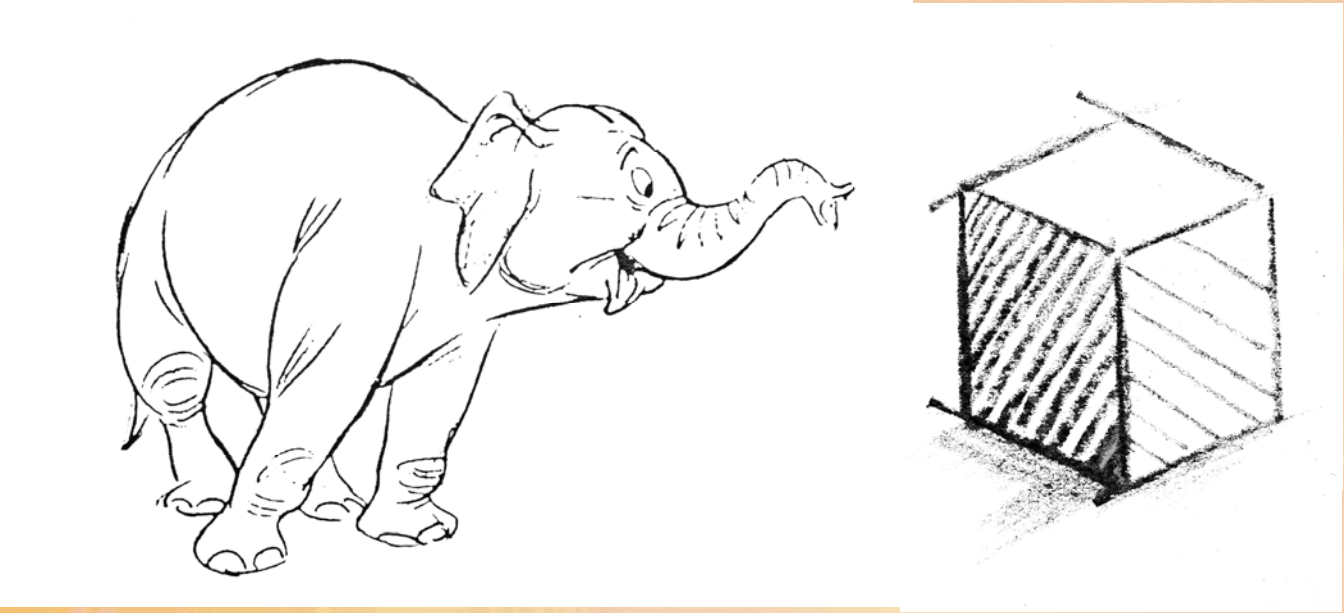
Animation Concepts

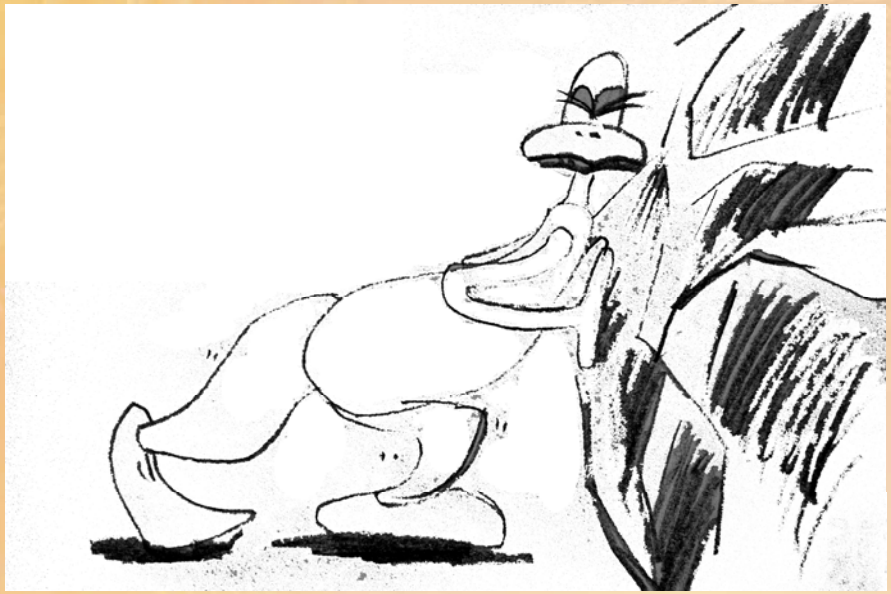
disusun oleh: Nuryadi

Newton's Laws of Motion

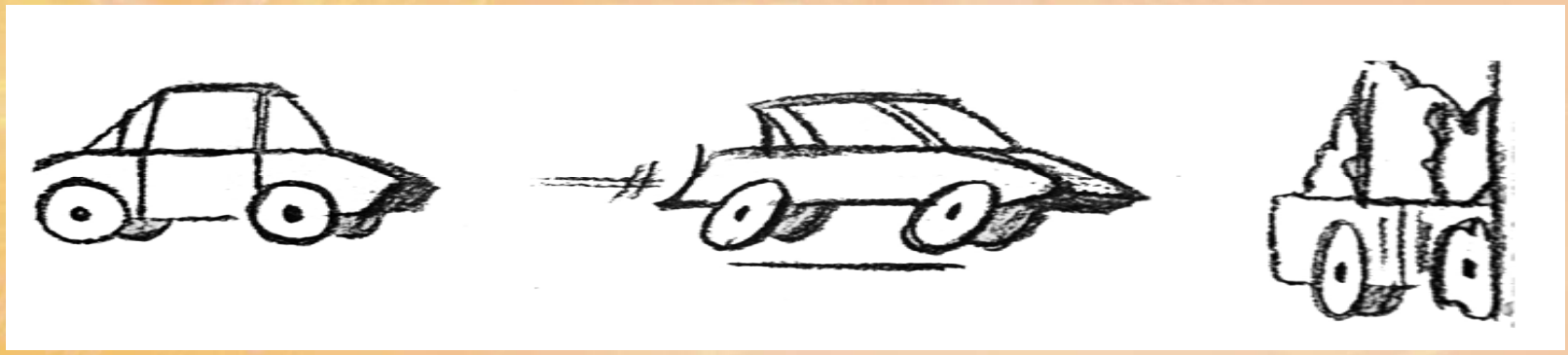
- Setiap objek mempunyai berat dan tidak akan bergerak jika tidak digerakkan



- Semakin besar berat objek, maka semakin besar tenaga yang diperlukan untuk menggerakkannya



