

## Circle Geometry Escape

The evil Dr. Farnsworth has finally snapped and abducted you to spend the next 20 years solving Math problems. To escape her devious plan, you want to find the combination of the lock that is keeping you hostage. Around the room are 6 centers which will provide you with clues to the 6 digits of the combination lock. Once you have a possible combination, you will need to check it out on the computer to see if you can escape Dr. Farnsworth's diabolical clutches!

Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6

Work Space:

Station 1

Station 2

Station 3

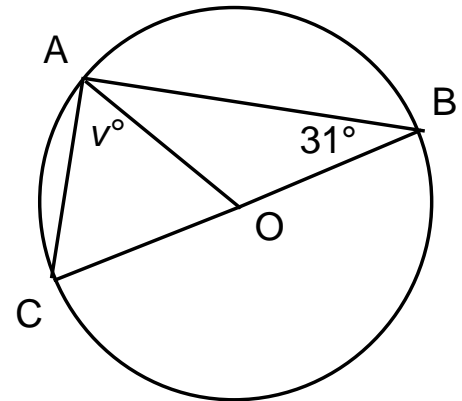
Station 4

Station 5

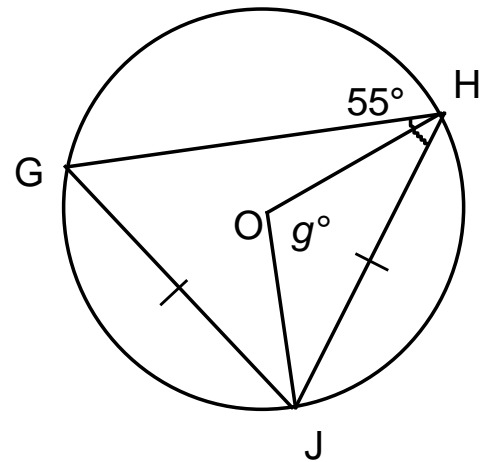
Station 6

# Station #1

A. Find the value of  $v$ .



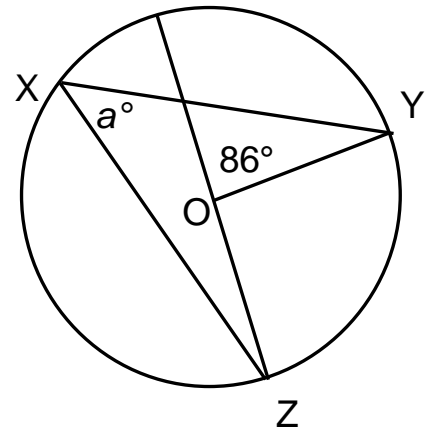
B. Find the value of  $g$ .



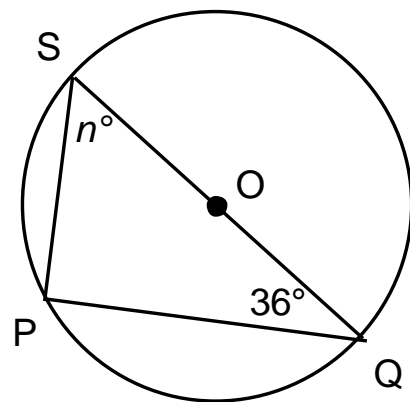
C. What is the GCF of  $(B - A)$  and the number 24?

# Station #2

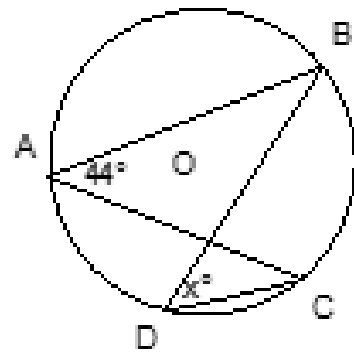
A. Determine the value of  $a$ .



B. What is the value of  $n$ ?



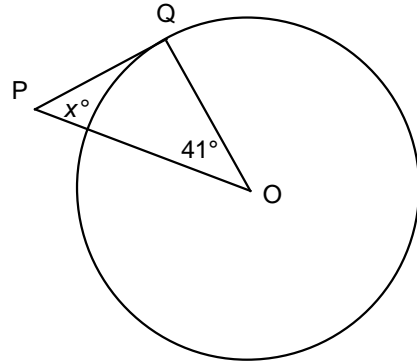
C. Determine the value of  $x$ .



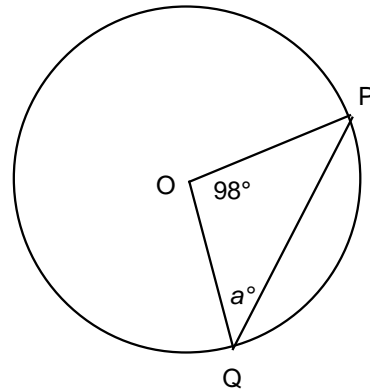
D. What is the average of  $A, B, C$  divided by the date of the second Friday in May?

