

MAKING THINGS LIVELY!

ANIMATION PRINCIPLES

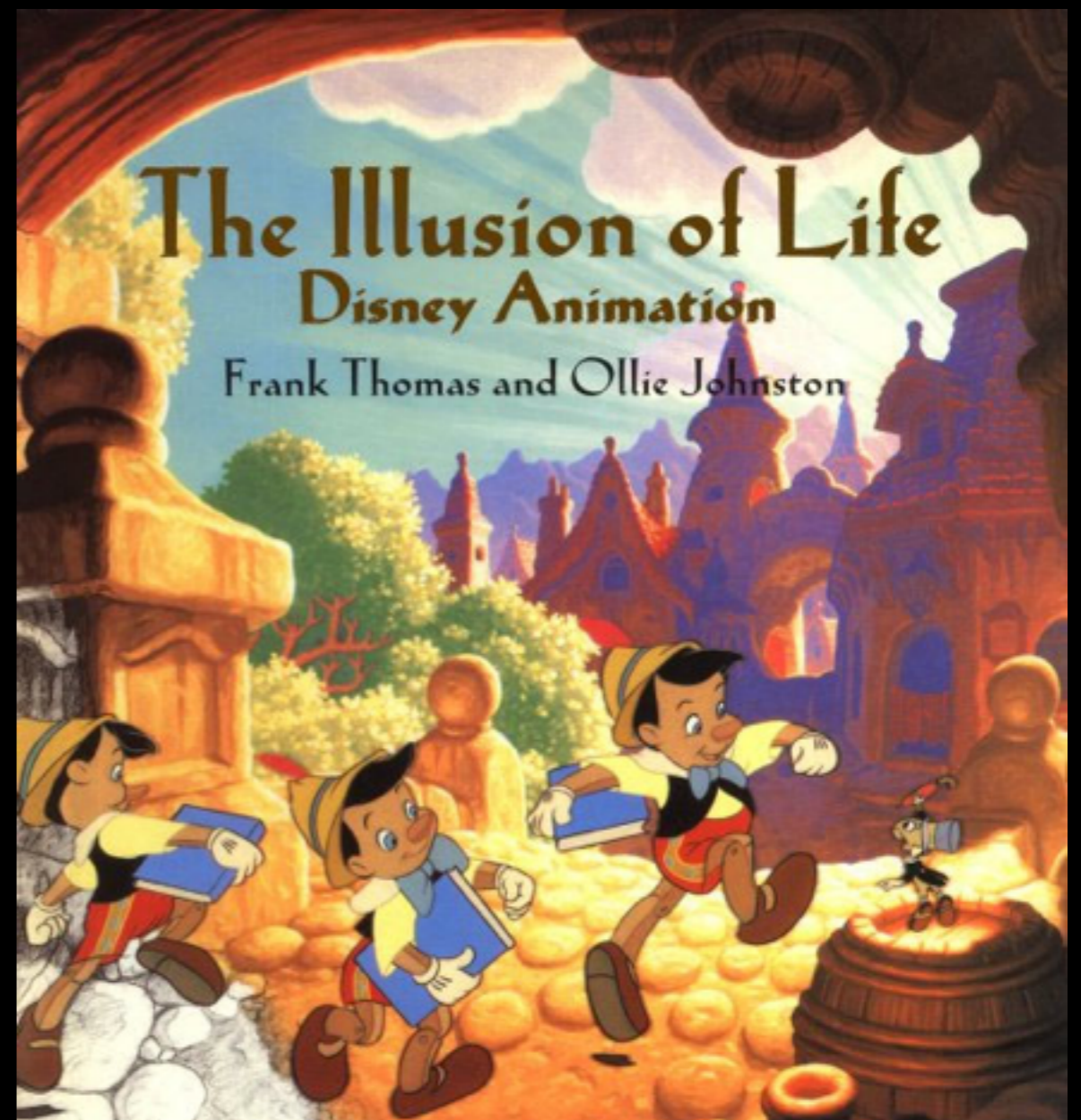


Hedgehog in the Fog, Yuri Norstein, 1975

ANIMATION PRINCIPLES, REVISED

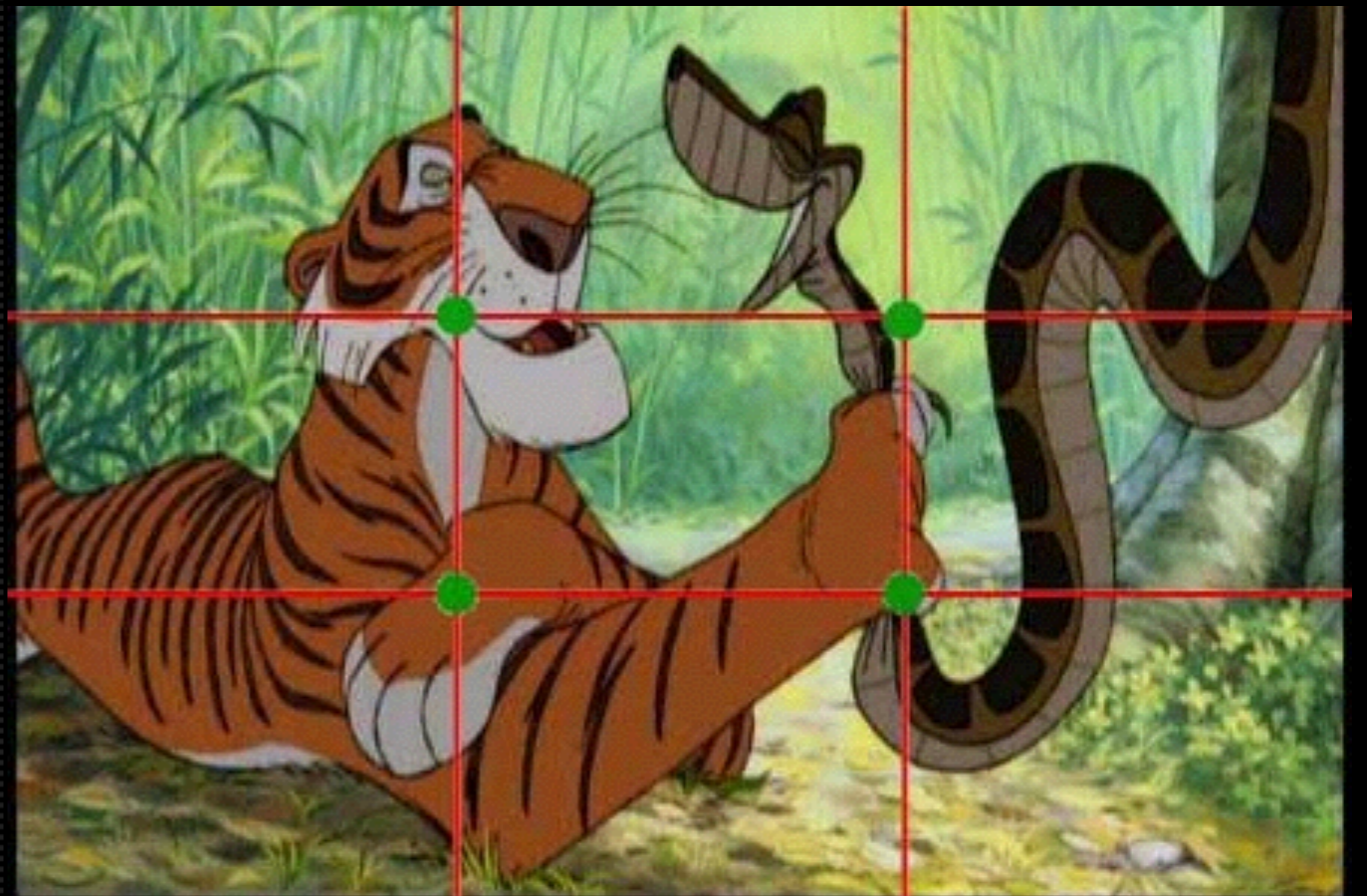
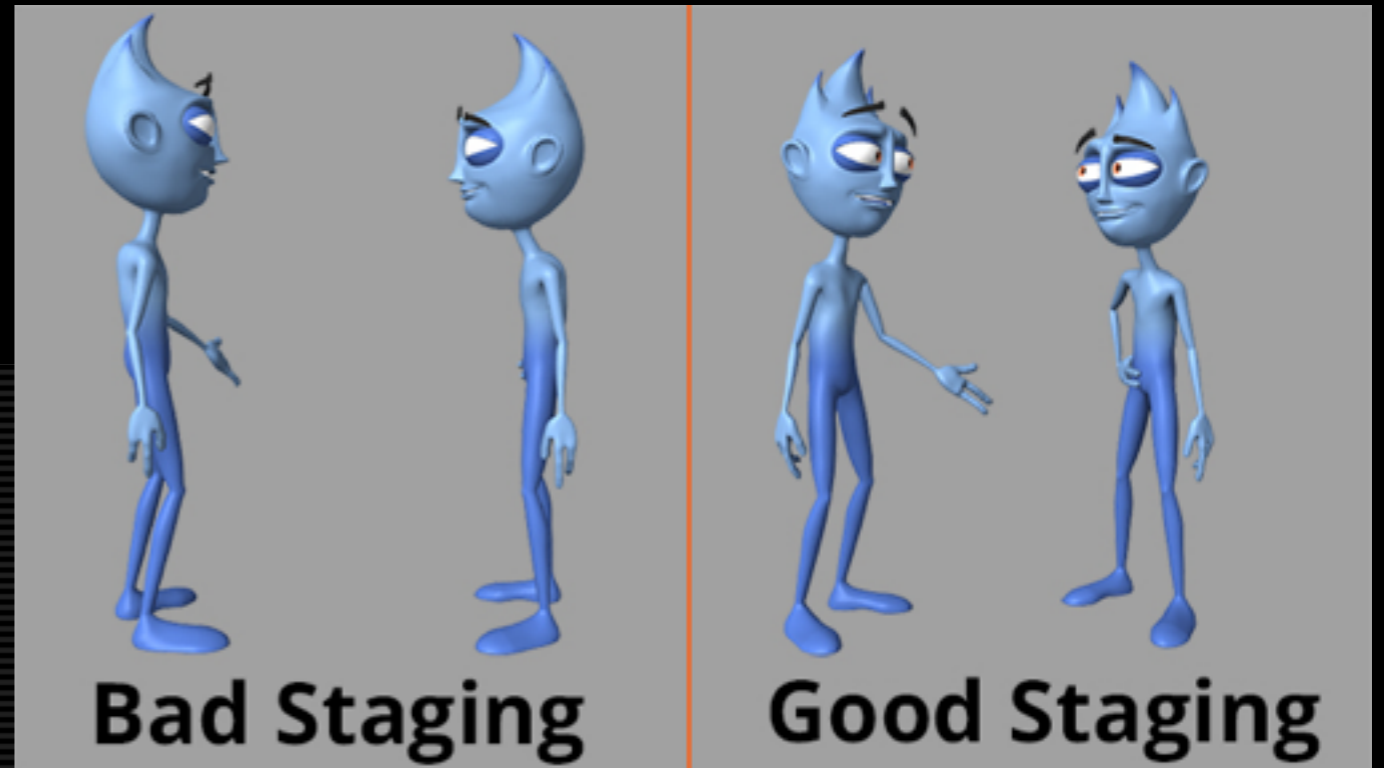
Disney's Twelve Basic **Principles** of **Animation** is a set of **principles of animation** introduced by the Disney animators Ollie Johnston and Frank Thomas in their 1981 book **The Illusion of Life.**

Most of these principles hold true for cut-out and other animation styles. I've adapted them specifically for cut-outs.



Staging

Staging is presenting an action or item so that it is easily understood.



Rule of thirds

STAGING: PLANNING ACTION

In general, it is important that action is presented one item at a time. If too much is going on the audience will be unsure what to look at and the action will be "upstaged". Focal length and shot composition also help good staging.

