Worksheet 3:

1.

1. This is a valid NFR, which could be tested by attempting to save and load each of the required file formats.
2. This is an invalid NFR, because a FoE can be created, so it is a FR.
3. This is an invalid NFR, because this does not specify image size, which would become a factor in making it impossible to have 1ms save time.
4. This is a valid NFR, which could be tested by attempting to save images of that size.
5. This is a valid NFR, which could be tested by timing how long it takes to “colour enhance” a 10 MP image on multiple PC specifications.
6. This is a valid NFR, which could be tested by running multiple machines and recording the number of crashes.
7. This is an invalid NFR, because it is a FR, due to a FoE being able to be written.
8. This is an invalid NFR, because the FoE can be written, meaning it is a FR.
9. This is a valid NFR, which can be tested by using human testers.
10. This is an invalid NFR, because it does not specify the size of the image, nor the computer specifications.

2.

1. The system must react and respond to objects on the road in 300 milliseconds or less.
2. The system must be able to analyse a word and be able to read it at an average of 200 milliseconds per word.
3. The system must solve an average two-sided mathematical equation within 20 milliseconds.

3.

1. A user must be able to regain control of the car within 1 action.
2. A user must be able to access their bank balance within 1 click.
3. A user should be able to use the system from >10m away, and at an average volume.

4.

1. The ROCOF of the system must be at most 1 critical failure per 50,000kms.
2. The ROCOF of the system must be at most 1 failure per 1,000,000 faces.
3. The MTBF of the system must be at least 6 months.