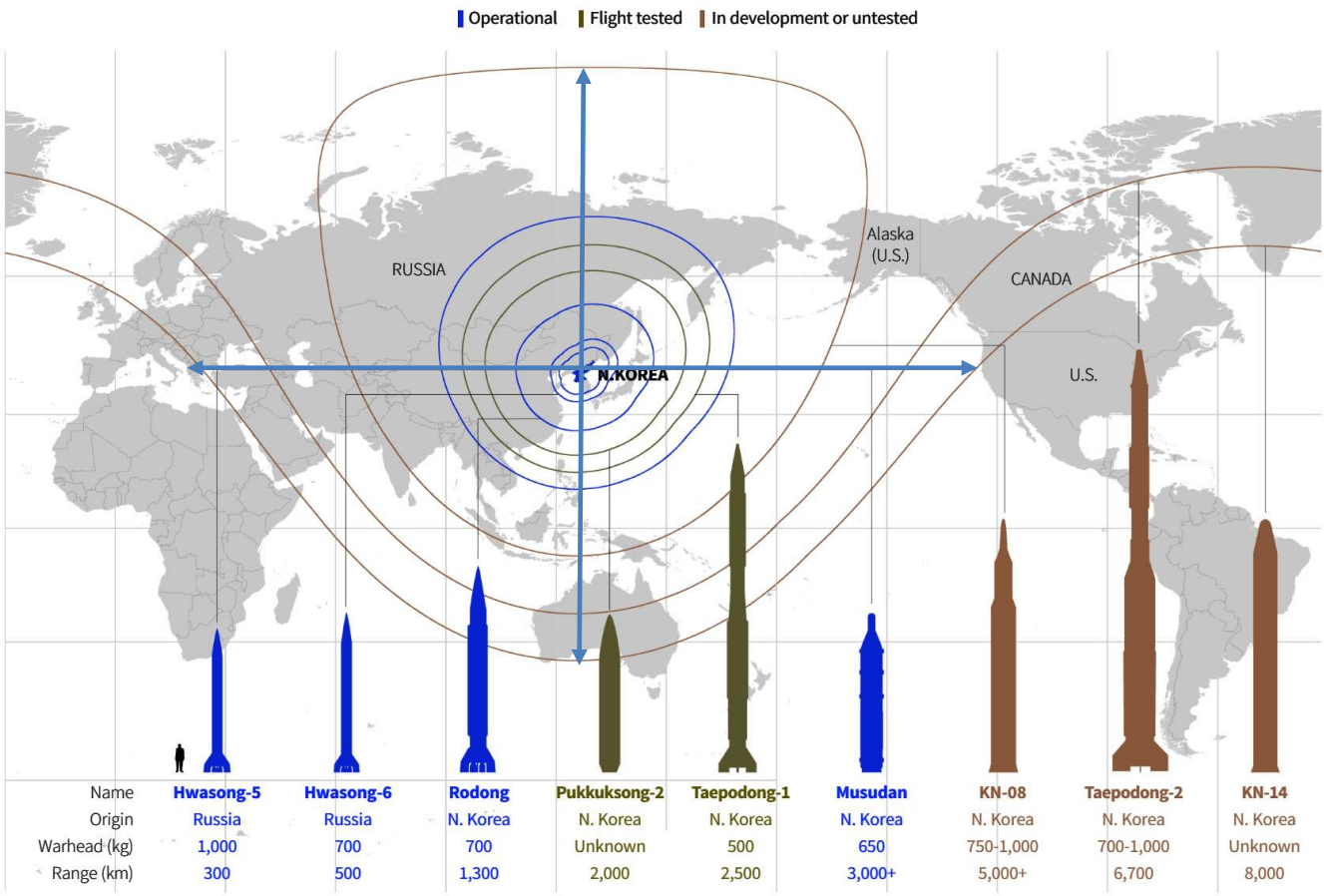
HW 03 [Circles]



Name	Hwasong-5	Hwasong-6	Rodong	Pukkuksong-2	Taepodong-1	Musudan	KN-08	Taepodong-2	KN-14
Origin	Russia	Russia	N. Korea	N. Korea	N. Korea	N. Korea	N. Korea	N. Korea	N. Korea
Warhead (kg)	1,000	700	700	Unknown	500	650	750-1,000	700-1,000	Unknown
Range (km)	300	500	1,300	2,000	2,500	3,000+	5,000+	6,700	8,000

1

The distance capability of the KN-14 missile is 8 thousand km from north korea which is the center. Give me the circle of this analysis on mathematica and give me the standard form of the equation

2

Find the standard form of the equation for the circle described below.

Center $(-6, -2)$ and radius 2

Using mathematica show code and graph.

3

Consider the equation below.

$$(x - 9)^2 + (y - 7)^2 = 36$$

Step 1. Find the center (h, k) , of this circle.

Step 2. Find the radius, r, of this circle.

Step 3. Graph the circle.

Using mathematica show code and graph.

(h,k) = r =

4

Consider the equation below.

$$x^2 + y^2 - 10x + 18y = -42$$

Step 1. Find the center (h, k) , of this circle.

Step 2. Find the radius, r, of this circle.

Step 3. Graph the circle.

Using mathematica show code and graph.

Completing the square

use the circle formula

(x-h)^2 + (y-k)^2 = r^2

5

Find the standard form of the equation for each of the following circles:

a. A circle with a diameter whose endpoints are $(-4, -1)$ and $(2, 5)$.

Find (h,k) // hint mid point formula

Then

Standard Form of a Circle

The **standard form** of the equation for a circle of radius r with center (h, k) is

$$(x - h)^2 + (y - k)^2 = r^2.$$

(h,k) = and r =