

Practice with Tangent

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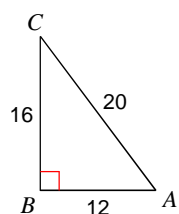
Find the value of each trigonometric ratio to the nearest ten-thousandth.

1) $\tan 73^\circ$

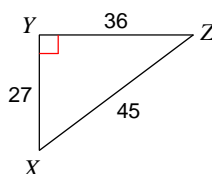
2) $\tan 9^\circ$

Find the value of each trigonometric ratio.

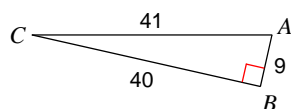
3) $\tan A$



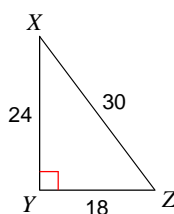
4) $\tan Z$



5) $\tan A$

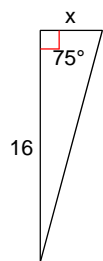


6) $\tan Z$

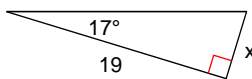


Find the missing side. Round to the nearest tenth. Show all work (including the proportion used).

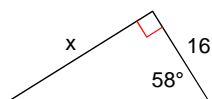
7)



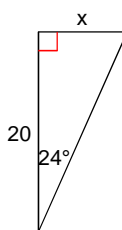
8)



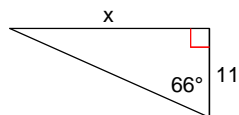
9)



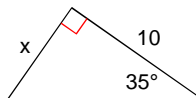
10)



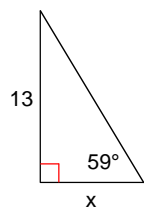
11)



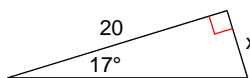
12)



13)



14)



15. **Write** a definition of the tangent ratio.

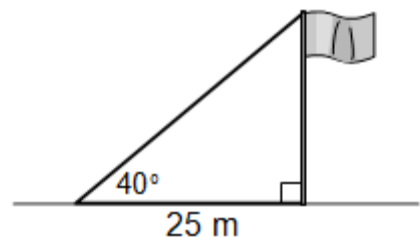
16. **Tell** how to use the tangent ratio to find the measure of a leg of a right triangle.

17. **Tell** how to find the measure of an angle in a right triangle when you know the measures of the two legs.

18. If the leg opposite the 53° angle in a right triangle is 4 inches long, how long is the other leg to the nearest tenth?

19. If the leg adjacent to a 29° angle in a right triangle is 9 feet long, what is the measure of the other leg to the nearest tenth?

20. A flagpole casts a shadow 25 meters long when the angle of elevation of the Sun is 40° . How tall is the flagpole to the nearest meter?



21. A surveyor is finding the width of a river for a proposed bridge. A theodolite is used by the surveyor to measure angles. The distance from the surveyor to the proposed bridge site is 40 feet. The surveyor measures a 50° angle to the bridge site across the river. Find the length of the bridge to the nearest foot.

