

# MA 544: Homework 1

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**PROBLEM 1.1**

*Proof.*



**PROBLEM 1.2**

*Proof.*



**PROBLEM 1.3**

*Proof.*



**PROBLEM 1.4**

*Proof.*



**PROBLEM 1.5**

*Proof.*



**PROBLEM 1.6**

*Proof.*





**PROBLEM 1.7**

*Proof.*



**PROBLEM 1.8**

*Proof.*



**PROBLEM 1.9**

*Proof.*



**PROBLEM 1.10**

*Proof.*

