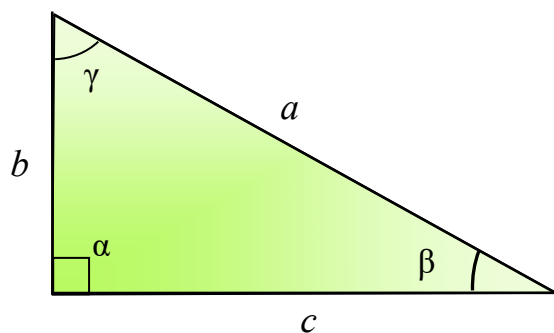
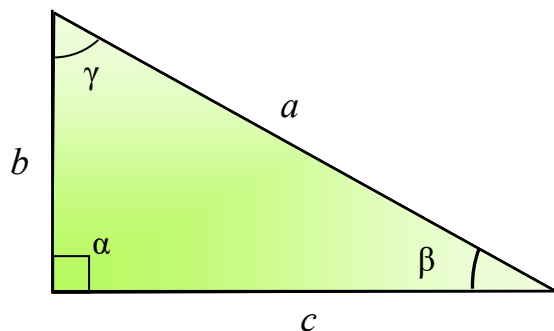


in riferimento al triangolo rettangolo in figura, risolvi i triangoli di cui sono noti:



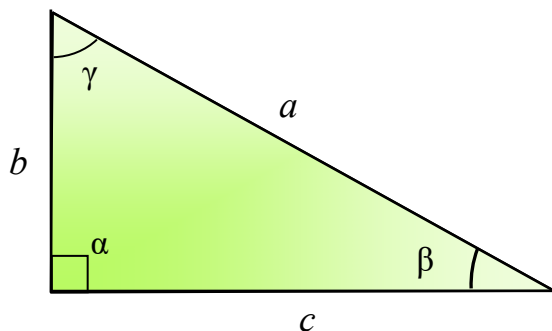
1	$a = 30 \quad c = 15$	$b = 15\sqrt{3} \quad \beta = 60^\circ$ $\gamma = 30^\circ$
2	$b = 15 \quad c = 15\sqrt{3}$	$a = 30 \quad \beta = 30^\circ \quad \gamma = 60^\circ$
3	$a = 6 \quad b = 3\sqrt{3}$	$c = 3 \quad \beta = 60^\circ \quad \gamma = 30^\circ$
4	$b = 18 \quad \beta = 30^\circ$	$a = 36 \quad c = 18\sqrt{3}$ $\gamma = 60^\circ$
5	$b = \sqrt{21} \quad c = \sqrt{7}$	$a = 2\sqrt{7} \quad \beta = 60^\circ$ $\gamma = 30^\circ$
6	$a = \sqrt{3} \quad b = \frac{3}{2}$	$c = \frac{\sqrt{3}}{2}$ $\beta = 60^\circ \quad \gamma = 30^\circ$
7	$a = 5\sqrt{2} \quad b = 5$	$c = 5$ $\beta = 45^\circ \quad \gamma = 45^\circ$
8	$b = 10 \quad \gamma = 30^\circ$	$a = \frac{20\sqrt{3}}{3} \quad c = \frac{10\sqrt{3}}{3}$ $\beta = 60^\circ$
9	$b = 5,5 \quad \beta = 45^\circ$	$a = \frac{11\sqrt{2}}{2} \quad c = 5,5$ $\gamma = 45^\circ$

