

Lab 2 Jan 19-23 Convert all of your photos from the previous lab into JPEG form, GIF form, and PNG form. Obviously if an image was already a JPEG, don't convert it to JPEG, just keep the original. You now have 15 images.

<https://www.adobe.com/express/feature/image/convert/jpg-to-png>

<https://cloudconvert.com/jpg-to-png>

<https://www.iloveimg.com/jpg-to-image/jpg-to-png>

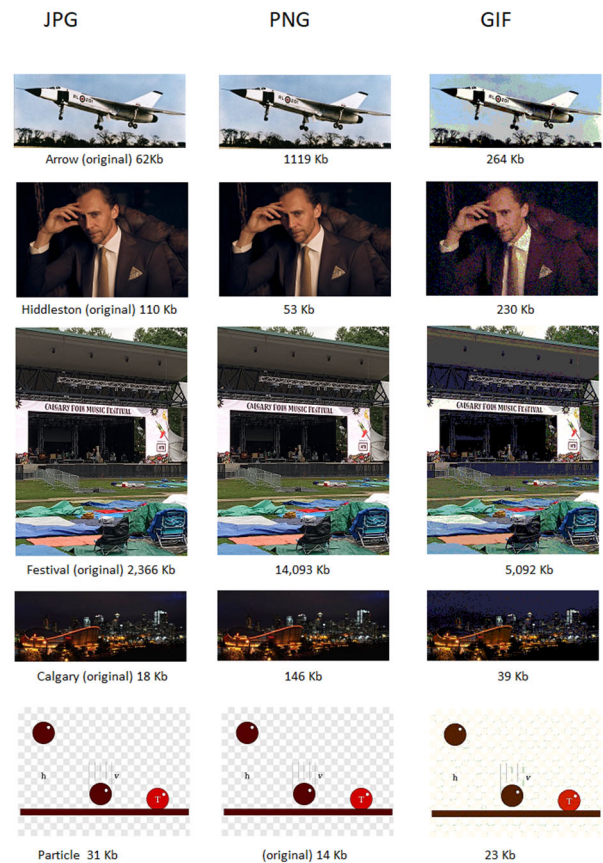
<https://onlinepngtools.com/convert-jpg-to-png>

1. **Compare the sizes.** Is there a pattern you can identify? Are JPEG images always smaller or larger than PNG or GIF? Calculate the percentage size differences between files of each type using JPEG as the standard (JPEG will be 100% or 1.0) and find an average size difference.

So if the JPEG image is 21Kb in size and the corresponding GIF image is 12Kb, then the percentage size change is $(12000/21000) = 0.57$. If this number is larger than 1 it means that the image is bigger than the corresponding JPEG version, and if smaller than 1 it means that the image is smaller than the corresponding JPEG.

2. **Compare the quality.** Expand a section of each image and see if you can detect differences between them, artifacts, or other problems. Describe these. When a JPEG is converted into a PNG do any quality issues disappear or appear? When a PNG is converted into a JPEG do any quality issues disappear or appear?

Sample hand-in:



Size:

	Arrow	Hiddleston	Festival	Calgary	Particle	
JPEG	62000	110000	2633000	18000	31000	2854000
	1.0	1.0	1.0	1.0	2.0	
PNG	1119000	53000	14093000	146000	14000	15425000
	1.8	1.77	5.35	8.1	1.0	
GIF	264000	230000	5092000	39000	23000	5648000
	4.26	2.1	1.9	2.2	0.7	

Differences:

JPEG is on the average 0.19 times the size of the same image as a PNG and 0.5 times a GIF

PNG is on the average 5.1 times the size of the same image as a JPEG and 2.7 times the size of a GIF

GIF is on the average 3 times the size of the same image as a JPEG and 0.37 times the size of a PNG

JPEG images tend to

PNG images usually ...

GIF images often