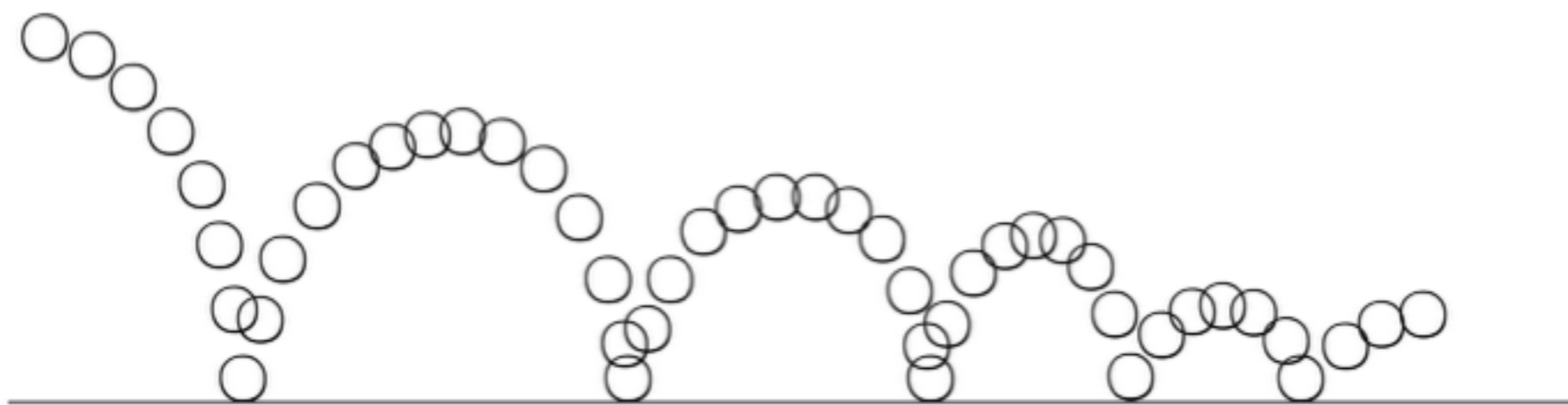
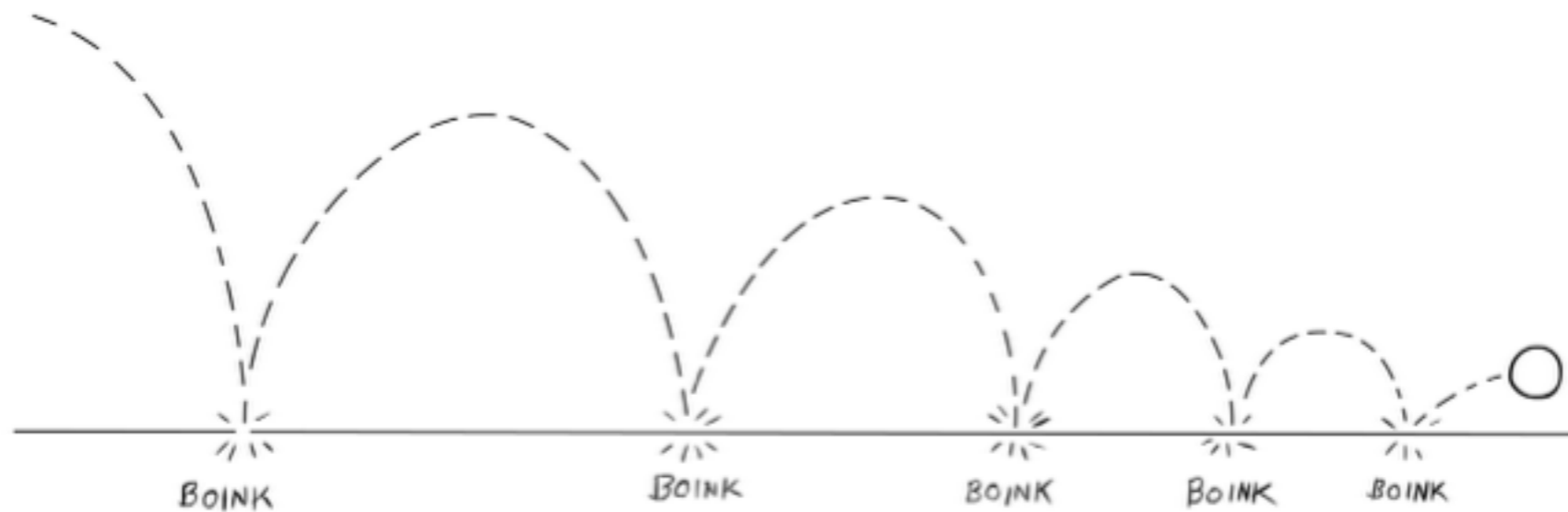


Where do you focus?



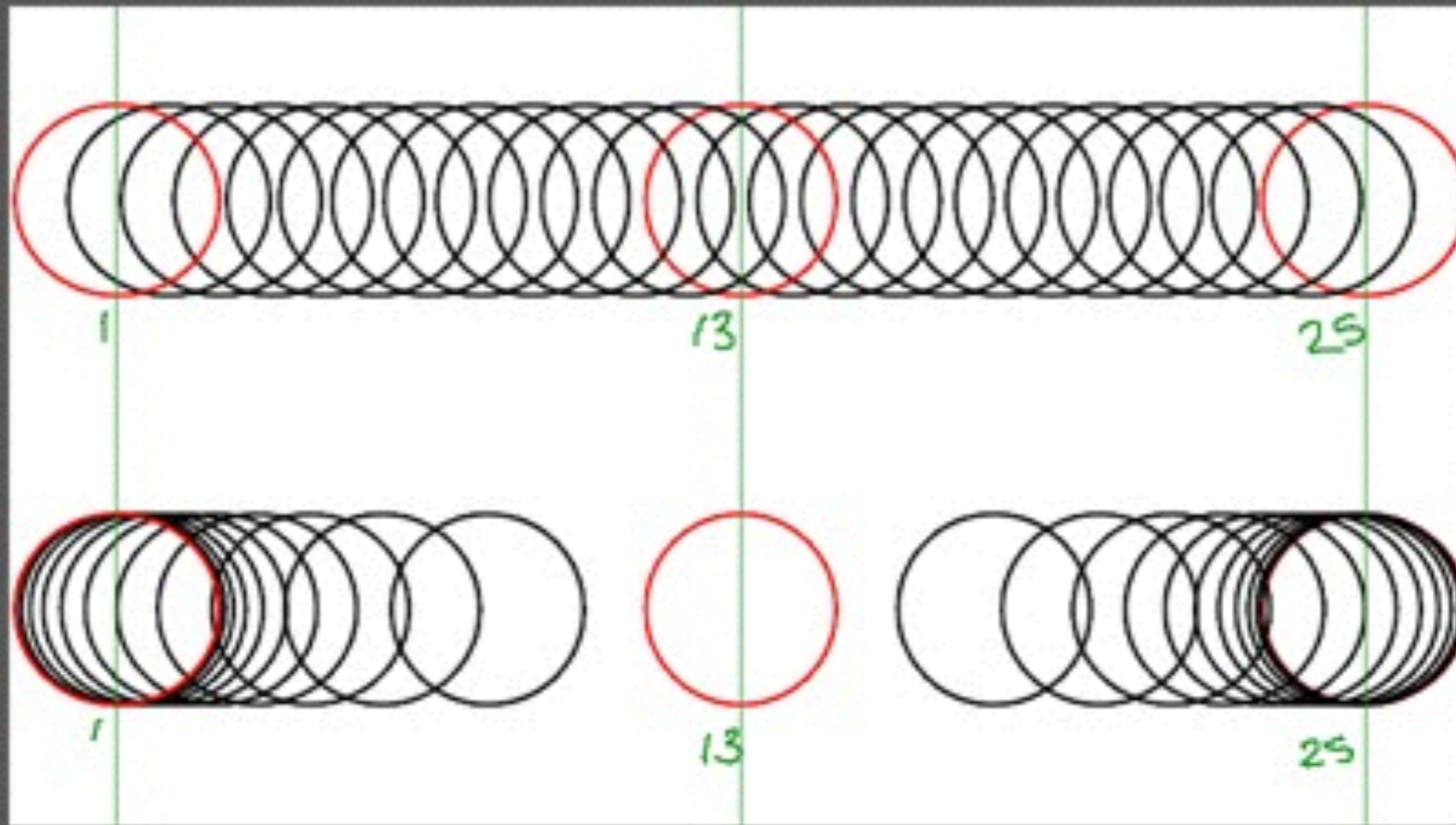
Focus point is clear.

