

HW #6

Math 506A

1. (20 points) DF, Exercise 10, p. 811.
2. DF, Exercise 11, p. 811.
3. DF, Exercise 19, p. 812.
4. Let A be the algebra over \mathbb{Q} generated by two elements x, y subject to the relations $x^2 = -3, y^2 = -7, xy = -yx$. Show that A is a division ring, by imitating the proof that the ring H of quaternions is a division ring.