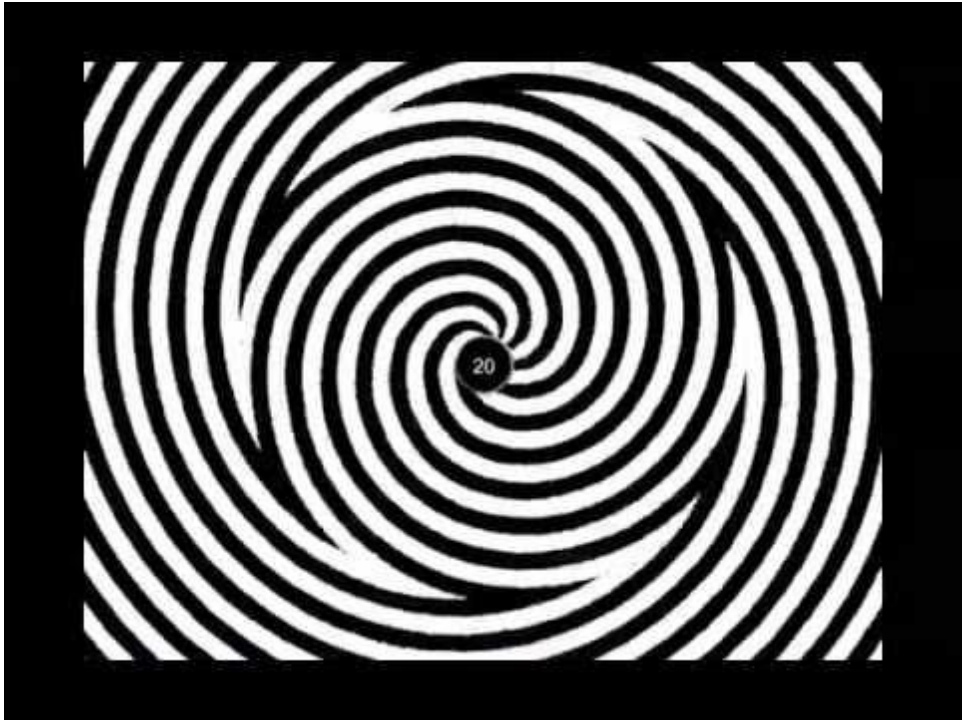
Question 1

How is is motion perception useful? Name 3 types of information about the world that can be cued by (provided from) motion in the retinal image.

Question 2

Watch the movie and stare at the number in the center of the video.

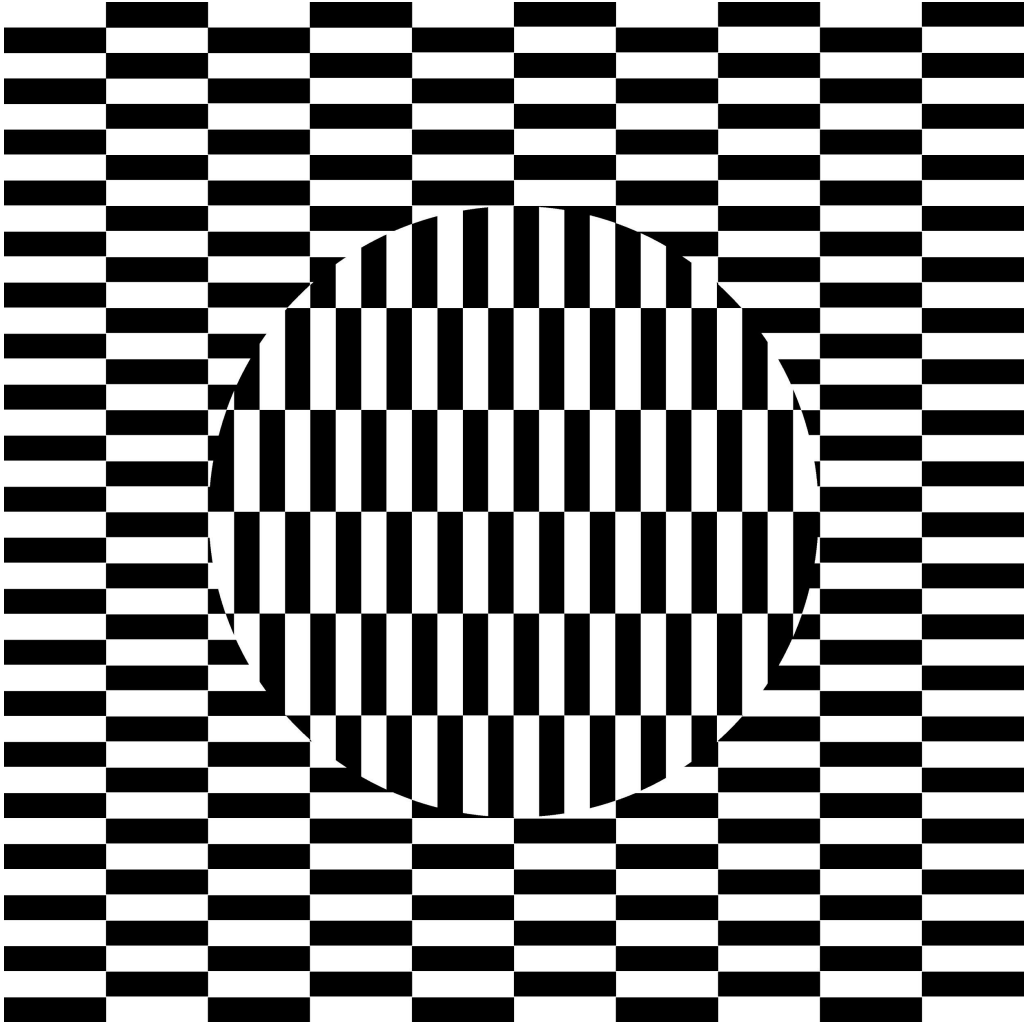
a) Describe what happens (what you perceive) at the end when the image of the cloud is displayed.
b) Why does the *motion aftereffect* happen?
c) Does the motion aftereffect transfer between eyes? If you adapt with one eye open, and then switch eyes to view the static image with the unadapted eye, is there an aftereffect?



