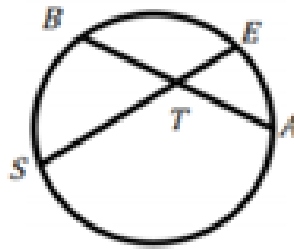


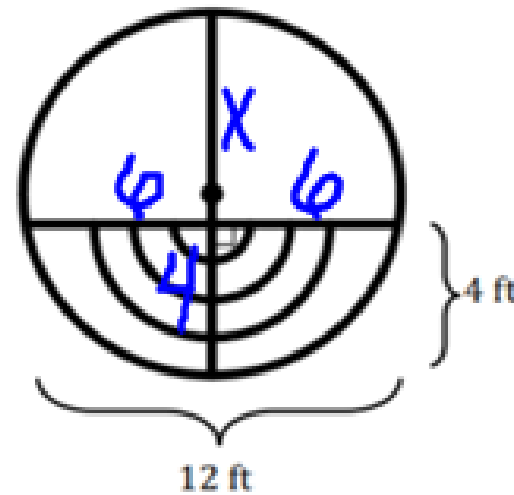
Intersecting Chords Theorem

If two chords intersect on the interior of a circle, then the product of the lengths of the segments of one chord is = to the product of the lengths of the segments of the other chord.



$$TB(TA) = TE(TS)$$

2. You are making a set of curved stairs for an upcoming chorus production. The diagram shows the top view of your plans and the dimensions of the stairs. To design the curvature correctly, you need to know the radius of the circle. Determine the radius of the circle.



$$4x = 6(6)$$
$$4x = 36$$
$$x = 9$$

$$9 + 4 = \frac{13}{2}$$

6.5 feet

Informal Assessment

1. Scientists from around the world watch the International Space Station (ISS). A scientist in California (C) observes the ISS at the exact time that the ISS is 249 miles above Moscow, Russia (M). If the Earth's radius is 3,959 miles long, determine how far the International Space Station is from the scientist in California. Round to the nearest hundredth of a mile.



1426.04 miles

$$\begin{aligned} 3959^2 + X^2 &= 4208^2 \\ 15673681 + X^2 &= \\ -15673681 & \quad 17707264 \\ \hline \sqrt{X^2} &= \sqrt{2033583} \end{aligned}$$