# Station #3

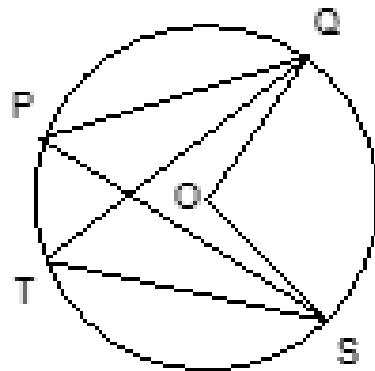
A. Determine the value of  $x^\circ$ .



B. What is the value of  $a^\circ$ ?



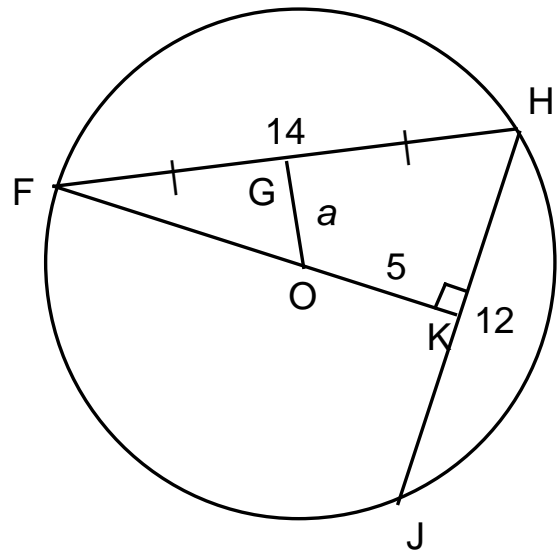
C. How many inscribed angles are there?



D. Find  $(A + B - 10) \div C^2$ .

# Station #4

A. What is the distance from O to H (nearest whole number)?

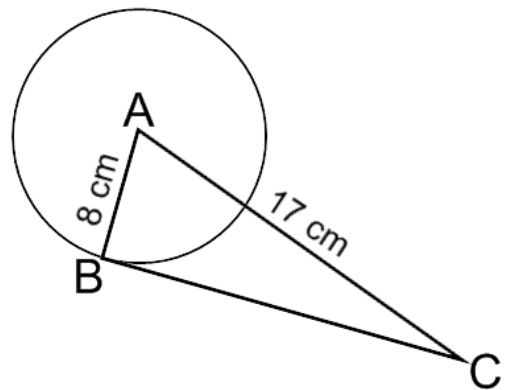


B. What is the value of  $a$  to the nearest whole number.  
Use the value of  $OH$  rounded as a whole number?

C. What is  $2(A - B)$ ?

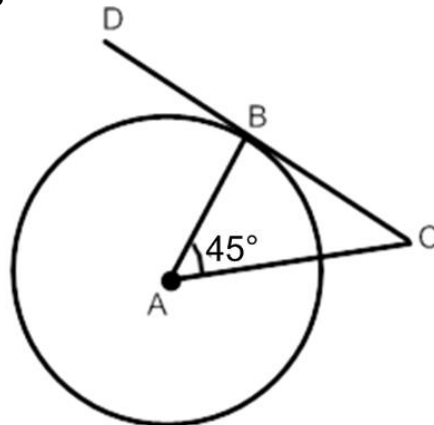
# Station #5

- A. Point A is the center of the circle and line BC is tangent to the circle. What is the length of line BC?



- B. Line AB connects the center of the circle (A) to the point of tangency (B) on the tangent line DC.

What is the angle measurement of angle C?

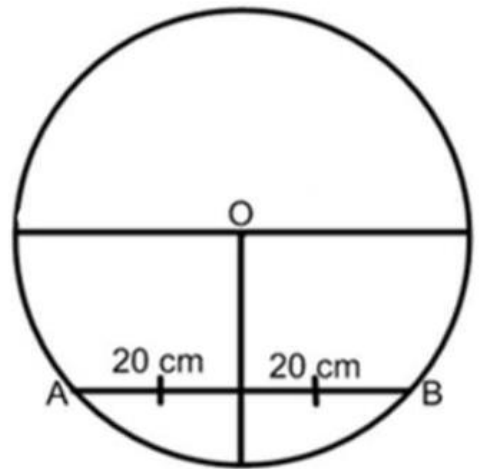


C)  $B \div A = \underline{\hspace{2cm}}$

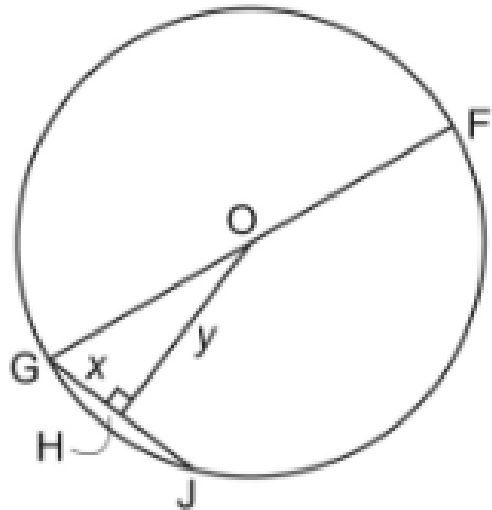
# Station #6

- A. The pipe on the bottom has water up to the line AB.

Point O is the center of the pipe. What is the height of the water at its deepest point if the diameter is 50 cm?



- B. Find the value of  $y$  if OF is 25 cm and GJ is 14 cm.



- C. Find  $B - 2A$ .