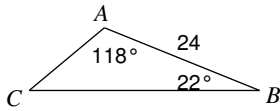


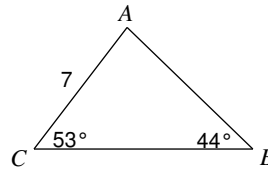
## The Law of Sines

Find each measurement indicated. Round your answers to the nearest tenth.

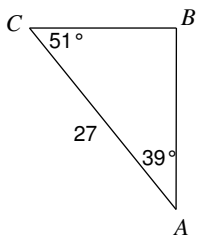
1) Find AC



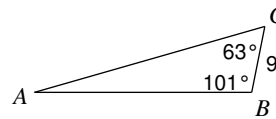
2) Find AB



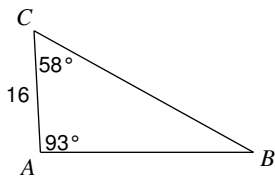
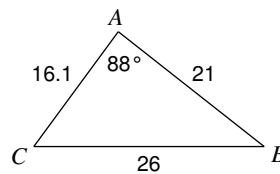
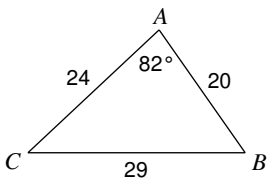
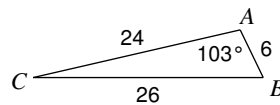
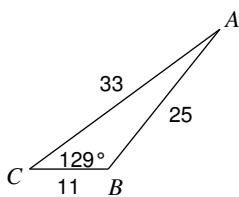
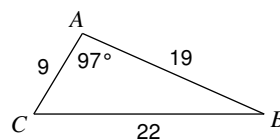
3) Find BC



4) Find AB



5) Find BC

6) Find  $m\angle C$ 7) Find  $m\angle C$ 8) Find  $m\angle C$ 9) Find  $m\angle A$ 10) Find  $m\angle C$ 

**Solve each triangle. Round your answers to the nearest tenth.**

11)  $m\angle A = 70^\circ$ ,  $c = 26$ ,  $a = 25$

12)  $m\angle B = 45^\circ$ ,  $a = 28$ ,  $b = 27$

13)  $m\angle C = 145^\circ$ ,  $b = 7$ ,  $c = 33$

14)  $m\angle B = 73^\circ$ ,  $a = 7$ ,  $b = 5$

15)  $m\angle B = 117^\circ$ ,  $a = 16$ ,  $b = 38$

16)  $m\angle B = 84^\circ$ ,  $a = 18$ ,  $b = 9$

17)  $m\angle B = 105^\circ$ ,  $b = 23$ ,  $a = 14$

18)  $m\angle C = 13^\circ$ ,  $m\angle A = 22^\circ$ ,  $c = 9$

**State the number of possible triangles that can be formed using the given measurements.**

19)  $m\angle C = 63^\circ$ ,  $b = 9$ ,  $c = 12$

20)  $m\angle B = 33^\circ$ ,  $a = 27$ ,  $b = 22$

21)  $m\angle B = 29^\circ$ ,  $a = 14$ ,  $b = 19$

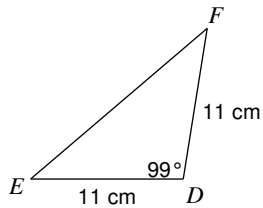
22)  $m\angle B = 95^\circ$ ,  $b = 24$ ,  $a = 5$

23)  $m\angle A = 29^\circ$ ,  $c = 18$ ,  $a = 17$

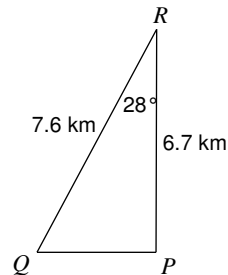
24)  $m\angle B = 35^\circ$ ,  $a = 24$ ,  $b = 6$

**Find the area of each triangle to the nearest tenth.**

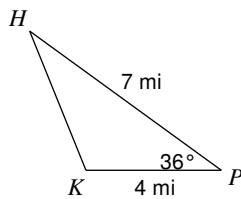
25)



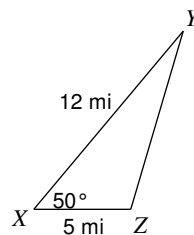
26)



27)



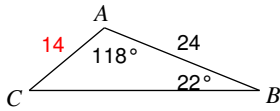
28)



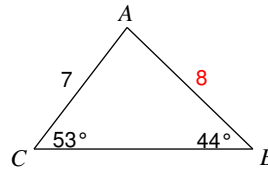
# The Law of Sines

Find each measurement indicated. Round your answers to the nearest tenth.

