

Math II Unit 3 Right Triangle Trig Review Sheet

Name _____

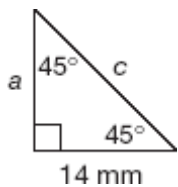
1. What are the ratios of the sides in a 45-45-90 triangle?

- a. $1:1:\sqrt{2}$ b. $1:2:\sqrt{3}$ c. $1:1:2$ d. $1:1:\sqrt{3}$

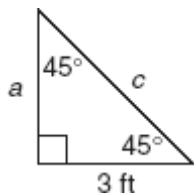
2. What are the ratios of the sides in a 30-60-90 triangle?

- a. $1:1:\sqrt{2}$ b. $1:2:\sqrt{3}$ c. $1:1:2$ d. $1:1:\sqrt{3}$

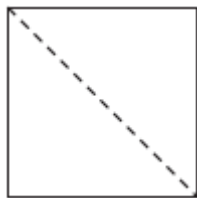
3. Calculate a & c , leave answers in radical form.



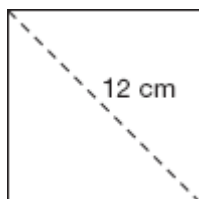
4. Calculate a & c , leave answers in radical form.



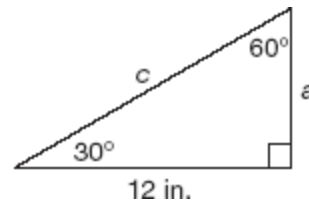
5. The perimeter of the square is 36 centimeters. Find the length of its diagonal. (Write answer in radical form.)



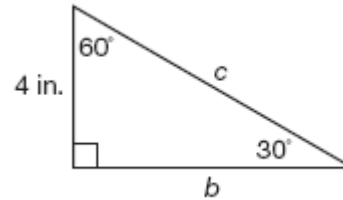
6. The diagonal of the square is 12 centimeters. Find the length of one side.



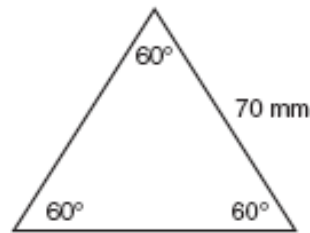
7. Calculate a & c , leave answers in radical form.



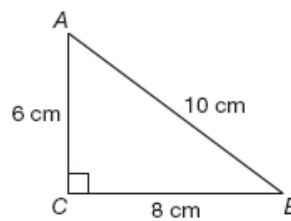
8. Calculate b & c , leave answers in radical form.



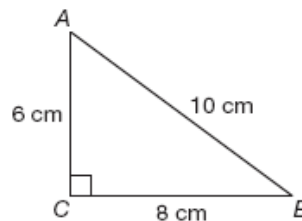
9. Calculate the altitude (height) of this triangle. (Write answer in radical form.)



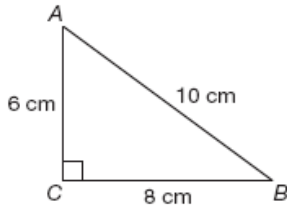
10. What is the length of the side opposite $\angle B$?



11. What is the length of the side adjacent to $\angle B$?

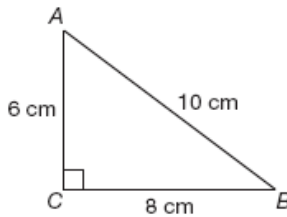


12. Write the sine, cosine, and tangent trigonometric ratios for $\angle A$. Write your answers as simplified fractions.



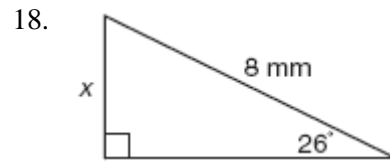
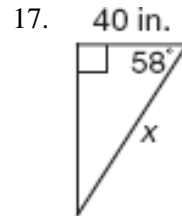
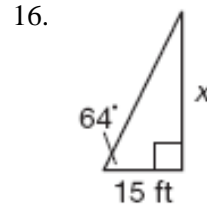
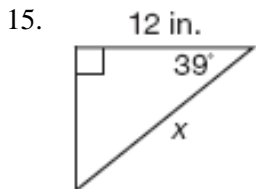
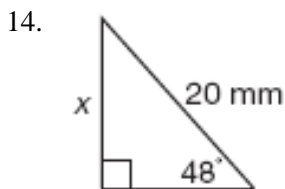
$\sin A =$ $\cos A =$ $\tan A =$

13. Write the sine, cosine, and tangent trigonometric ratios for $\angle B$. Write your answers as simplified fractions.

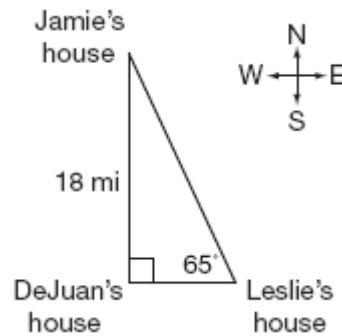


$\sin B =$ $\cos B =$ $\tan B =$

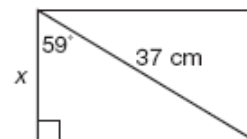
Use trigonometric ratios to find the value of x . Show all your work and round your answer to the nearest tenth.



