

Quiz #9 Review

- 1) On a straight level street, a squirrel is facing west and looking up to the top of a building at an angle of elevation of  $37^\circ$ . A toad, also facing west on the street, is looking up to the top of the same building at an angle of  $64^\circ$ . The straight-line distance from the toad to the top of the building is 236 feet. To the nearest foot, what is the distance between the two animals? Show all work.

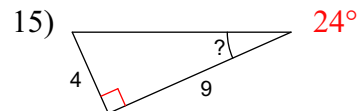
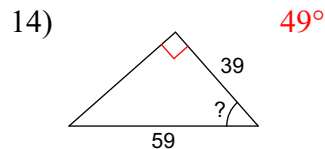
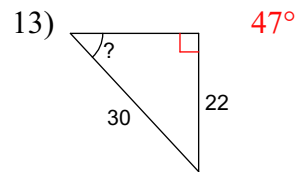
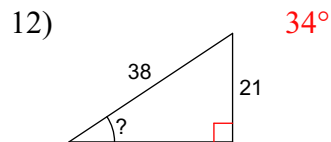
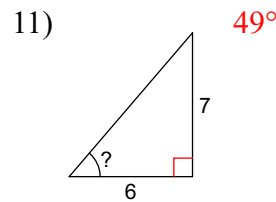
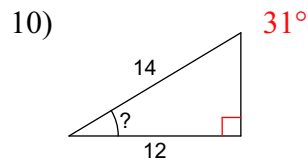
Use a calculator to find each angle measure to the nearest degree. Box all answers on this page.

- 2)  $\cos Z = 0.7193$   
 $44^\circ$
- 3)  $\tan B = 0.0875$   
 $5^\circ$
- 4)  $\tan C = 1.3270$   
 $53^\circ$
- 5)  $\sin A = 0.9986$   
 $87^\circ$

Use a calculator to find the value of each trigonometric ratio to FOUR decimal places.

- 6)  $\tan 71^\circ$   
 $2.9042$
- 7)  $\cos 21^\circ$   
 $0.9336$
- 8)  $\sin 40^\circ$   
 $0.6428$
- 9)  $\sin 84^\circ$   
 $0.9945$

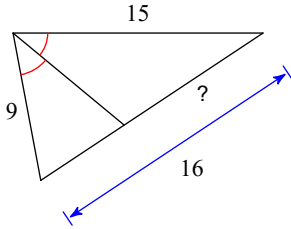
Find the measure of each indicated angle to the nearest degree. Show all of your work.



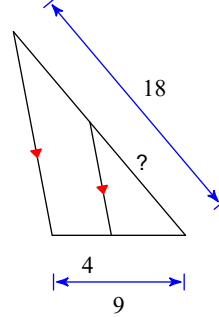
- 16) Flights 329 and 177 are both approaching an airport from entirely opposite directions at an altitude of three miles. The pilot of flight 329 reports an angle of depression of  $37^\circ$  to the tower, and the pilot on flight 177 reports an angle of depression of  $32^\circ$  to the tower. To the nearest tenth of a mile, calculate the distance between the planes. Show all of your work.

Find the missing length indicated. Show all of your work.

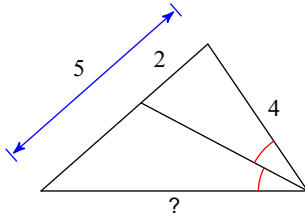
17) 10



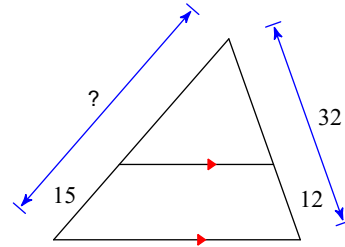
18) 10



19) 6

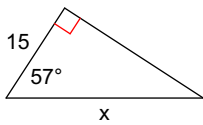


20) 40



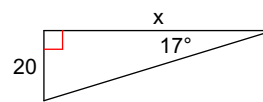
For each triangle, find the length of side  $x$ . Round answers to the nearest tenth. Show all work.