Timing & Spacing



Ease-in and Ease-out

(aka slow in and slow out)

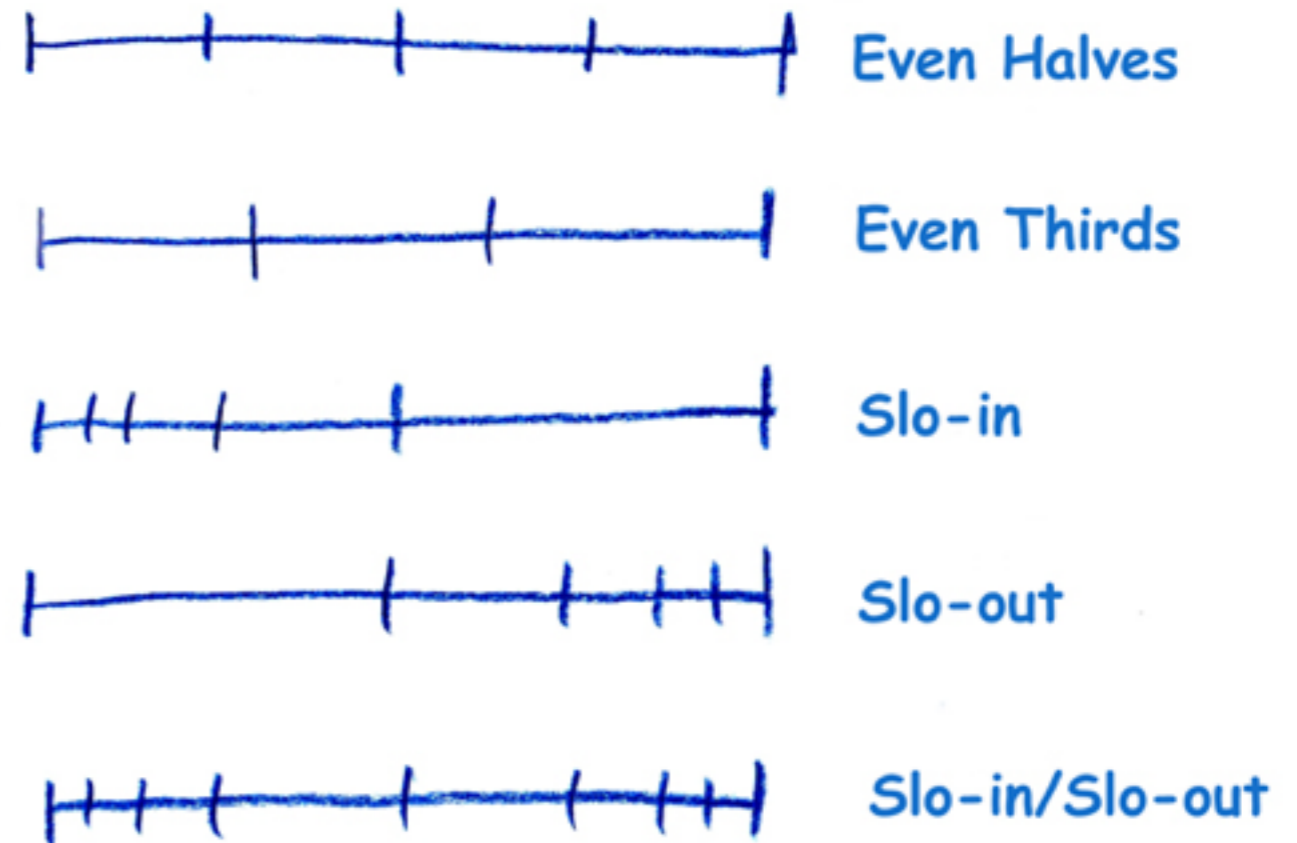


same Timing / different Spacing

PLAN YOUR TIMING AND SPACING

- plan your path of action
- plan for any acceleration or deceleration: ease-in and/or ease outs
- you can make planning marks along the outside of your animation, or use a layover grid in OSnap! to help guide your moves

