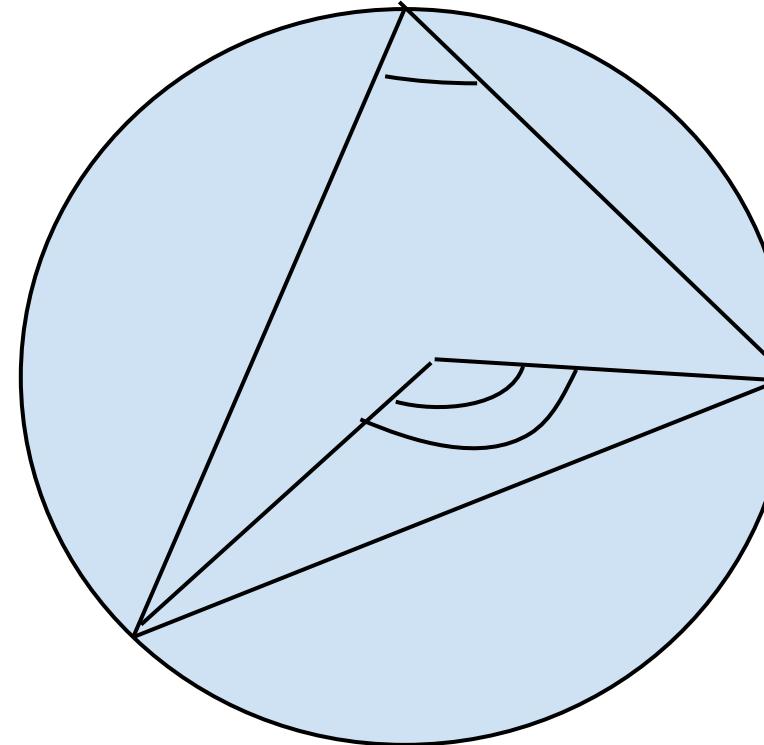
$$(2x-x)(2x+x) = c^2$$

$$x \cdot 3x = c^2$$

$$3x^2 = c^2$$

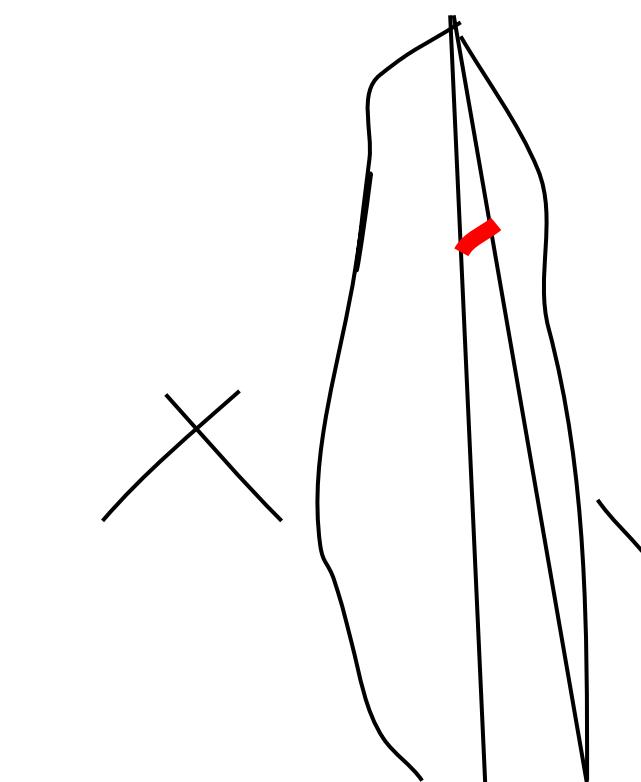
$$c = x\sqrt{3}$$

$$\cos 30 = \sin 60 = x\sqrt{3}/2x = \sqrt{3}/2$$



$$\begin{aligned} c^2 &= 2x^2 \Rightarrow c = x\sqrt{2} \\ \sin 45 &= x/x\sqrt{2} = \sqrt{2}/2 = \cos 45 \\ \operatorname{tg} 45 &= 1 = \operatorname{ctg} 45 \end{aligned}$$

$$\begin{aligned} \sin 0 &= 0/x = 0 = \cos 90 \\ \cos 0 &= x/x = 1 = \sin 90 \end{aligned}$$



$$\begin{aligned} \operatorname{tg} 30 &= \sin 30 / \cos 30 = (\frac{1}{2}) / (\sqrt{3}/2) = 2/\sqrt{3} = 1/\sqrt{3} = \operatorname{ctg} 60 \\ \operatorname{ctg} 30 &= \sqrt{3} = \operatorname{tg} 60 \end{aligned}$$

