NAME __Key__   DATE _____ Pd _____

10.5 Interior & Exterior Angles of a Circle CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Inscribed Angles	1		
Interior Angles	1, 2		
Intercepted arcs	1		
Triangle Sum Theorem	1		
Exterior Angles	3	4	7
Problem Solving			5, 6

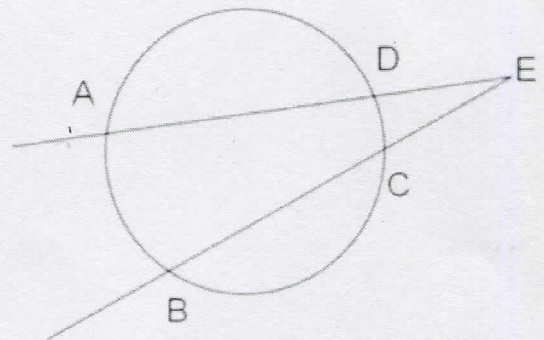1. *Find the missing pieces of the circle, including arcs and ALL interior angles.*
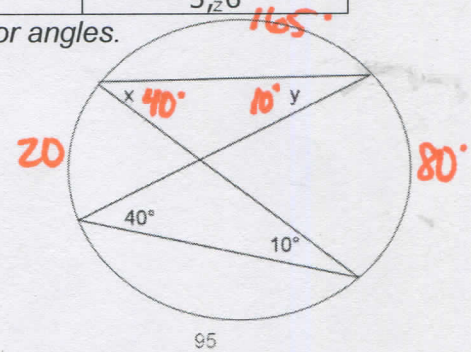
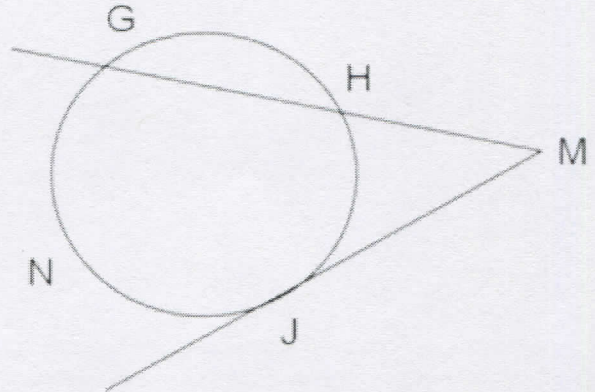2. *Find y. Show all work to justify your answer.*

$$y = 100$$
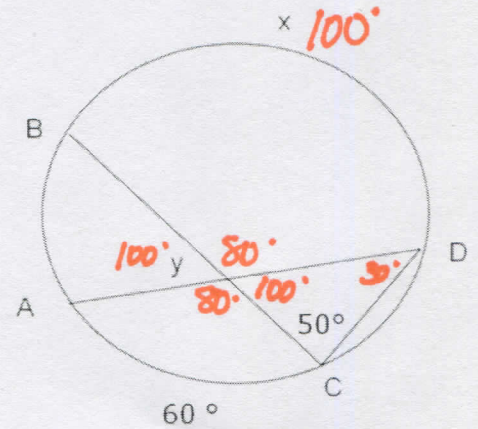
3. If $m\overparen{DC} = 30°$, $m\overparen{AD} = 160°$, and $m\overparen{BC} = 120°$, find $m\angle E$.

$$10°$$

4. If m∠M = 25° and m$\widehat{GNJ}$ = 100°, find m$\widehat{HJ}$.
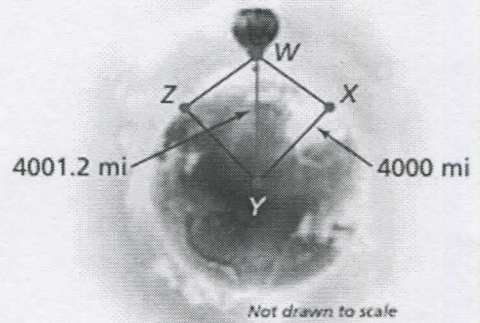
50°

G

H

M

N

J

PROBLEM SOLVING

5. You are flying in a hot air balloon about 1.2 miles above the ground. Find the measure of the arc that represents the part of Earth you can see. The radius of Earth is about 4000 miles.

≈ 2.8°

W

Z · X

4001.2 mi

4000 mi

Y

Not drawn to scale

6. You are watching fireworks over San Diego Bay, S, as you sail away in a boat. The highest point the fireworks reach, F, is about 0.2 miles above the bay. Your eyes, E, are about 0.01 miles above the water. At point B you can no longer see the fireworks because of the curvature of Earth. The radius of Earth is about 4000 miles, and $\overline{FE}$ is tangent to Earth at point T. Find m$\widehat{SB}$. *Round your answer to the nearest tenth. Don't forget units!*

≈ 0.7°

F

S

T

E

B

C

Not drawn to scale
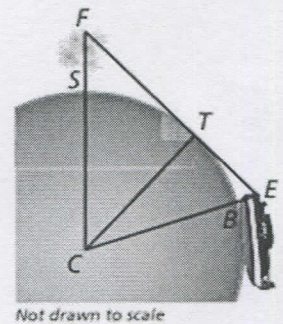
7. Find the value of x.

X = 11

Y

125°

X

(6x − 11)° Z
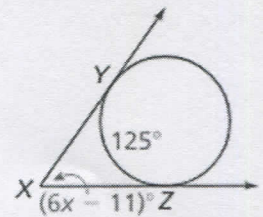
CYU Reflection: *How far can you go: basic, intermediate, or advanced?*
Rate your mastery level!
How confident are you with the skills this CYU covered? Circle the score you would give yourself.

1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!