Timing & Spacing

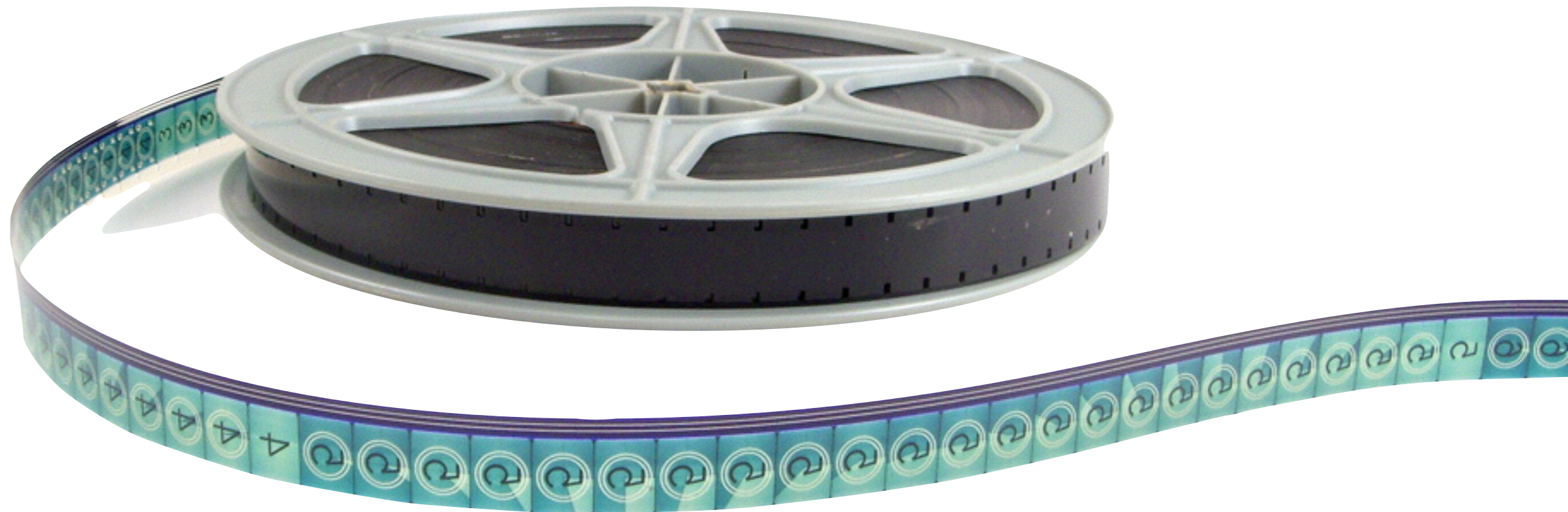


DO NOT BUNCH UP YOUR
INBETWEENS ANYWHERE ALONG
THE PATH OF ACTION

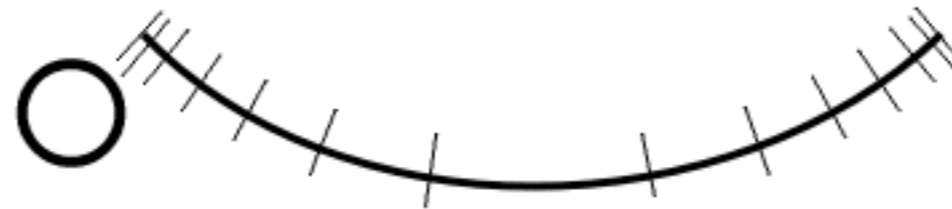
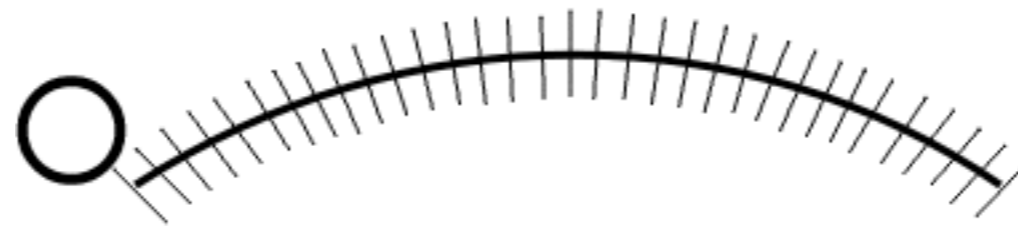


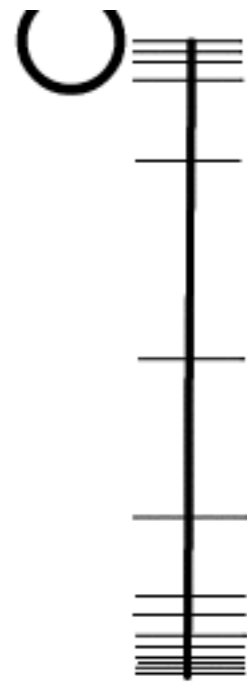
THE MATH OF ANIMATION

- 16 mm film has 24 frames in one second. 24 fps.
- to save time, many animators shot "on two's."
- 12 images in one second. 12 fps.

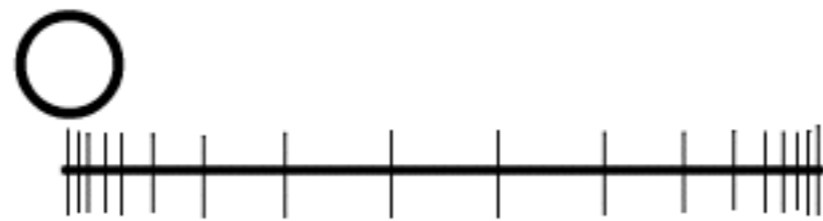


Creating meaning through spacing and timing:

