## Presentations01C

| Define the golden mean/golden ratio and calculate its <br> value. | 1 |
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| Prove that the square root of 2 is irrational. | 2 |
| Calculate the ratio of the side of a regular pentagon to <br> the diagonal of the regular pentagon. Hint: look at my <br> calculations in terms of $n$ and $m$. | 2.5 |
| Prove that the square root of 3 is irrational. | 3 |
| Discuss and explain Zeno's Achilles and the Tortoise <br> 'paradox.' Why is it a 'paradox'? | 4 |
| What were some of Zeno's other paradoxes? What was <br> their purpose? | 5 |
| Argue that there are only five Platonic solids. | 6 |
| With compass and straight edge: bisect an angle. | 7 |
| With compass and straight edge: square the equilateral <br> triangle. | 8 |
| With compass and straight edge: duplicate the square. | 9 |
| With compass and straight edge: construct a regular <br> pentagon. | 10 |

