MFM2PI – *Unit 3: Linear Systems – Diagnostic*  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

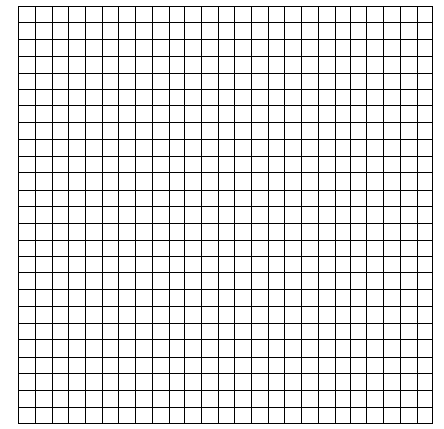
**Diagnostic: Linear Systems**

*Solve the following problem using any (or none!) of the mathematical tools provided! Good luck!*

Mr. Smith wants to take his wife on a hot-air balloon ride for their anniversary. He checks with some local hot-air balloon companies and this is what they told him:

1. Sky-Ride said that it would cost a flat fee of $100 for the balloon and an additional $50 for every hour the balloon is in the air
2. Air-Date said that it would cost a flat fee of $200 for the balloon and an additional $25 for every hour the balloon is in the air

At how many hours will both balloon rides cost the same?



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**Total / 8**