Flight Level 3 Quiz – Answer Key

1. Hot Air Balloons work because of the principle of:

Select one:

1. volume
2. temperature
3. density
4. mass
5. When the air inside a Hot Air Balloon heats up, what happens to the atoms?

Select one:

1. The atoms move slower
2. The atoms stick together
3. The atoms get bigger
4. The atoms move faster
5. Choose the correct formula for calculating density.

Select one:

1. Density = Volume/Mass
2. Density = Mass/Volume
3. Density = Volume/Temperature
4. Density = Mass x Volume – Temperature
5. John has a gel pen. The gel pen has a mass of 8g and a volume of 2cm3. What is the density of the pen?

Select one:

1. 4 g/cm3
2. 4
3. 16 g/cm3
4. 0.25 g/cm3
5. In order for a hot air balloon to rise, the air inside of the balloon needs to be \_\_\_\_\_\_\_\_\_ than the air outside of the balloon.

Select one:

1. more dense
2. less dense
3. When air is heated, it becomes \_\_\_\_\_\_\_.

Select one:

1. more dense
2. less dense
3. Warmer air \_\_\_\_\_, and cooler air \_\_\_\_\_\_.

Select one:

1. sinks; sinks
2. sinks; rises
3. rises; rises
4. rises; sinks
5. An object with more mass needs more \_\_\_\_ in order to rise.

Select one:

1. weight
2. lift
3. drag
4. gravity
5. Which of the following are aerostats?

**Circle YES or NO for each item.**

* Blimp YES NO
* Zeppelin YES NO
* Dirigible YES NO
* Airplane YES NO
* Hot Air Balloon YES NO

1. Which of the following are dirigibles?

**Circle YES or NO for each item.**

* Rigid Airship YES NO
* Airplane YES NO
* Zeppelin YES NO
* Hot Air Balloon YES NO
* Blimp YES NO