1. Which economic and political changes characterized the end of the second millenium BC?

2. Why do you think that philosophy, mathematics and science in general first blossomed in the Greek islands of the Aegean Sea?

3. Thales of Miletus is considered to be the father of Greek mathematics. What can you tell about him? Which mathematical results is he credited with?

4. Thales is credited with the result that says that an angle inscribed in a semicircle is a right angle. Which simple (possibly Thales' own) proof does Euclid present in Book III-Proposition 31 of his Elements?

5. What can you tell about Pythagoras of Samos and his School?

6. What did the Pythagorean philosophy rest on?

7. Why could we argue that the Pythagoreans laid the foundations of number theory?

8. What are "figurate numbers"? Give some of their properties?

9. Explain the following comment of Aristotle: "If we assume that the diagonal and the side of a square are commensurable, then odd numbers will be equal to even ones."

10. Prove that $\sqrt{2}$ is irrational?

11. Which properties does the holy symbol of the Pythagoreans have?

12. Explain what it means to square a plane figure.

13. Explain the construction that yields the quadrature of a rectangle.

14. Why is Hippocrates of Chios remembered?

15. What is a "lune"? State Hippocrates' Theorem and sketch the strategy of its proof. Which results are needed in the argument?

16. Can we square all types of lunes? Explain? Can we square a circle? What is wrong in the argument "attributed" to Hippocrates?

17. Give some examples of Zeno's Paradoxes.