1. Explain the dyadic multiplication system of the Egyptians. In which way would Egyptians perform the multiplication $14 \times 15$? What about their calculus of fractions?

2. Could Egyptian solve linear equations? Give an example of the types of problems they considered. What is a false position argument?
3. What is so special about the method of computation of the Babylonians? What does it mean that they used a place value system?

pts: /5

4. Describe the geometric procedure that Babylonians used to approximate \( \sqrt{N} \). Which approximation for \( \sqrt{2} \) did they obtain?

pts: /5
5. What does it mean that Babylonian scribes would present “formulas” of geometric objects in terms of coefficient lists? Give some examples. For instance, which approximation for $\pi$ did the Babylonians (implicitly) use? Which approximation did the Egyptians “use” for $\pi$?

6. What does it mean that Babylonian geometry is based on the cut-and-paste geometry of surveyors? Illustrate this by giving the geometric interpretation to the Babylonian solution of

$$x^2 + bx = c.$$