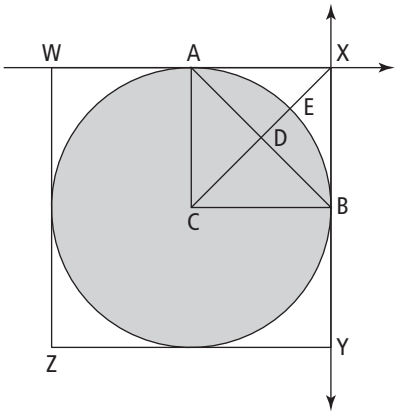
Name: _____ Date: _____

BLM 10–1

Chapter 10 Problems of the Week



1. ACBX is a square.
C is the centre of the circle.
AC and CB are radii.
AB is a chord.

a) CE is a radius that bisects chord AB. If DB is 7.26 cm, what is the length of AB?

b) Find the length of each side of the square ACBX. Round your answer to 2 decimal places.

Let r = radius.
So, AC = r and CB = _____
Since ACBX is a square, $\angle$ACB = _____°.
Use the Pythagorean relationship to find the length of AC and CB.

$AC^2 + BC^2 = AB^2$

$r^2 + r^2 = \square^2$ Solve for r.

Sentence: _____

c) Find the length of WX.

d) Find the area of square WXYZ. Round to the nearest hundredth.

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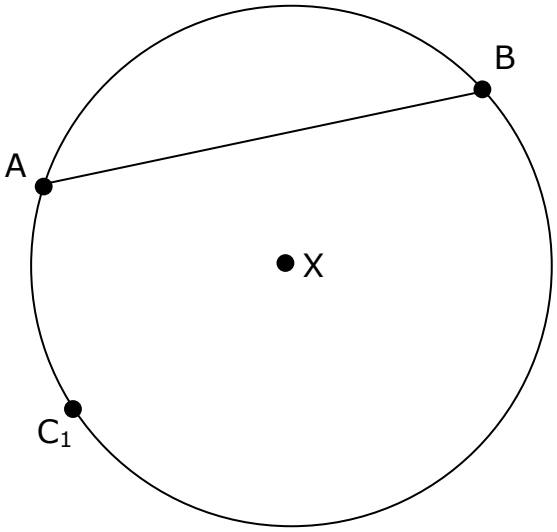
(continued)

2. a) Use the circle below to

- Draw a chord using points A and B.
- Place 4 points, C_1, C_2, C_3, and C_4 on the major arc. C_1 is done for you.

The major arc is larger than a semi-circle.



b) Using a ruler, draw $\angle AC_1B$, $\angle AC_2B$, $\angle AC_3B$ and $\angle AC_4B$.

- Measure each angle with a protractor.

$\angle AC_1B$ = _____, $\angle AC_2B$ = _____, $\angle AC_3B$ = _____, $\angle AC_4B$ = _____.

- What do you notice?

_____

c) On a different piece of paper, draw a smaller or larger circle and do the same steps. What do you notice about all of those angles?

_____

d) Measure $\angle AXB$. _____

What do you notice about $\angle AXB$ and each of the angles in a)?

_____

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