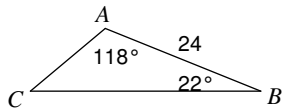
Kuta Software - Infinite Algebra 2 Name_____

The Law of Sines

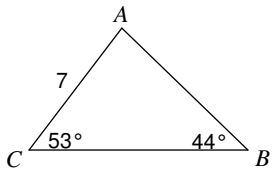
Date_____ Period____

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

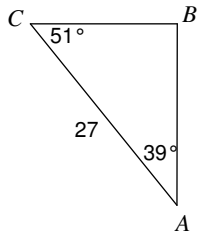
1) Find AC



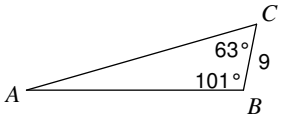
2) Find AB



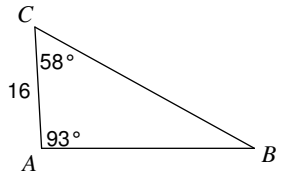
3) Find BC



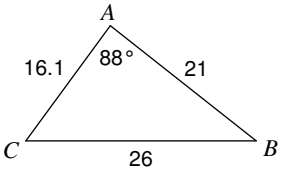
4) Find AB



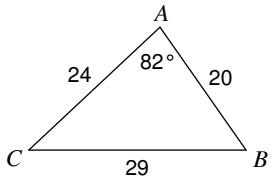
5) Find BC



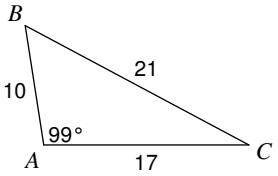
6) Find $m\angle C$



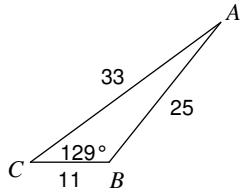
7) Find $m\angle C$



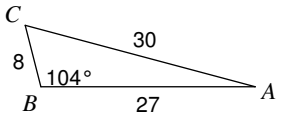
8) Find $m\angle C$



9) Find $m\angle A$



10) Find $m\angle A$



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

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

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

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

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

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

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

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

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

19) $m\angle B = 80°$, $m\angle C = 54°$, $b = 11$

20) $m\angle C = 29°$, $b = 25$, $c = 21$

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

21) $m\angle C = 63°$, $b = 9$, $c = 12$

22) $m\angle B = 33°$, $a = 27$, $b = 22$

23) $m\angle B = 29°$, $a = 14$, $b = 19$

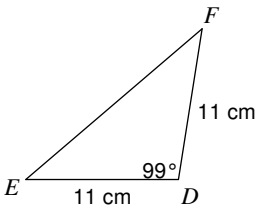
24) $m\angle B = 95°$, $b = 24$, $a = 5$

25) $m\angle A = 29°$, $c = 18$, $a = 17$

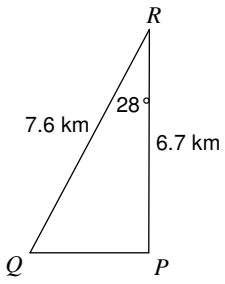
26) $m\angle B = 35°$, $a = 24$, $b = 6$

Find the area of each triangle to the nearest tenth.

27)



28)



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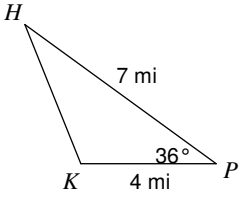

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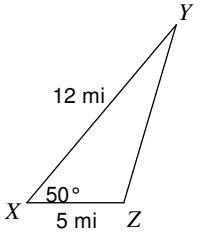

Kuta Software - Infinite Algebra 2 Name_____

The Law of Sines

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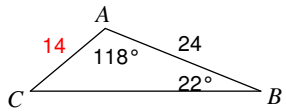
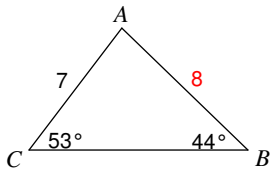
Find each measurement indicated. Round your answers to the nearest tenth.

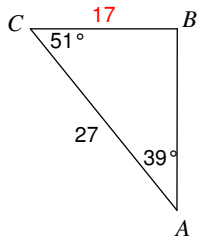
1) Find AC



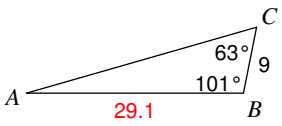
2) Find AB



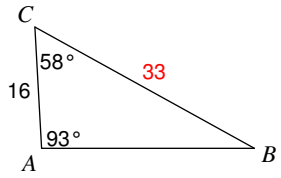
3) Find BC



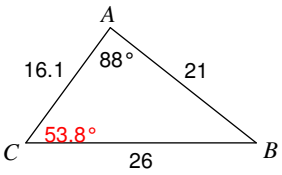
4) Find AB



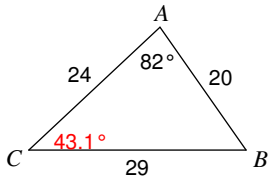
5) Find BC



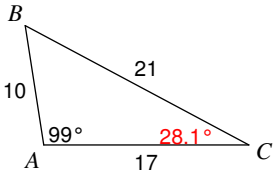
6) Find $m\angle C$



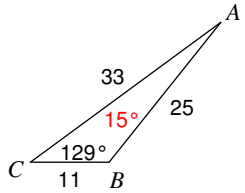
7) Find $m\angle C$



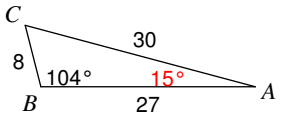
8) Find $m\angle C$



9) Find $m\angle A$



10) Find $m\angle A$



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

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

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

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

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

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

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

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

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

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

Not a triangle

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

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

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

Not a triangle

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

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

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

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

19) $m\angle B = 80°$, $m\angle C = 54°$, $b = 11$

$m\angle A = 46°$, $a = 8$, $c = 9$

20) $m\angle C = 29°$, $b = 25$, $c = 21$

$m\angle A = 115.7°$, $m\angle B = 35.3°$, $a = 39$

Or $m\angle A = 6.3°$, $m\angle B = 144.7°$, $a = 4.8$

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

21) $m\angle C = 63°$, $b = 9$, $c = 12$

One triangle

22) $m\angle B = 33°$, $a = 27$, $b = 22$

Two triangles

23) $m\angle B = 29°$, $a = 14$, $b = 19$

One triangle

24) $m\angle B = 95°$, $b = 24$, $a = 5$

One triangle

25) $m\angle A = 29°$, $c = 18$, $a = 17$

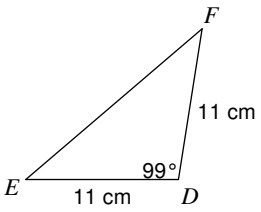
Two triangles

26) $m\angle B = 35°$, $a = 24$, $b = 6$

None

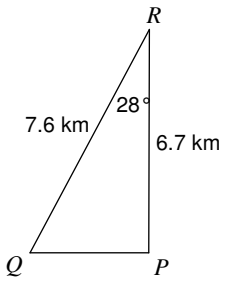
Find the area of each triangle to the nearest tenth.

27)



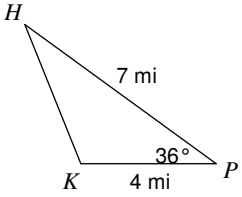
59.8 cm²

28)



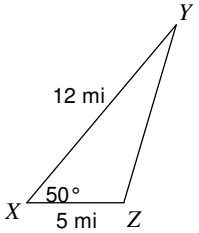
12 km²

29)



8.2 mi²

30)



23 mi²