## Lecture 3: Quiz

**Name:**

### Problem 1

In one of the first slides, we defined geometry as the science of "Shape", "Size" and ⋯⋯ .
What is the third point.

### Problem 2

Thales was known to be the first mathematician and philosopher. When did he live? a) 600BC
b) 400BC          c) 200BC          d) 200AC

### Problem 3

During the lecture, I mentioned whether Thales has ever met Pythagoras.
600BC          , A) They met          B) they did not meet

### Problem 4

Match the birth places:

| | | | |
|---|---|---|---|
| Pythagoras of | | A | Samos |
| Thales of | | B | Miletus |
| Euclid of | | C | Chios |
| Hippocrates of | | D | Alexandria |

### Problem 5

What is Morley's miracle?

| | |
|---|---|
| A  A relation between side lengths of a quadri-lateral. | B  $a^2 + b^2 + c^2 = d^2$ for a quadrilateral |
| C  The angle tri-sectors in an arbitrary triangle intersect in a equilateral triangle. | D  In a right triangle, $h$ intersects hypotenuse $c$ in segments $a, b$ satisfying $ab = h^2$. |

### Problem 6

Thales theorem works also if the angle is 90 degree angle. Then:

| | |
|---|---|
| The center of the circle is on the hypothenuse. | A |
| The center of the circle is on the centroid of the triangle. | B |
| The triangle is an isosceles triangle | C |
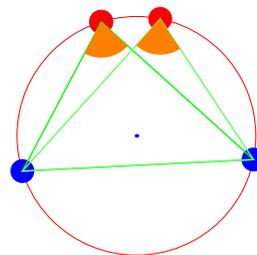


## Problem 7

Two of the following problems are not solvable with ruler and compass:
a) Angle doubling
b) Length trisection
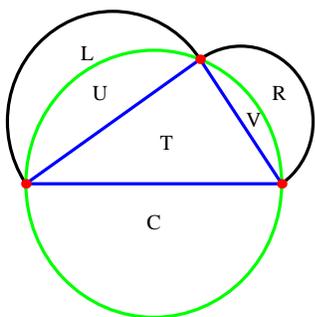c) Angle trisection
d) Quadrature of the circle

## Problem 8

Match four miracles are basic results in geometry:
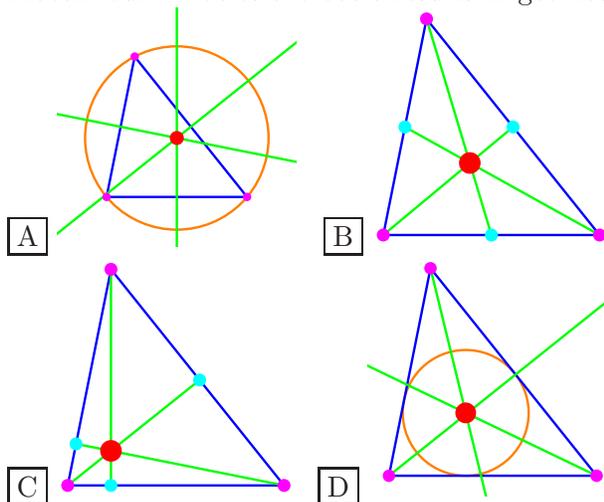


| | |
|---|---|
| The intersection of lines through mid points | |
| The intersection of angular bi-sectors | |
| The intersection of perpend. line bisectors | |
| The intersection of altitudes | |

## Problem 9



Which formula appeared in the proof of Hippocrates theorem?

| | |
|---|---|
| $U + V = T$ | A |
| $L + R = T$ | B |
| $L + R = U + V$ | C |
| $|U - V| = T$ | D |
| $|L - R| = T$ | E |