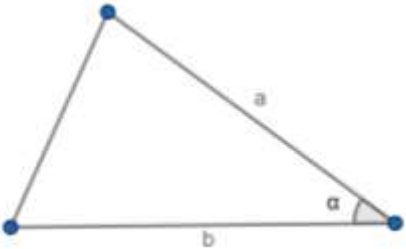
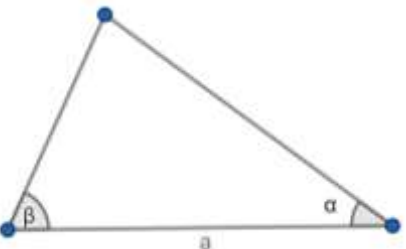
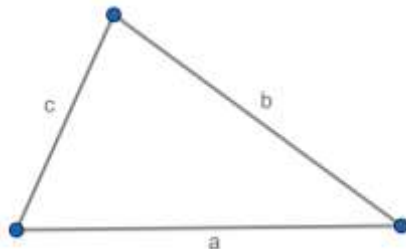
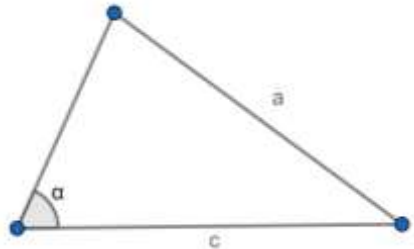
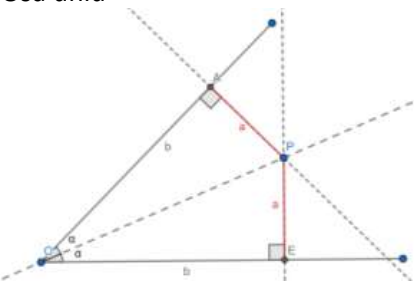
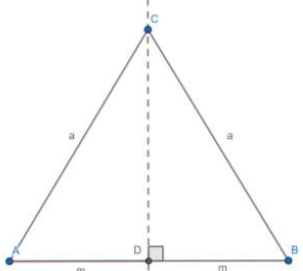
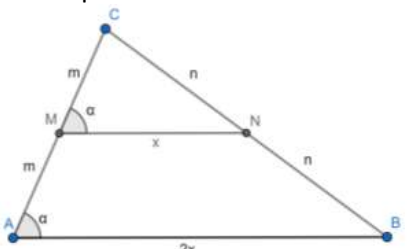
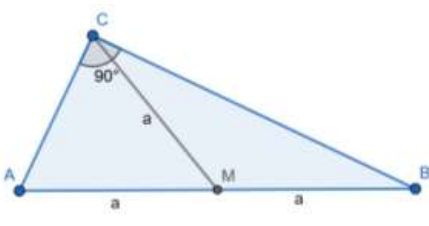
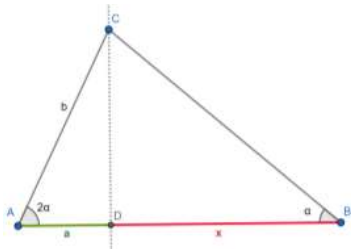
