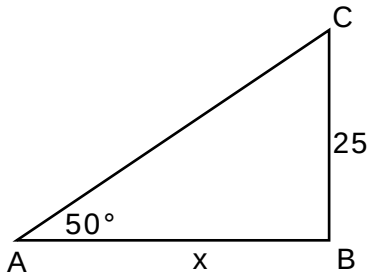
Name _____ Date _____

Trigonometric Ratios and the Pythagorean Theorem - Step-by-Step Lesson

A boy is walking with his friend on a straight road. He notices the top of a flag pole creating an angle A = 50°; from the point where he is standing. If the height of the pole is h = 25 m, what is the distance (in meters) of the man from the pole?



Explanation:

height = 25, angle = 50°, distance of man from the pole =

tan ø = $\frac{opposite}{adjacent}$

Step 3) tan A = $\frac{opposite}{adjacent}$

tan 50° = $\frac{BC}{AB}$

tan 50° = $\frac{25}{x}$

tan 50° x = 25

x = $\frac{25}{1.192}$ (value of tan 50° = 1.191)

x = 20.98 meters

Answer is: 20.98 meters