21)



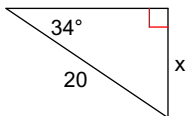
27.5

22)



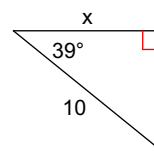
65.4

23)



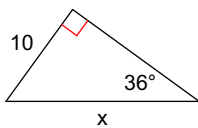
11.2

24)



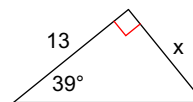
7.8

25)



17.0

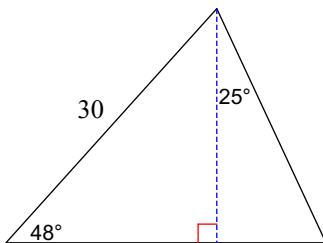
26)



10.5

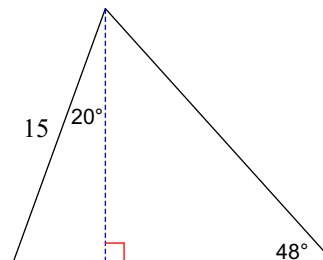
Find the area of each triangle. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth. Show all work.

27)



340.1

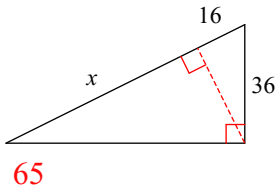
28)



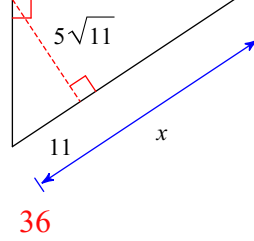
125.5

Find the missing length indicated. Leave your answer in simplest radical form. Show all work.

29)

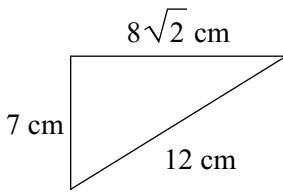


30)



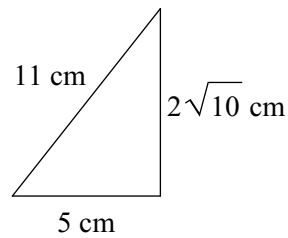
State if each triangle is acute, obtuse, or right. Show how you arrive at each answer.

31)



Acute

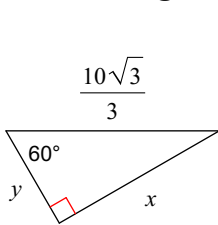
32)



Obtuse

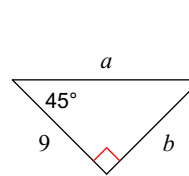
Find the missing side lengths. Leave your answers as radicals in simplest form. Show all work.

33)



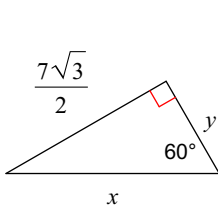
$$x = 5, y = \frac{5\sqrt{3}}{3}$$

34)



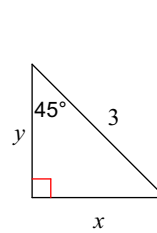
$$a = 9\sqrt{2}, b = 9$$

35)



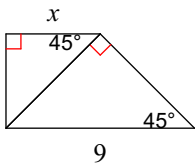
$$x = 7, y = \frac{7}{2}$$

36)



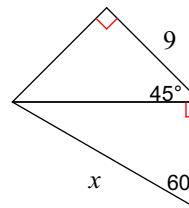
$$x = \frac{3\sqrt{2}}{2}, y = \frac{3\sqrt{2}}{2}$$

37)



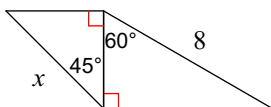
$$\frac{9}{2}$$

38)



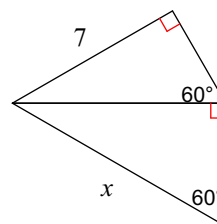
$$6\sqrt{6}$$

39)



$$4\sqrt{2}$$

40)



$$\frac{28}{3}$$