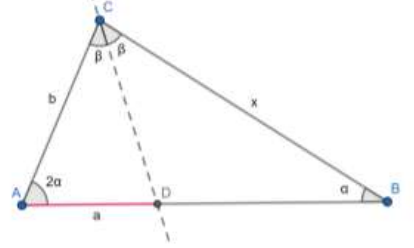
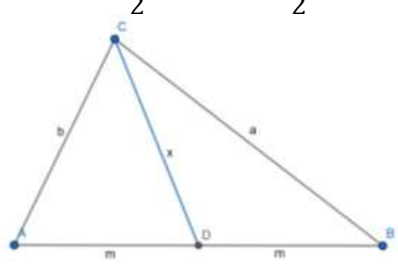
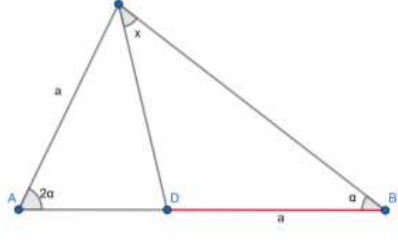
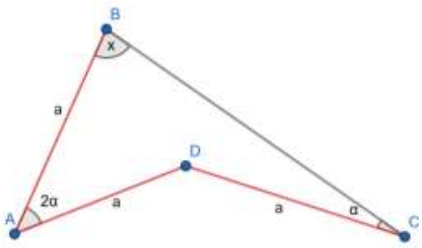
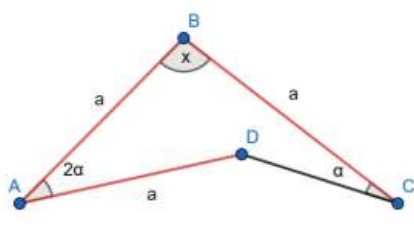
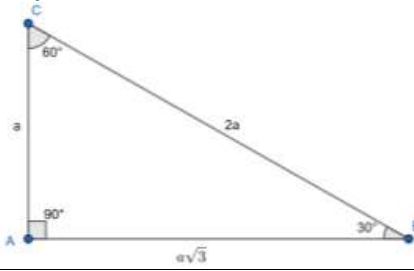
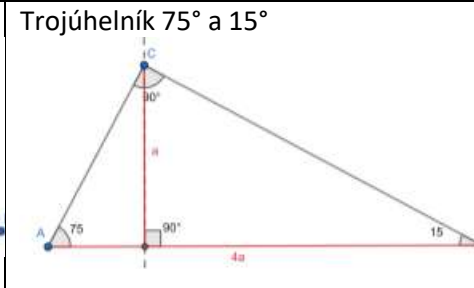
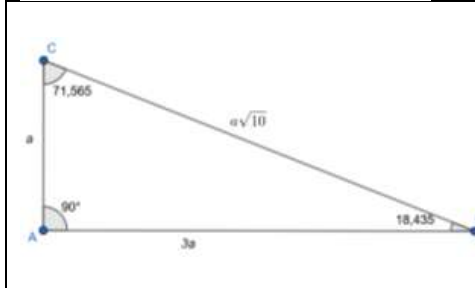
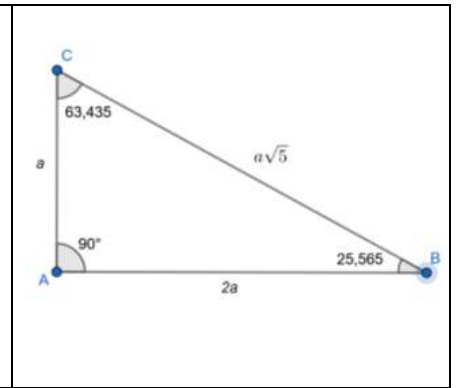
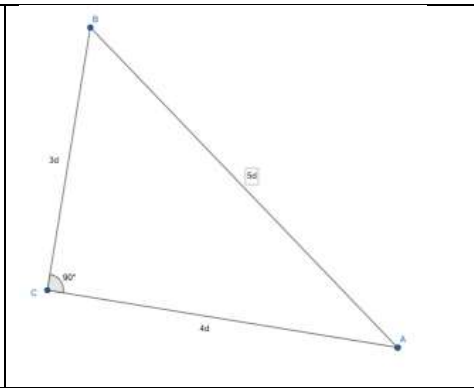
