

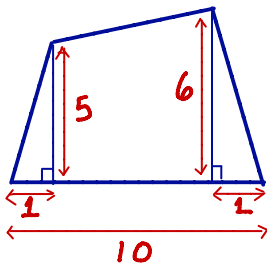
1. Read Burton §2.4-2.6. Summarize the mathematical topics discussed in these sections using at most two sentences.

2. Roughly when was the Moscow papyrus written?

3. On page 54 is an ancient Egyptian formula for the area of a quadrilateral: $A = \frac{1}{4}(a + c)(b + d)$.

(a) Use it to find the area of a rectangle with side lengths a and b .

(b) Use it to find the area of the quadrilateral below and compare that calculation to a correct calculation. Does the Egyptian formula give an over-estimate or an underestimate of the exact area?



(c) Give a simple argument or proof-by-picture to demonstrate that the formula the Egyptian were using is not only incorrect, but obviously so. In particular, that official using the formula must have known it was incorrect.

4. Write a sentence or two explaining **to a 5th grader** what π is.

5. How much of your answer is something an ancient Egyptian could understand?