

Ottocento Lesson #11 SOHCAHTOA Worksheet

Video Solutions at: <https://youtu.be/apVCnokddsM>

Triangle DEF is a right triangle where angle E is a right angle. Side DF has a length of 34 inches. Side DE has a length of 16 inches. Side EF has a length of 30 inches.

Question 1

What is the value of $\sin(D)$?

Question 2

What is the value of $\tan(F)$?



Question 3

Triangle DEF is a right triangle where angle E is a right angle. Side DF has a length of 16 inches. Side EF has a length of 14 inches. What is the value of $\sin(F)$? (Use exact numbers in your answer)

Question 4

Triangle XYZ is a right triangle where angle Y is a right angle. Side YZ has a length of 8 inches. Side XZ has a length of 9 inches. What is the value of $\tan(X)$? (Use exact numbers in your answer)

Question 5

Triangle XYZ is a right triangle where angle Y is a right angle. If $\cos(X) = \frac{28}{53}$, what is the value of $\cos(Z)$?

Question 6

Triangle JKL is a right triangle where angle K is a right angle. Side JK has a length of 14 inches. Side JL has a length of x inches. If $\cos(J) = \frac{7}{3}$, what is the value of x ?



Question 7

Triangle JKL is a right triangle where angle K is a right angle. Side KL has a length of 32 inches. If $\tan(L) = \frac{5}{4}$, what is the length of side JK?

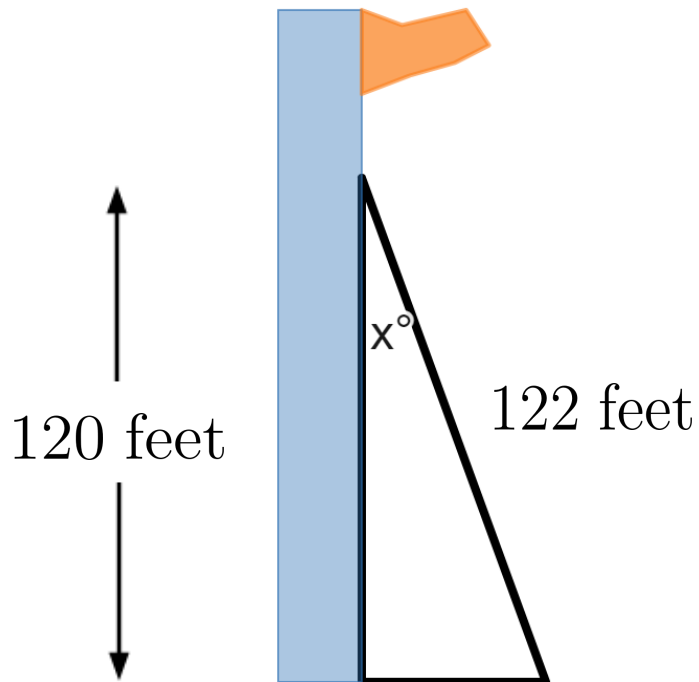
Question 8

Triangle ABC is a right triangle where angle C is a right angle. Side AB has a length of 3 inches. The measure of Angle B is 29° . What is the length of side AC? (Use exact numbers in your answer and THEN truncate/round your answer for the Bluebook app)

Question 9

Triangle PQR is a right triangle where angle Q is a right angle. Side PQ has a length of 11 inches. The measure of Angle R is 83° . What is the length of side QR? (Use exact numbers in your answer and THEN truncate/round your answer for the Bluebook app)

Question 10



The figure above shows the mast of a boat that is installed perpendicular to the deck of a boat. The mast is secured by a rope that is anchored to the deck. The rope measures 122 feet long and makes an angle of x° with the mast. The point where the rope is attached to the mast is 120 feet above the deck. What is the value of $\tan(x^\circ)$?