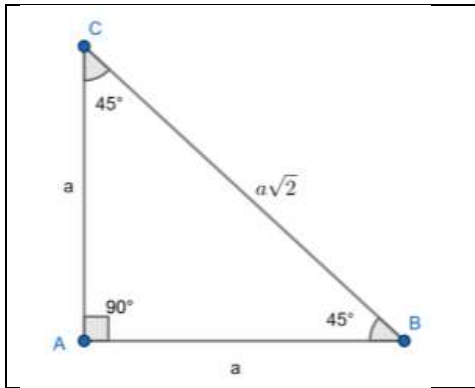
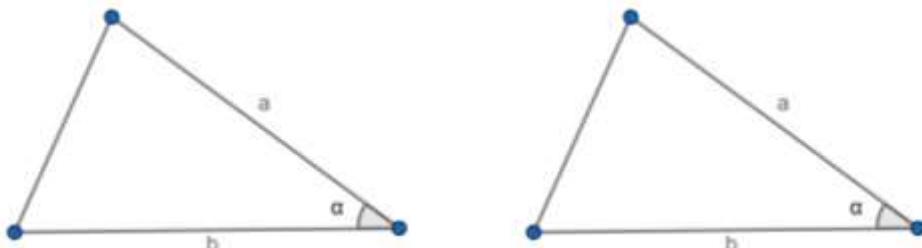
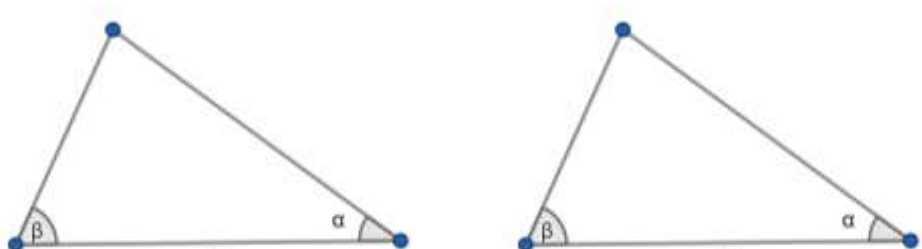
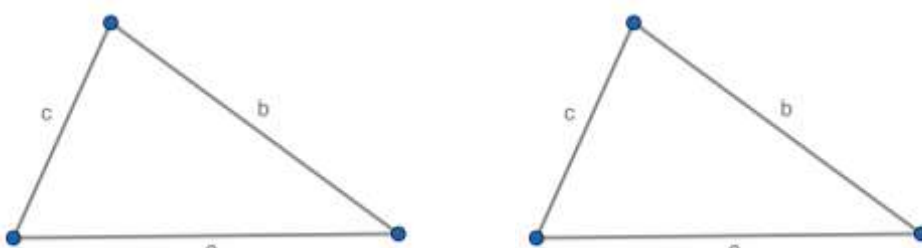
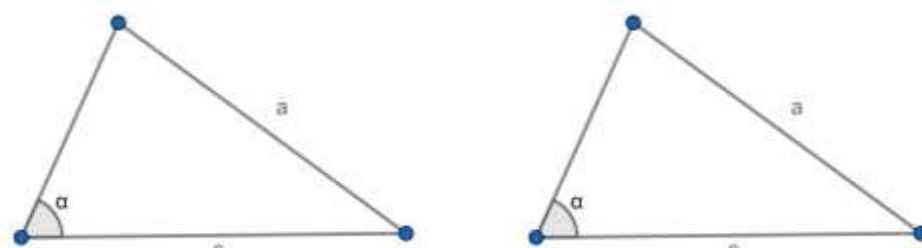
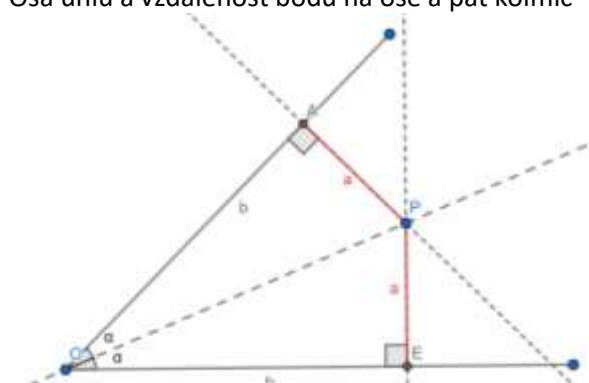
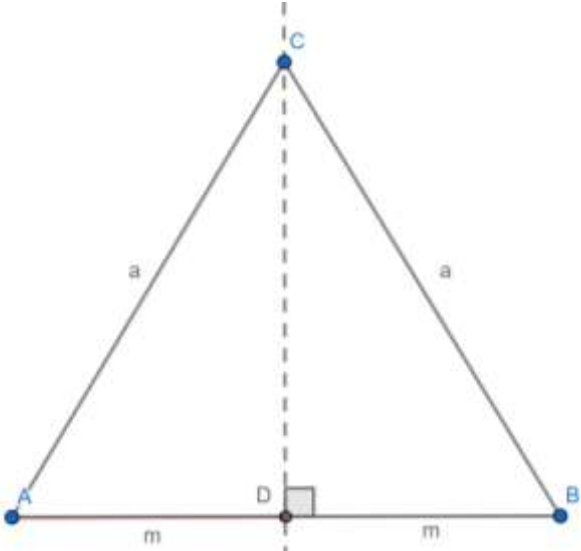
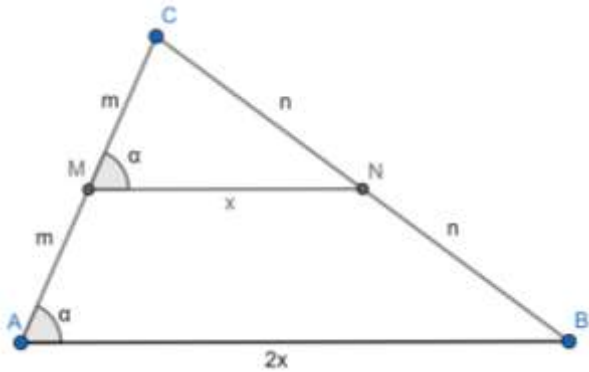
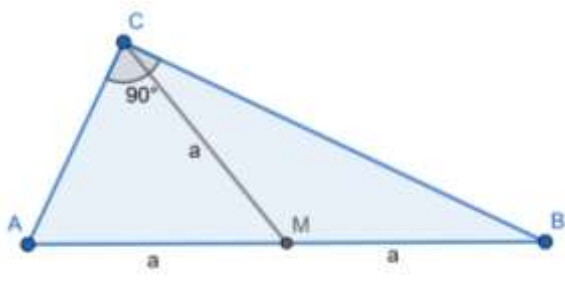