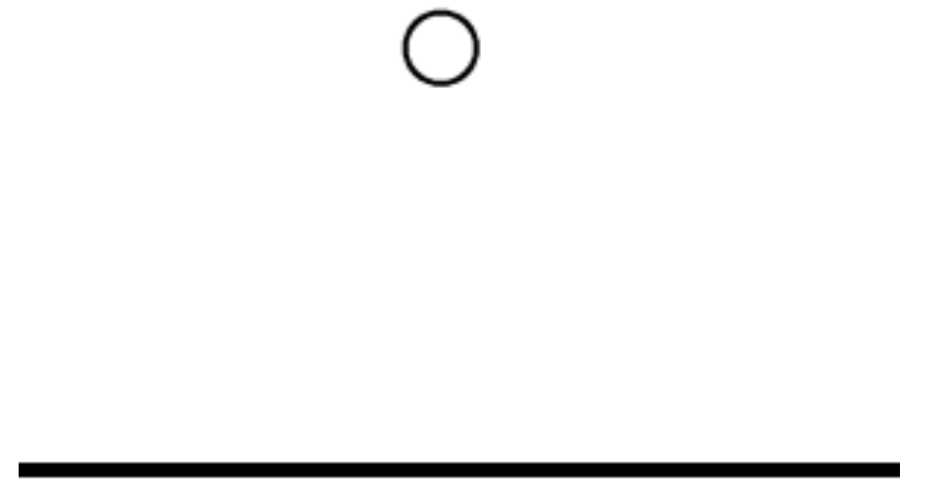




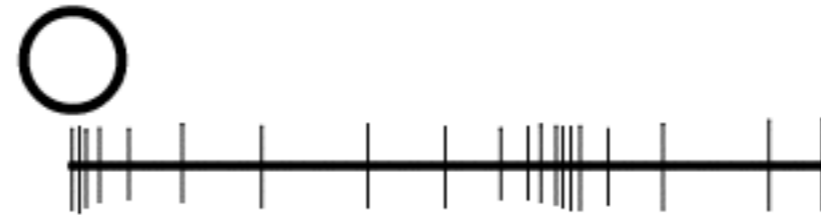
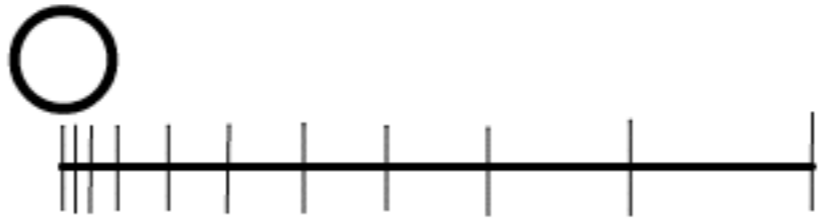
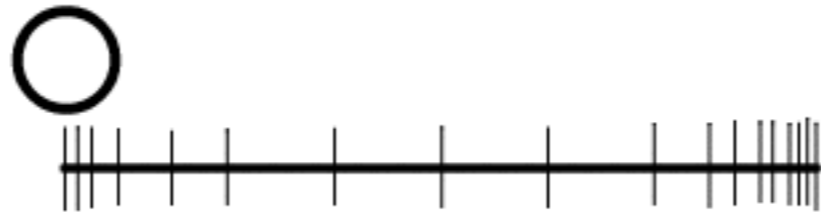
yoyo



handsaw

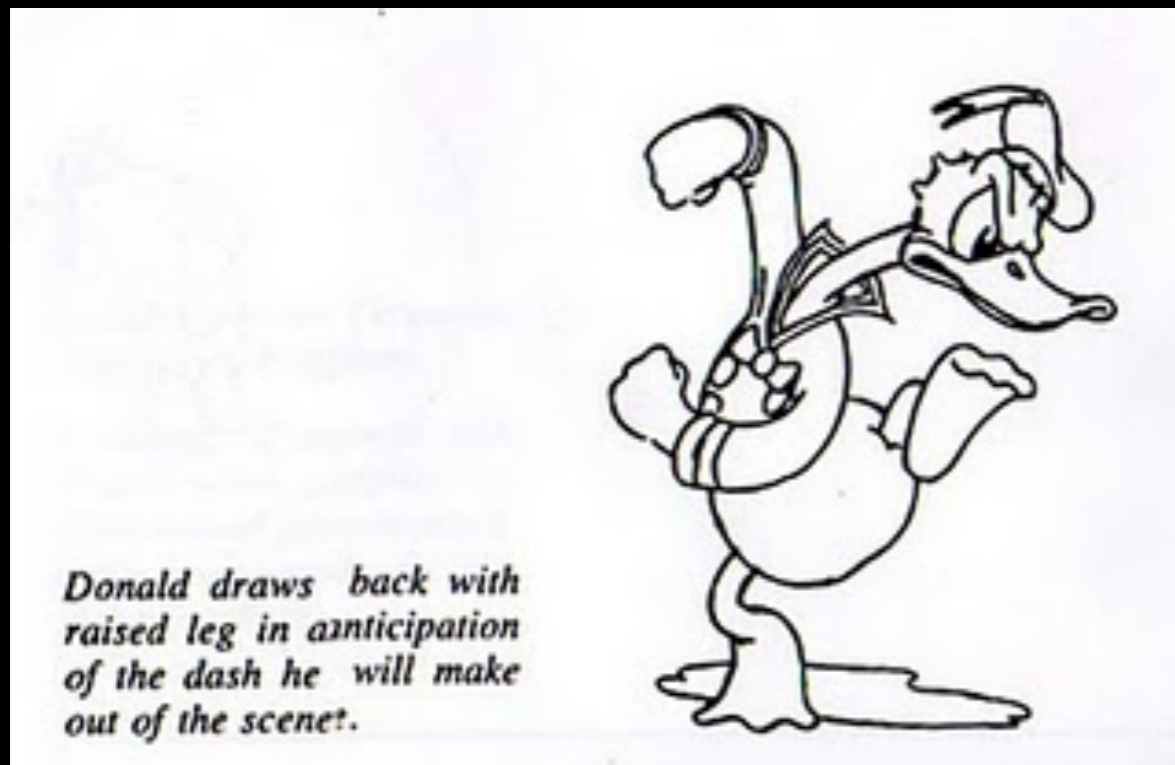


bounce



Anticipation:

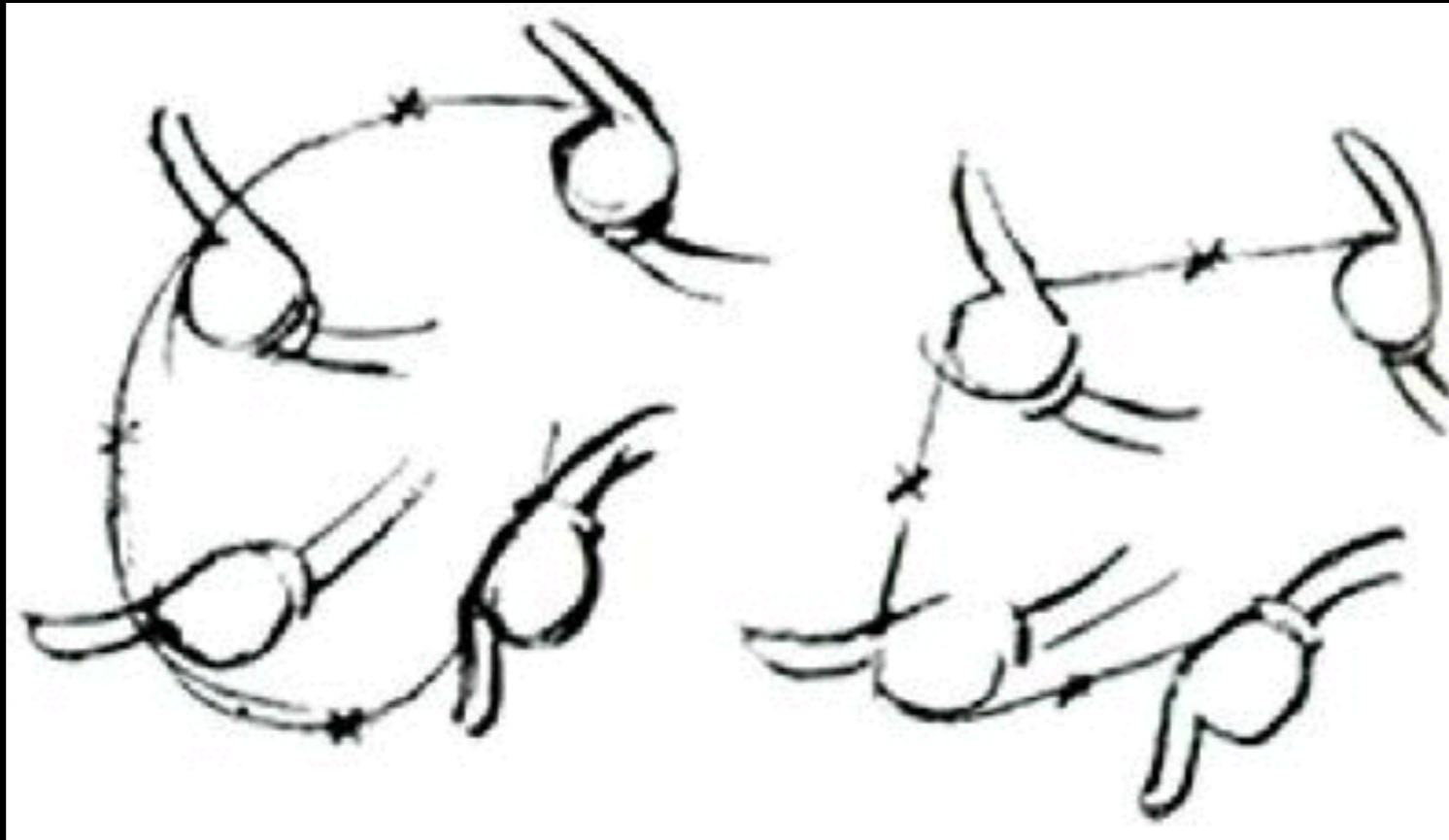
the wind-up, tells the audience something is going to happen