Question 3

Do you see a jittering motion in the image to the right?

a) Explain the Ouchi effect and why this static image produces a sensation of motion?
b) What happens to your perception of an image if it is stabilized on (if it is totally stationary) your retina?



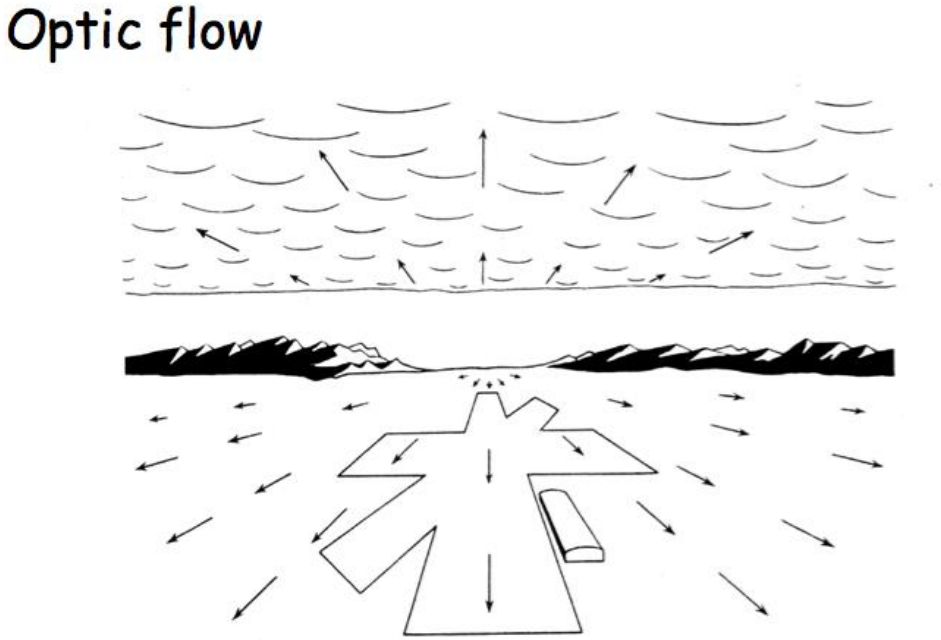
Question 4

a) Name two types of ***voluntary*** eye movements and describe the image motion that they produced on the retina.
b) Name one type of ***involuntary*** eye movement and describe the image motion that it produces on the retina.
c) Do we tend to notice motion produced by eye movements? Why or why not?

Question 5

To the right is an example of an illustration of a visual scene (the landing strip, mountains, and clouds) and an optic flow field overlaid on it (the arrows). This optic flow field is produced by forward motion.

a) Draw a simple visual scene that you might see as the passenger in the front seat of a car. Make 3 copies of this image.



Question 5

b) Onto the first copy of the image, draw an optic flow field that would be produced if you were turning sharply to the right. How is the optic flow field in the left half of the image similar to the optic flow field in the the right half of the image? How is the optic flow field in the left half of the image different than the optic flow field in the right half of the image?

c) Onto the second copy of the image, draw an optic flow field that you would see if the car was moving backward (but your head was pointed forwards). How is the optic flow field in the left half of the image similar to the optic flow field in the the right half of the image? How is the optic flow field in the left half of the image different than the optic flow field in the right half of the image?

d) Onto the third copy of the image, draw an optic flow field that you would see if the car was moving forward on a curved path to the left. How is the optic flow field in the left half of the image similar to the optic flow field in the the right half of the image? How is the optic flow field in the left half of the image different than the optic flow field in the right half of the image?

Optic flow