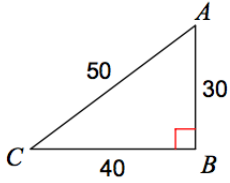


Unit 12 Practice Test

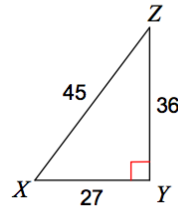
Name: _____

Target A: I can describe the trigonometric ratios

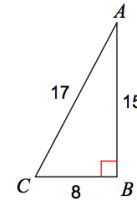
$\sin C$



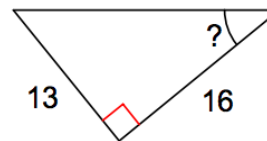
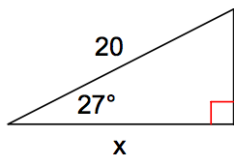
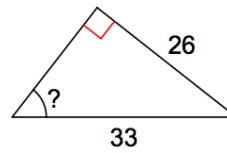
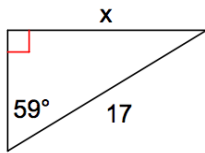
$\tan X$



$\cos C$



Target B: I can apply the trigonometric ratios to determine unknown angle measures and side lengths



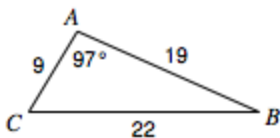
Target C: I can apply trigonometric ratios to solve problems

From a horizontal distance of 80.0 m, the angle of elevation to the top of a flagpole is 18° . Calculate the height of the flagpole to the nearest tenth of a metre.

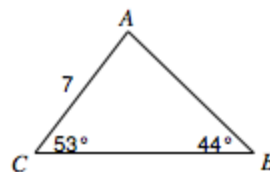
An airplane is flying at an altitude of 6000 m over the ocean directly toward a coastline. At a certain time, the angle of depression to the coastline from the airplane is 14° . How much farther (to the nearest kilometer) does the airplane have to fly before it is directly above the coastline?

Target D: I can describe and apply the law of sines to solve problems

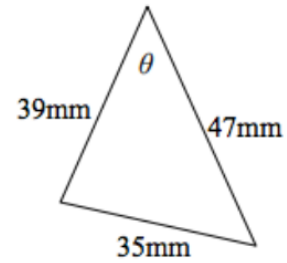
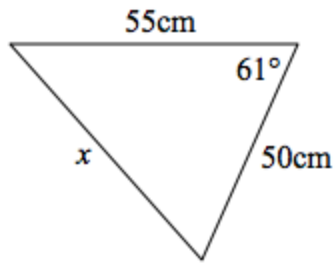
Find $\angle C$ and $\angle B$.



Find BC

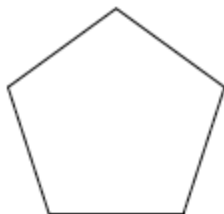


Target E: I can describe and apply the law of cosines to solve problems



Extra Challenges:

Find the area. You will need the apothem first.



Perimeter = 35 yd

Todd's friend Olivia is flying her plane at an elevation of 6.3 km. From the ground, Todd sees the plane moving directly toward him from the west at a 49° angle of elevation. Three minutes later he turns and sees the plane moving away from him to the east at a 65° angle of elevation. How fast is Olivia flying in kilometers per hour? [h](#)

Solutions:

Target A: $30/50$ ($\frac{3}{5}$), $36/27$ ($\frac{4}{3}$), $8/17$

Target B: 14.57 , 52 degrees , 17.82, 39 degrees

Target C: 26 , 24,066

Target D: C = 59 degrees B = 24 degrees, BC = 10

Target E: 53 47 degrees