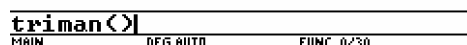
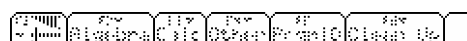


TRIMAN Ultimate Triangle Solver

1. Enter "triman()" at the main screen and press <enter>



2. At the startup screen, press the <enter> key to begin the program.
*Note: You can email any bugs or suggestions to the email shown on the startup screen (davidfreeman2@netscape.net).



TRIMAN Ultimate Triangle Solver

version 4.3.7

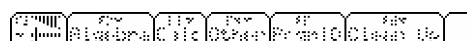
©2004 David Freeman

davidfreeman2@netscape.net

Press <Enter> to continue...



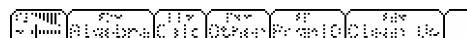
3. Use the up/down arrow keys to select whether you want to use Degrees or Radians for all angle measurements.



1:Angles in degrees
2:Angles in radians

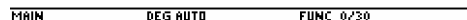
TYPE OR USE $\leftarrow \rightarrow +$ [ENTER]=OK AND [ESC]=CANCEL

4. The first value you are prompted to enter is the triangle's Area. If you do not know the area, then enter 0 (zero) and press the <enter> key.

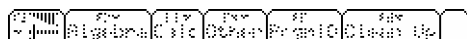


Enter known values when prompted.
If a value is unknown, enter a 0 (zero).

Area =



5. Continue entering what you know until the program begins solving. In the following example, values are known only for the triangle's three sides:



Area =

Side a =

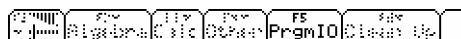
3

Side b =

५।

Side c =

2



-----Single Solution

sida = 3.00000000000000 = 3

$$\text{sinh} = 4.00000000000000 = 4$$

```
side = 5.000000000000000 = 5
```

```

sin30 = 0.5000000000000000 = 0
arcs3 = 36.8698976458 = arcsin(4/5)

```

$$\arcsin b = 53.1301023542 = \arcsin(3/5)$$

```
angb = 33.1331023342 = 33
angc = 90.0000000000 = 90
```

```
angle = 90.00000000000000 = 90
area = 6.000000000000000 = 6
```



6. In this example, values are known for two sides and one angle. Note that the particular values used in this case result in two possible solutions:

	Mode	F7	F8	F9	F10	F11	F12
	Algebra	Calc	DChn	PrgrIO	Clash Up		
Area = 0	Side b = 15	Side c = 20	Angle A = 0	Angle B = 30			
Side a = 0	Side c = 20	Angle A = 0	Angle B = 30				
Side b = 15	Angle A = 0	Angle B = 30					
Side c = 20	Angle B = 30						
MAIN DEG AUTO FUNC 2/250	MAIN DEG AUTO FUNC 2/250	MAIN DEG AUTO FUNC 2/250					

	MODE	F7	F8	F9	F10	F11	F12			MODE	F7	F8	F9	F10	F11	F12			
Normal	Algebra	CPLC	DSPN	PrgrnIO	Clcdn Up				Normal	Algebra	CPLC	DSPN	PrgrnIO	Clcdn Up					
-----First Solution-----								-----Second Solution-----											
sida	=	28.50008479632	=	5*(F(5)+10*(F(3)					sida2	=	6.14016818819	=	10*(F(3)-5*(F(5)						
sldb	=	15.00000000000	=	15					sldb2	=	15.00000000000	=	15						
sidc	=	20.00000000000	=	20					sidc2	=	20.00000000000	=	20						
anga	=	108.189685104	=	150-sin ⁴ (2/3)					anga2	=	11.8103148958	=	sin ⁴ (2/3)-30						
angb	=	30.00000000000	=	30					angb2	=	30.00000000000	=	30						
angc	=	41.8103148958	=	sin ⁴ (2/3)					angc2	=	138.189685104	=	180-sin ⁴ (2/3)						
area	=	142.504239816	=	25*(F(5)+2*(F(3)					area2	=	30.70084049410	=	-25*(F(5)-2*(F(3)						
Press [Enter] to see second solution																			
MAIN	DEG AUTO	FUNC 3/20	POLAR						MAIN	DEG AUTO	FUNC 3/20	POLAR							

7. Finally, please note the variable names of the solved measurements (sida, sidb, etc.) These variables are stored in the default store folder (usually the MAIN folder) and can be used in other calculations after you have exited the calculator program. Continuing the above example...

Second Solution--

sida2 = 6.14016818819 = $10 \cdot f(3) - 5 \cdot f(5)$

sidb2 = 15.00000000000 = 15

sidc2 = 20.00000000000 = 20

anga2 = 11.8103148958 = $\sin^{-1}(2/3) - 30$

angb2 = 30.00000000000 = 30

angc2 = 138.189685104 = $180 - \sin^{-1}(2/3)$

area2 = 30.7008409410 = $-25 \cdot (f(5) - 2 \cdot f(3))$

Function keys: \sin , \cos , \tan , \sin^{-1} , \cos^{-1} , \tan^{-1}

8. Enjoy using the *TRIMAN Ultimate Triangle Solver* program! 😊