

- Describe the difference between Greek and pre-Greek geometry. What was the focus of geometry before Greeks?
- Put Egyptian and Babylonian geometry into a time and space perspective (briefly describe “when” and indicate “where” on the map).

Egyptian Geometry:

Approximation of  $\pi$ : what was the value the Egyptians worked with and how they arrived at it? (pg. 36)

#3 and 4 on pg. 40

You should know modern formulas for the area of square, rectangle, parallelogram, trapezoid and kite and be able to derive them

Babylonian Geometry:

How was Babylonian geometry different from Egyptian?

Example 1 and example 2 on page 59

Approximation of  $\pi$  : solve example 1 on page 61 and explain how we can deduce the value of  $\pi$  Babylonians used

#4, 5, 6, 8 pg. 63

Greeks:

Give 3 most influential Greeks with (including time perspective; you do not have to memorize exact years, approximations within the right century will do).

Thales: Problems # 1,2, 4, 5 on pg. 71.

Pythagoras and Pythagoreans:

Commensurability of line segments, irrationality of  $\sqrt{2}$

- Show that the line segments with the following lengths are commensurable:  
3 and 2, 8 and 13,  $6\frac{1}{2}$  and  $2\frac{2}{3}$
- Show that a side and diagonal of a square are not commensurable. (pg. 85)
- Show that  $\sqrt{2}$  is irrational (pg. 86).
- Exercises #1, 2, 3, 4, on page 87

Arithmetica -Figurate numbers: # 1, 2, 3, 4, 5 on pg. 81