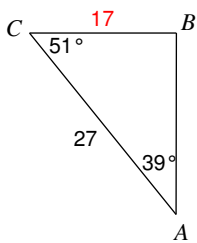
1) Find AC



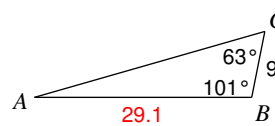
2) Find AB



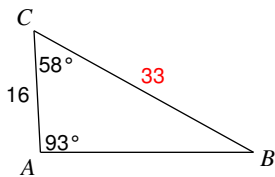
3) Find BC



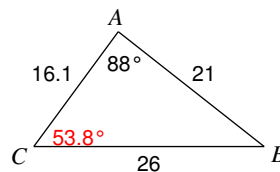
4) Find AB



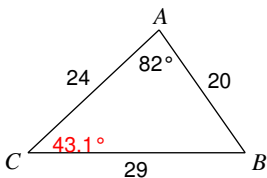
5) Find BC



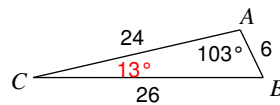
6) Find  $m\angle C$



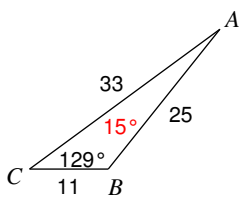
7) Find  $m\angle C$



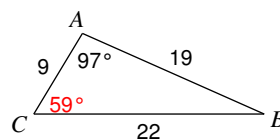
8) Find  $m\angle C$



9) Find  $m\angle A$



10) Find  $m\angle C$



Solve each triangle. Round your answers to the nearest tenth.

11)  $m\angle A = 70^\circ$ ,  $c = 26$ ,  $a = 25$

$m\angle B = 32.2^\circ$ ,  $m\angle C = 77.8^\circ$ ,  $b = 14.2$

Or  $m\angle B = 7.8^\circ$ ,  $m\angle C = 102.2^\circ$ ,  $b = 3.6$

12)  $m\angle B = 45^\circ$ ,  $a = 28$ ,  $b = 27$

$m\angle C = 87.8^\circ$ ,  $m\angle A = 47.2^\circ$ ,  $c = 38.2$

Or  $m\angle C = 2.2^\circ$ ,  $m\angle A = 132.8^\circ$ ,  $c = 1.5$

13)  $m\angle C = 145^\circ$ ,  $b = 7$ ,  $c = 33$

$m\angle A = 28^\circ$ ,  $m\angle B = 7^\circ$ ,  $a = 27$

14)  $m\angle B = 73^\circ$ ,  $a = 7$ ,  $b = 5$

Not a triangle

15)  $m\angle B = 117^\circ$ ,  $a = 16$ ,  $b = 38$

$m\angle C = 41^\circ$ ,  $m\angle A = 22^\circ$ ,  $c = 28$

16)  $m\angle B = 84^\circ$ ,  $a = 18$ ,  $b = 9$

Not a triangle

17)  $m\angle B = 105^\circ$ ,  $b = 23$ ,  $a = 14$

$m\angle C = 39^\circ$ ,  $m\angle A = 36^\circ$ ,  $c = 15$

18)  $m\angle C = 13^\circ$ ,  $m\angle A = 22^\circ$ ,  $c = 9$

$m\angle B = 145^\circ$ ,  $a = 15$ ,  $b = 22.9$

State the number of possible triangles that can be formed using the given measurements.

19)  $m\angle C = 63^\circ$ ,  $b = 9$ ,  $c = 12$

One triangle

20)  $m\angle B = 33^\circ$ ,  $a = 27$ ,  $b = 22$

Two triangles

21)  $m\angle B = 29^\circ$ ,  $a = 14$ ,  $b = 19$

One triangle

22)  $m\angle B = 95^\circ$ ,  $b = 24$ ,  $a = 5$

One triangle

23)  $m\angle A = 29^\circ$ ,  $c = 18$ ,  $a = 17$

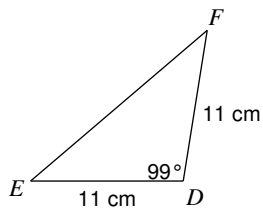
Two triangles

24)  $m\angle B = 35^\circ$ ,  $a = 24$ ,  $b = 6$

None

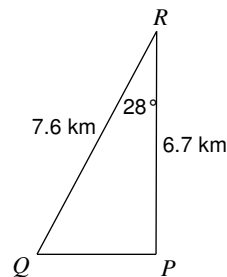
Find the area of each triangle to the nearest tenth.

25)



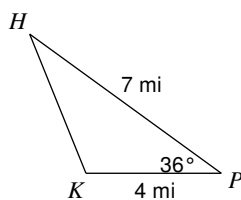
$59.8 \text{ cm}^2$

26)



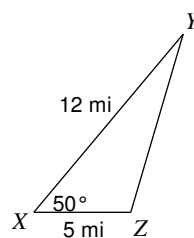
$12 \text{ km}^2$

27)



$8.2 \text{ mi}^2$

28)



$23 \text{ mi}^2$