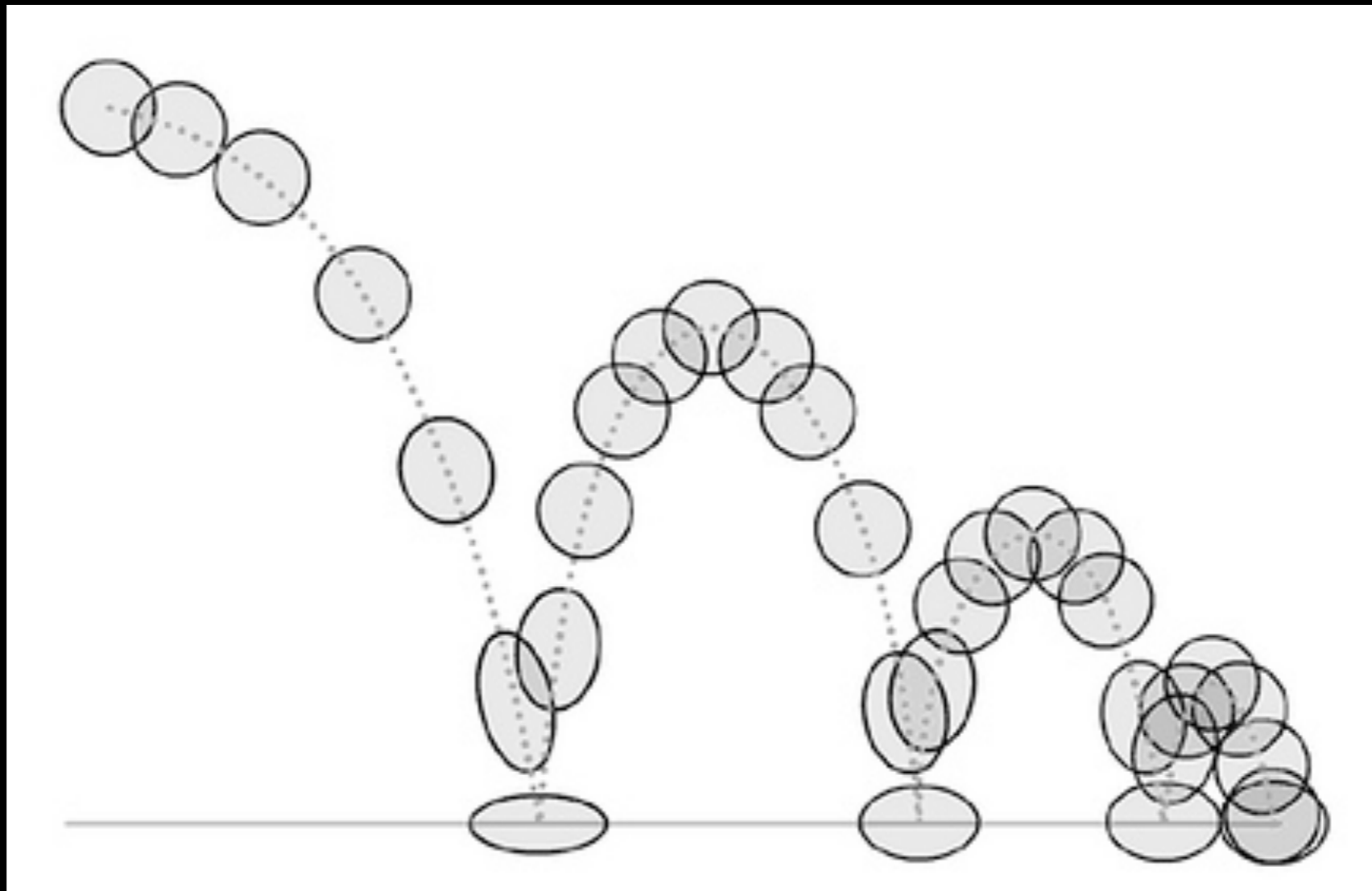
Reaction:

the follow-through, reinforces the impact of the action.