19. DeJuan's house is 18 miles due south of Jamie's house. Leslie's house is due east of DeJuan's house and southeast of Jamie's house. Use the following figure to determine how far is Leslie's house from DeJuan's house? Round your answer to the nearest tenth of a mile if necessary.



20. Use a trigonometric ratio to find the width of the following rectangle. Round your answer to the nearest tenth of a centimeter.

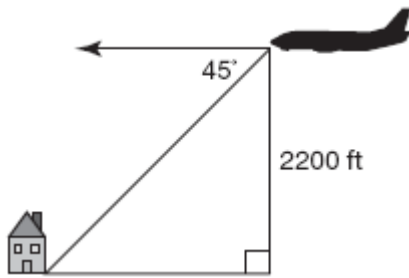


Round to 4 decimal places for #21-23.

- 21. $\tan 78^\circ$
- 22. $\cos 33^\circ$
- 23. $\sin 16^\circ$

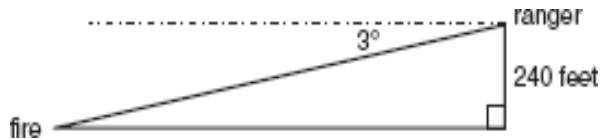
Round to the nearest whole degree for #24-26.

- 24. Find the measure of angle A: $\cos A = 0.5$
- 25. Find the measure of angle A: $\sin A = \frac{3}{5}$
- 26. Find the measure of angle A: $\tan A = \frac{3}{2}$
- 27. Eric is flying an airplane at an altitude of 2200 feet. He sees his house on the ground at a 45° angle of depression.

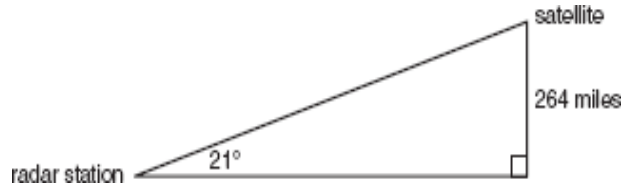


What is Eric's horizontal distance from his house at this point?

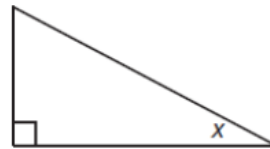
- a. 110 ft b. 220 ft c. 1100 ft d. 2200 ft
- 28. A park ranger on a 240-foot observation tower spots a fire at an angle of depression of 3° . To the nearest foot, how far is the fire from the base of the tower?



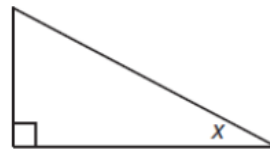
- 29. A radar station is tracking the path of a satellite. The altitude of the satellite is 264 miles. If the angle of elevation is 21° , how far is the satellite from the radar station to the nearest tenth of a mile?



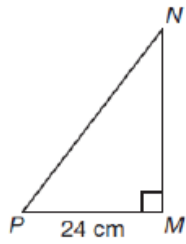
- 30. In the following figure, if $\tan x = \frac{5}{12}$, what are $\sin x$ and $\cos x$?



- 31. In the following figure, if $\sin x = \frac{8}{17}$, what are $\tan x$ and $\cos x$?



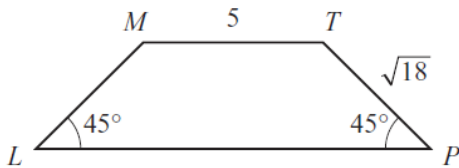
32. In the following figure below,
given $\cos P = 0.40$,



What is the length of \overline{PN} ?

- A. 0.25 centimeters
- B. 60 centimeters
- C. 9.6 centimeters
- D. 66.4 centimeters

33. Quadrilateral $LMTP$ is an isosceles trapezoid.

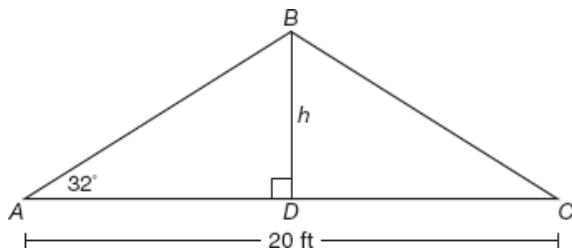


What is the length of \overline{LP} ?

34. Angle J and angle K are complementary angles in a right triangle. The value of $\tan J$ is $\frac{3}{4}$.

What is the value of $\sin J$?

Use the following figure, which represents a roof truss, to complete questions 35 and 36.



35. Find the length of AD , and the measure of $\angle ABD$.

36. Find the height (h) in problem above. Round answers to nearest hundredths place.