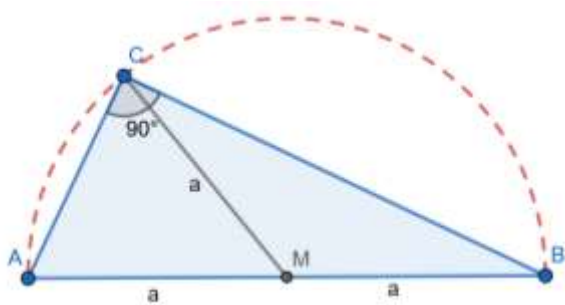
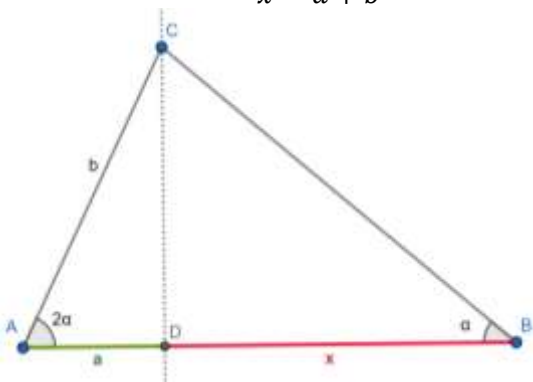


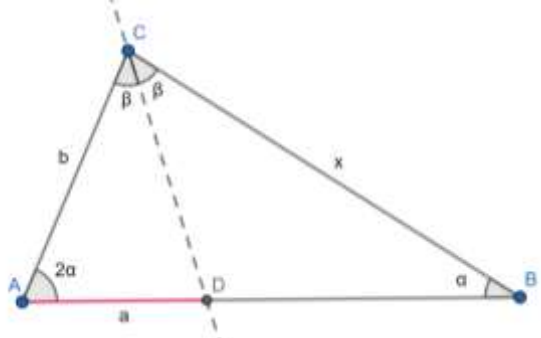
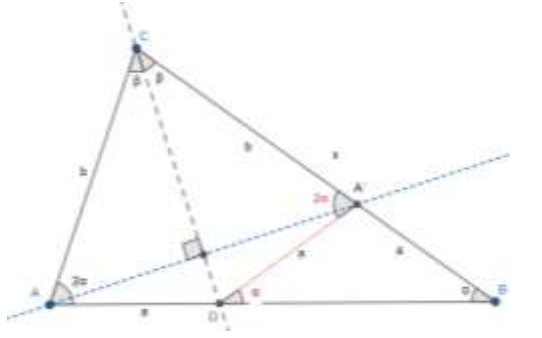
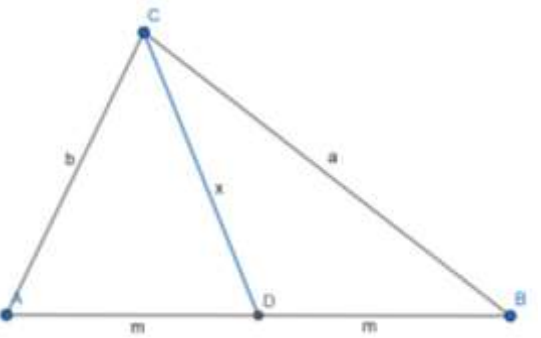
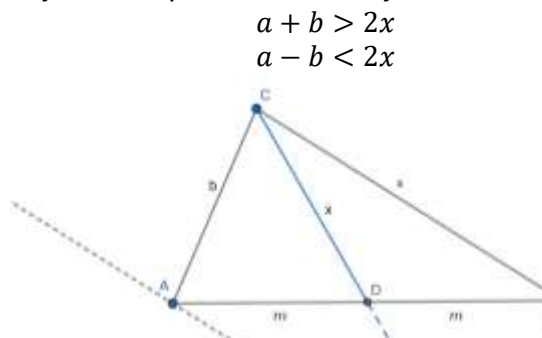
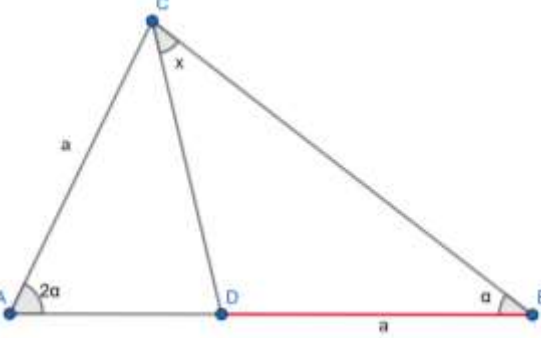
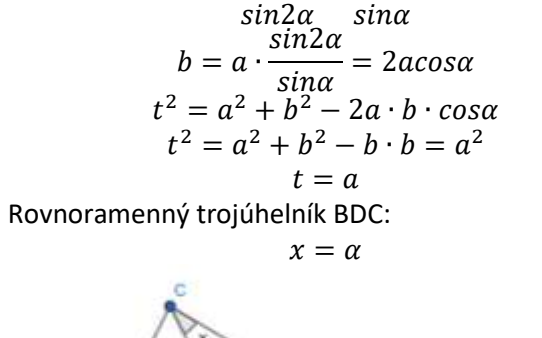
Vzorce Série 2 - trojúhelníky

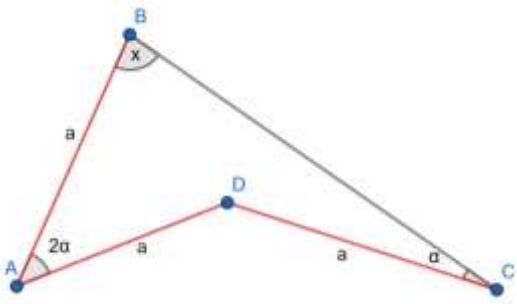
