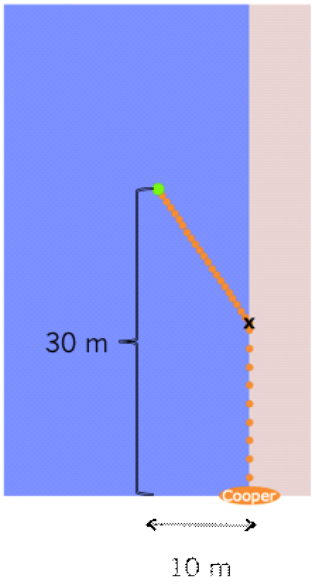
Problem_solving_Template

29 Kasım 2020 Pazar 19:45

Ex:



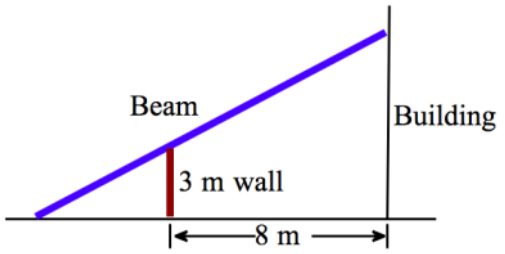
We have a dog named Cooper.

Cooper is on the beach,
we throw a tennis ball towards to sea and
it rolls to water.
Cooper can run on the beach with velocity
6 m/sec and it can swim in water with
velocity 4 m/sec.

If we throw the ball 30 m far up and
10 m far into the sea, where Cooper
should jump into the sea to catch the ball
in a minimum time.

4.6.45

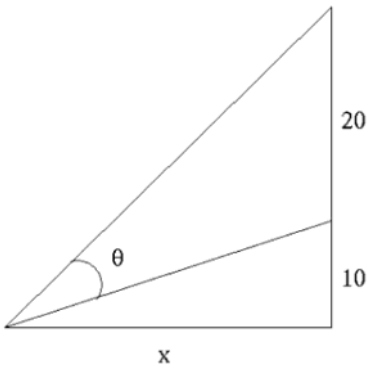
The 3-m wall shown here stands 8 m from the building. Find the length of the shortest straight beam that will reach to the side of the building from the ground outside the wall.



Ex:

A movie screen on a wall is 20 feet high and 10 feet above the floor.

At what distance x from the front of the room should you position yourself so that the viewing angle of the movie screen is as large as possible?



4.7.19

How many solutions does the equation **sin** $2x = 0.22 - 2x^2$ have? Use Newton's method to find them.

The equation has ☐ solution(s). (Type a whole number.)

The solution(s) is/are $x =$ ☐.
(Use a comma to separate answers as needed. Type an integer or decimal rounded to five decimal places as needed.)

4.8.119

The graph below shows solution curves of the differential equation $\frac{dy}{dx} = 1 - \frac{4}{3}x^{1/3}$. Find an equation for the curve that passes through the labeled point.