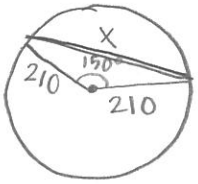
Name: KEY! Date: _____ Hour: _____

# Unit N Exam Review

1. In a circle with radius 210 mm, find the length of the chord of a 150 degree arc.




$C^2 = 210^2 + 210^2 - 2 \cdot 210 \cdot 210 \cdot \cos 150°$

$\sqrt{C^2} = \sqrt{164,583.4}$

$C = 405.7\text{mm}$

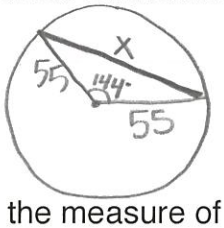
2. In a circle with radius 55 mm, find the length of the chord of a 60 degree arc.


$X^2 = 55^2 + 55^2 - 2 \cdot 55 \cdot 55 \cdot \cos 60°$

$\sqrt{X^2} = \sqrt{3025}$

$X = 55\text{mm}$

3. In a circle with radius 55 mm, find the length of the chord of a 144 degree arc.



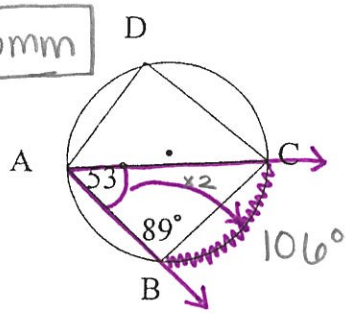

$X^2 = 55^2 + 55^2 - 2 \cdot 55 \cdot 55 \cdot \cos 144°$

$\sqrt{X^2} = \sqrt{10,944.6}$

$X = 104.6\text{mm}$

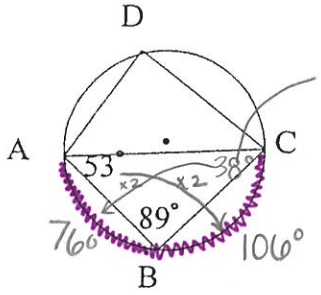
4. Find the measure of arc CB.

106°



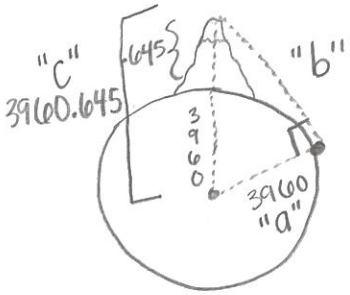

5. Find the measure of arc ABC.

$76 + 106 = 182°$




$180 - 53 - 89 = 38°$

6. Suppose that you are on the top of a 3,405 ft mountain, if there are no hills are obstructions in your way how far can you see? (Remember...the radius of the Earth is approximately 3,960 miles).




convert into miles

$\frac{3405\text{ ft}}{5280\text{ ft/mi}} = .645$

$a^2 + b^2 = c^2$

$3960^2 + b^2 = 3960.645^2$

$-3960^2 \quad -3960^2$

$\sqrt{b^2} = \sqrt{5108.8}$

$b = 71.5\text{mi}$