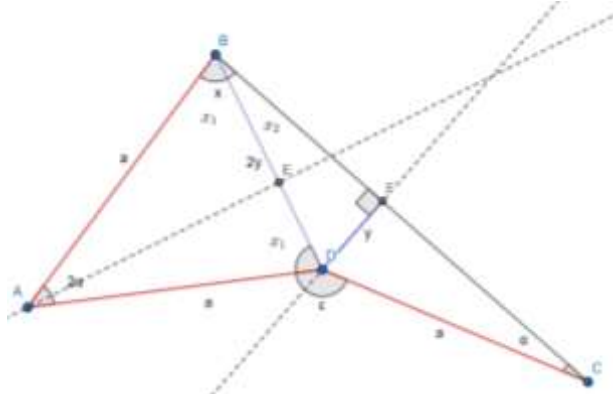
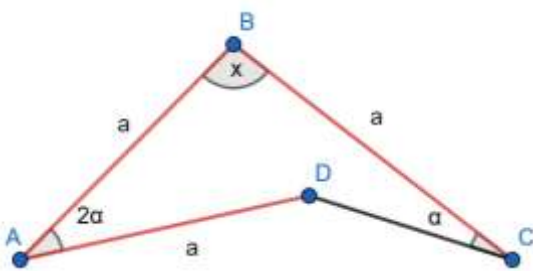
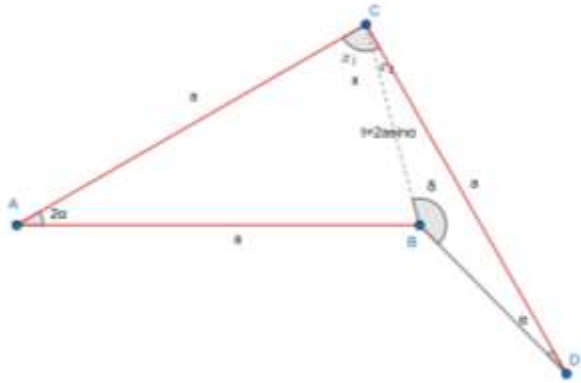
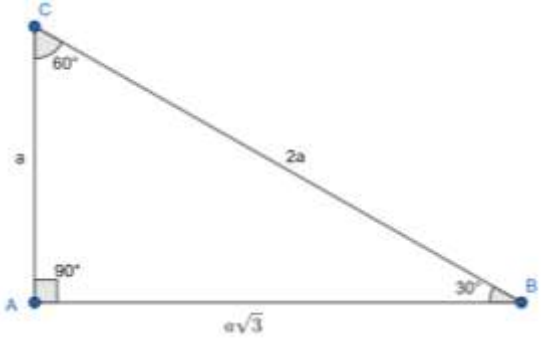
SUS 	USU 	SSS 
SSU 	Osa úhlu 	Výška v rovnoramenném trojúhelníku 
Střední příčka 	Thaletova kružnice 	$x = a + b$ 
$x = a + b$ 	$\frac{a-b}{2} < x < \frac{a+b}{2}$ 	$\alpha = x$ 
