**Presentations02Greeks**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Topic** | **Presenter** |  |
| 1 | Prove that vertical angles are congruent. |  |  |
| 2 | Prove that an angle inscribed in a semi-circle is a right angle. |  |  |
| 3 | Show how Thales calculated the height of a pyramid and the distance of a ship from the shore. |  |  |
| 4 | Prove the Pythagorean theorem. |  |  |
| 5 | Find the formula for the nth triangular number. |  |  |
| 6 | Find the formula for the nth pentagonal number. |  |  |
| 7 | Prove that the square root of 2 is irrational. (See if you can find out how the Greeks proved it.) |  |  |
| 8 | Prove that the square root of 3 is irrational.  |  |  |
| 9 | Discuss and explain Zeno’s Achilles and the Tortoise ‘paradox.’ Why is it a ‘paradox’? |  |  |
| 10 | What were Zeno’s paradoxes? What was their purpose? |  |  |
| 11 | Argue that there are only five Platonic solids. |  |  |
| 12 | Describe Plato’s Theory of Forms (or Ideals) |  |  |
| 13 | With compass and straight edge: bisect an angle. |  |  |
| 14 | With compass and straight edge: square the equilateral triangle. |  |  |
| 15 | With compass and straight edge: duplicate the square.  |  |  |
| 16 | With compass and straight edge: construct a regular pentagon. |  |  |