10	$c = \frac{41}{5} \quad \beta = 60^\circ$	$a = \frac{82}{5} \quad b = \frac{41\sqrt{3}}{5}$ $\gamma = 30^\circ$
11	$a = 9 \quad \gamma = 45^\circ$	$b = \frac{9\sqrt{2}}{2} \quad c = \frac{9\sqrt{2}}{2}$ $\beta = 45^\circ$
12	$b = 5 \quad \beta = 60^\circ$	$a = \frac{10\sqrt{3}}{3} \quad c = \frac{5\sqrt{3}}{3}$ $\gamma = 30^\circ$
13	$a = 6,4 \quad \beta = 45^\circ$	$b = \frac{16\sqrt{2}}{5} \quad c = \frac{16\sqrt{2}}{5}$ $\gamma = 45^\circ$
14	$c = 22 \quad \beta = 60^\circ$	$a = 44 \quad b = 22\sqrt{3}$ $\gamma = 30^\circ$
15	$a = 2 + \sqrt{2} \quad c = 1 + \sqrt{2}$	$b = 1 + \sqrt{2} \quad \beta = 45^\circ$ $\gamma = 45^\circ$
16	$c = \frac{1}{2} \quad \beta = 45^\circ$	$a = \frac{\sqrt{2}}{2} \quad b = \frac{1}{2} \quad \gamma = 45^\circ$
17	$c = 7 \quad \gamma = 15^\circ$	$a = 7(\sqrt{6} + \sqrt{2})$ $b = 7(2 + \sqrt{3})$ $\beta = 75^\circ$
18	$b = \sqrt{6} + 2\sqrt{2} \quad c = \sqrt{2}$	$a = 2(1 + \sqrt{3}) \quad \beta = 75^\circ$ $\gamma = 15^\circ$
19	$a = 4 \quad \gamma = 18^\circ$	$b = \sqrt{10 + 2\sqrt{5}}$ $c = \sqrt{5} - 1 \quad \beta = 72^\circ$
20	$b = \frac{1}{2} \quad \gamma = 22^\circ 30'$	$a = \frac{\sqrt{4-2\sqrt{2}}}{2} \quad c = \frac{\sqrt{2}-1}{2}$ $\beta = 67^\circ 30'$

trovare i due lati incogniti dei seguenti triangoli rettangoli in α 

21	$c = 336$ $\tan \gamma = \frac{168}{95}$	$b = 190$ $a = 386$
22	$a = 68$ $\cos \gamma = \frac{8}{17}$	$c = 60$ $b = 32$
23	$a = 148$ $\sin \beta = \frac{12}{37}$	$c = 140$ $b = 48$
24	$b = 90$ $\sin \gamma = \frac{12}{13}$	$c = 216$ $a = 234$
25	$c = 84$ $\cos \beta = \frac{21}{29}$	$b = 80$ $a = 116$
26	$a = 650$ $\tan \gamma = \frac{36}{323}$	$c = 72$ $b = 646$
27	$a = 74$ $\tan \beta = \frac{35}{12}$	$c = 24$ $b = 70$
28	$c = 79$ $\cos \gamma = \frac{24}{19}$	impossibile
29	$b = 34$ $\cos \beta = \frac{144}{145}$	$c = 288$ $a = 290$
30	$c = 147$ $\sin \beta = \frac{4}{5}$	$b = 196$ $a = 245$

stabilisci la correttezza delle seguenti relazioni tra gli elementi del triangolo rettangolo in figura



31	$\sin^2 \alpha + \sin^2 \beta + \sin^2 \gamma = 2$	corretta
32	$\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma = 1$	corretta
33	$\tan \beta = \frac{\sin \beta}{\sin \gamma}$	corretta
34	$a + b + c = a (\sin \beta (\sin \beta + 1) + \cos \beta (\cos \beta + 1))$	corretta
35	$a \sin \frac{\beta}{2} \cos \frac{\beta}{2} = \frac{b}{2}$	corretta
36	$(c + b)^2 = a^2 \cos^2 \beta (\tan \beta + 1)^2$	corretta
37	$a^2 - c^2 = c^2 \tan^2 \beta$	corretta
38	$a^2 - c^2 = 2 ab \cot \frac{\beta}{2} \sin^2 \frac{\beta}{2}$	corretta
39	$\frac{b + c}{2} = a \sin \frac{\beta}{2} \cos \frac{\beta}{2} (1 + \cot \beta)$	corretta
40	$b^2 = \frac{a^2 \sin 2\gamma \sin \beta}{2 \sin \gamma}$	corretta
41	$\frac{a^2}{b^2} = \frac{1 + \tan^2 \beta}{\tan^2 \beta}$	corretta
42	$2 bc = a^2 \sin 2\beta$	corretta

43	$\frac{c^2}{\cos^2\beta} = a^2 + a \tan^2\beta - ab \frac{\tan\beta}{\cos\beta}$	<i>non corretta</i>
44	$\sin^2\gamma + \sin^2\beta + \tan^2\beta = \frac{1}{\cos^2\beta}$	<i>corretta</i>
45	$b^2 = a^2 \sin^4\beta + a^2 \cos^2\gamma \cos^2\beta$	<i>corretta</i>
46	$\left(\frac{a}{b}\right)^2 \tan^2\beta = \frac{\sin^2\gamma + \sin^2\beta}{\cos^2\beta}$	<i>corretta</i>