

Problem Set Nine

Exercises

8.7 14, **15**,17, **19**,23a,b, **29**, 35,**36**,39

8.8: 3,4,**9**,**11**,13,**18**,**20**,**37**

8.9: 5, 7, **10**, **23**, **24**

Problems

In 660 the Indian mathematician Brahmagupta asserted that $\pi = \sqrt{10}$. This was pretty close, but not quite right.

(a) Using a Taylor approximation for \sqrt{x} at $x = 9$, approximate the value of $\sqrt{10}$.

(b) Prove that Brahmagupta was not correct, by choosing n big enough and using Taylor's theorem.