$x = 120^\circ - \alpha$ 	$x = 120^\circ - 2\alpha$ 	Trojúhelník 30° a 60° 

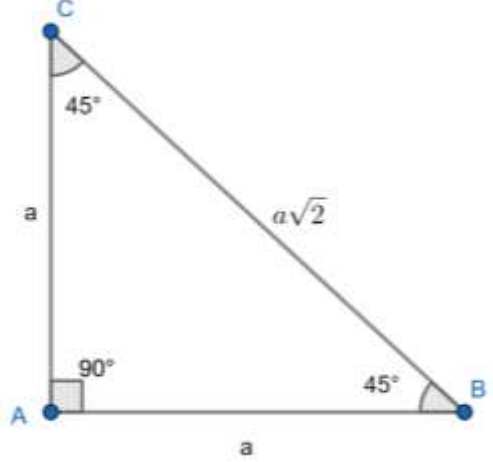
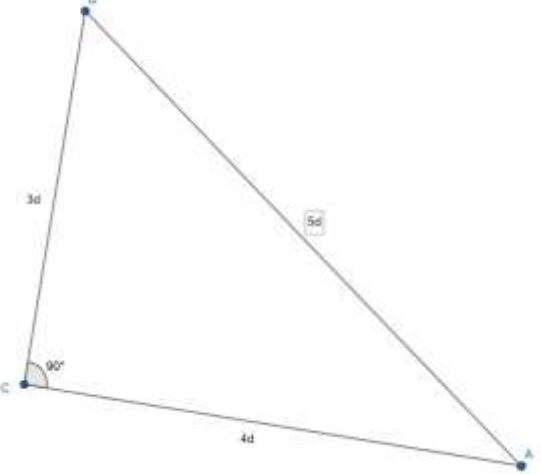
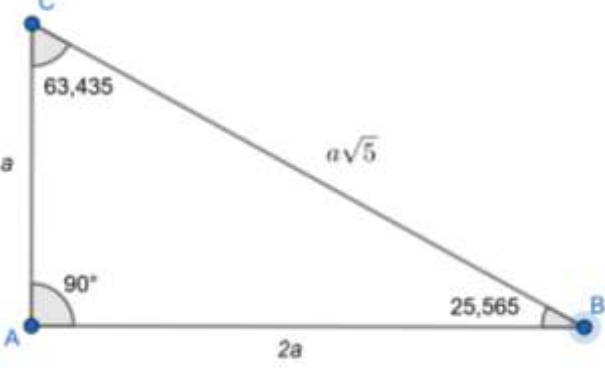
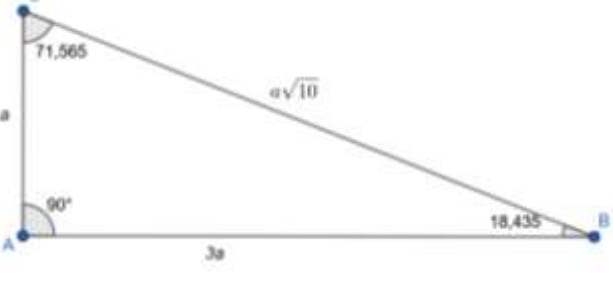


1	Shodnost trojúhelníků – Věta SUS – shodnost ve dvou stranách a úhlu jimi sevřeném 
2	Shodnost trojúhelníků – Věta USU – shodnost ve dvou úhlech a straně mezi úhly 
3	Shodnost trojúhelníků – Věta SSS – shodnost ve třech stranách 
4	Shodnost trojúhelníků – Věta SSu – shodnost ve dvou stranách a úhlu proti jedné z nich 
5	Osa úhlu a vzdálenost bodu na ose a pat kolmic 

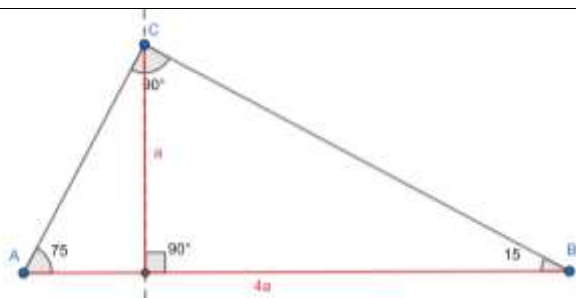
6	Rovnoramenný trojúhelník 	Výška je totožná s těžnicí na stranu c. Pata výšky dělí stranu c na dvě stejné úsečky o velikosti m.