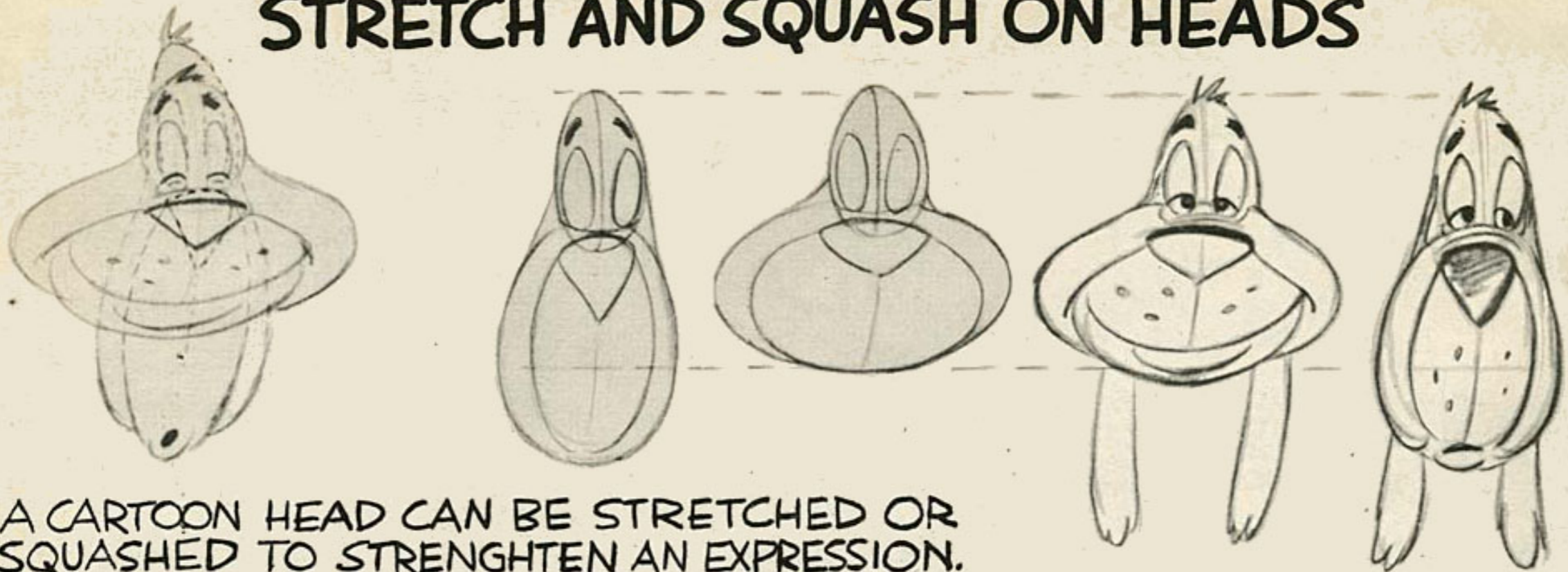
Arcs



Squash & Stretch



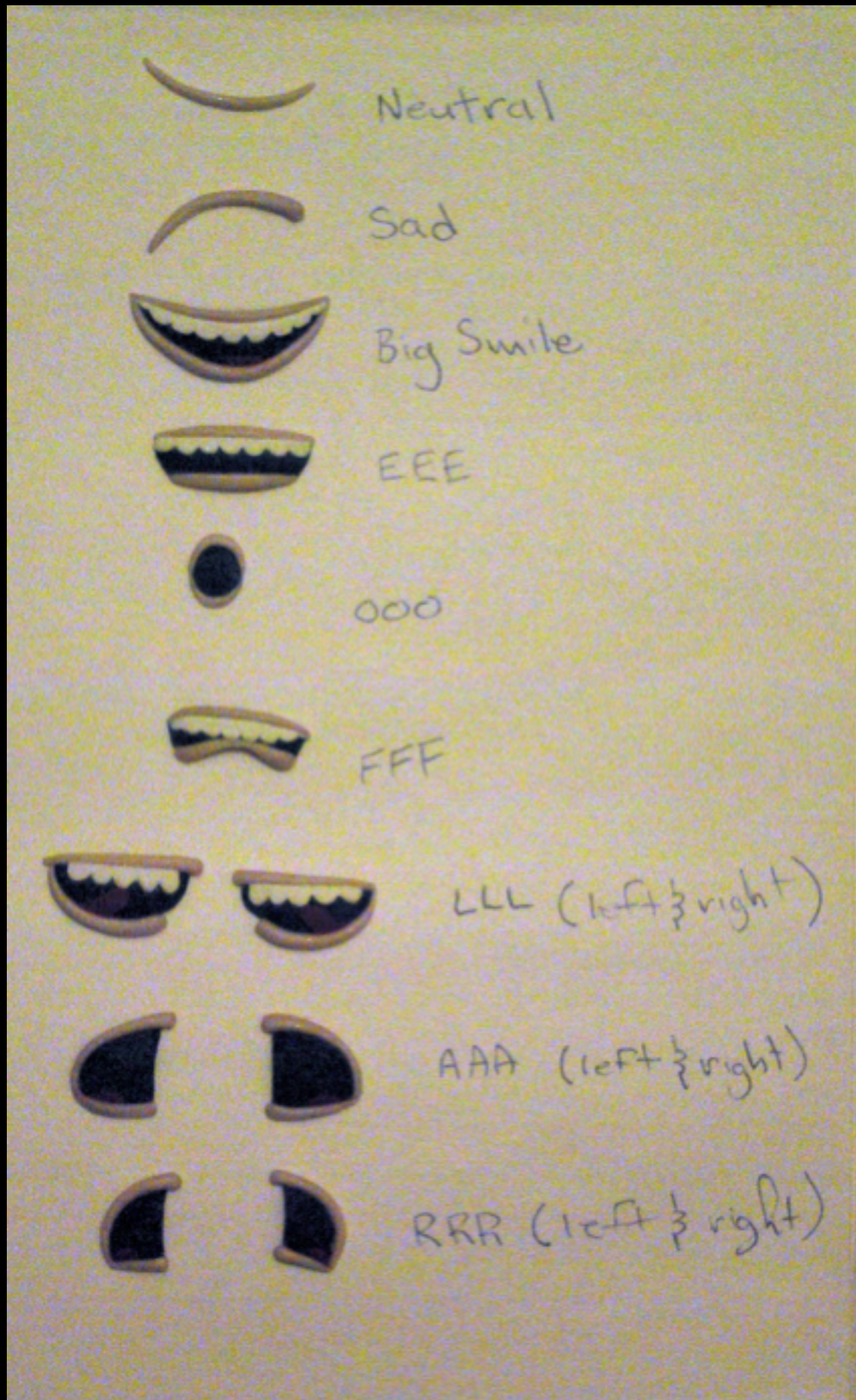
STRETCH AND SQUASH ON HEADS



A CARTOON HEAD CAN BE STRETCHED OR SQUASHED TO STRENGTHEN AN EXPRESSION.
..YOU WILL NOTICE THAT THE OVAL CONTAINING THE EYES DOES NOT CHANGE GREATLY.-MOST VARIABLE IS MOUTH AREA..
.. SMALL DETAILS ALSO RE-ACT LIKE THE LARGE FORM IN WHICH THEY ARE IN.

Squash and stretch can be tricky with cut-out animation, but with **replacement animation** you can try it in selected places by cutting out different shapes.

Replacement Animation



Exaggeration





Appeal



Here's a digitally animated example of the Animation Principles.