7	Střední příčka trojúhelníka 	Podobnost trojúhelníků $\frac{\Delta MNC}{\Delta ABC} \approx \frac{m}{2m} = \frac{n}{2n} = \frac{x}{2x}$
8	Thaletova kružnice 	
9	$x = a + b$ 	$\begin{aligned} \operatorname{tg} 2\alpha &= \frac{2\operatorname{tg} \alpha}{1 - \operatorname{tg}^2 \alpha} \\ \frac{v}{a} &= \frac{2 \frac{v}{x}}{1 - \left(\frac{v}{x}\right)^2} = \frac{\frac{2v}{x}}{\frac{x^2 - v^2}{x^2}} = \frac{2vx}{x^2 - v^2} \\ a &= \frac{x^2 - v^2}{2x} = \frac{x^2 + b^2 - a^2}{2x} \\ 2xa &= x^2 - a^2 + b^2 \\ x^2 - 2xa + a^2 - b^2 &= 0 \\ (x - a)^2 &= b^2 \\ x &= a + b \end{aligned}$

10	$x = a + b$ 	Symetrie podle osy úhlu, přímky CD. 
11	$\frac{a-b}{2} < x < \frac{a+b}{2}$ 	Doplnění na rovnoběžník, součet, rozdíl trojúhelníkových nerovností troj. ACE. $a + b > 2x$ $a - b < 2x$ 
12	$\alpha = x$ 	$\frac{b}{\sin 2\alpha} = \frac{a}{\sin \alpha}$ $b = a \cdot \frac{\sin 2\alpha}{\sin \alpha} = 2a \cos \alpha$ $t^2 = a^2 + b^2 - 2a \cdot b \cdot \cos \alpha$ $t^2 = a^2 + b^2 - b \cdot b = a^2$ $t = a$ Rovnoramenný trojúhelník BDC: $x = \alpha$ 

13	$x = 120^\circ - \alpha$ 	Z rovnostranného trojúhelníku ADB $y = a \cdot \sin \alpha$ $x = x_1 + x_2$ $x_1 = 90^\circ - \alpha$ $\sin x_2 = \frac{y}{2y} = \frac{1}{2}$ $x_2 = 30^\circ$ $x = 90^\circ - \alpha + 30^\circ = 120^\circ - \alpha$ 
14	$x = 120^\circ - 2\alpha$ 	$\frac{ BC }{\sin \delta} = \frac{a}{\sin \alpha} = \frac{2a \sin \alpha}{\sin \alpha} = 2a$ $\sin \delta = \frac{1}{2}$ $\delta = 150^\circ$ $x_2 = 180^\circ - 150^\circ - \alpha = 30^\circ - \alpha$ $x = x_1 + x_2 = 90^\circ - \alpha + 30^\circ - \alpha = 120^\circ - 2\alpha$ 
15		Pythagorova a sinová věta

16		Pythagorova a sinová věta, rovnoramenný trojúhelník, úhlopříčka čtverce
17		Egyptský trojúhelník
18		Konstrukce odmocniny z 5
19		Konstrukce odmocniny z 10

20



2a je poloměr Thaletovy kružnice

$$\operatorname{tg} 15^\circ = \frac{a}{a(2 + \sqrt{3})} = \frac{1}{2 + \sqrt{3}}$$