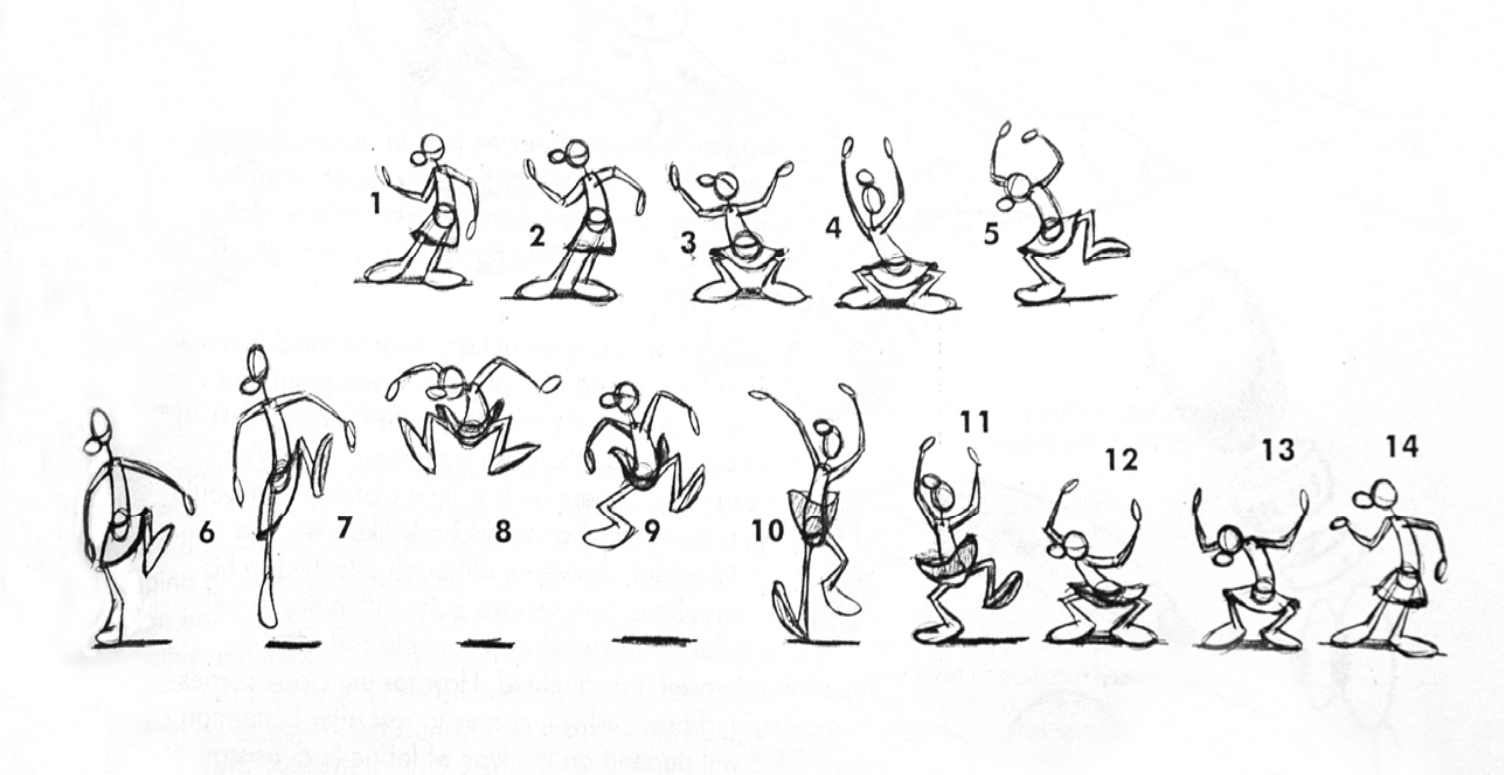
- Saat objek mulai bergerak maka ia terus bergerak kecuali di stop oleh sesuatu atau berhenti secara perlahan-lahan oleh gesekan



Konsep Animasi

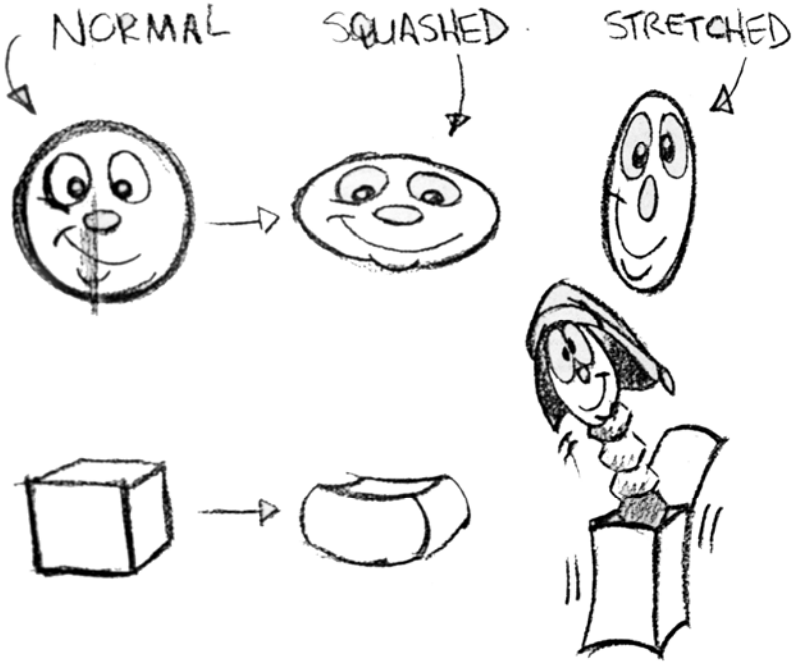
- **Overlapping Action**

  Saat sebuah objek berhenti, maka tidak semua bagian dari objek tersebut langsung berhenti



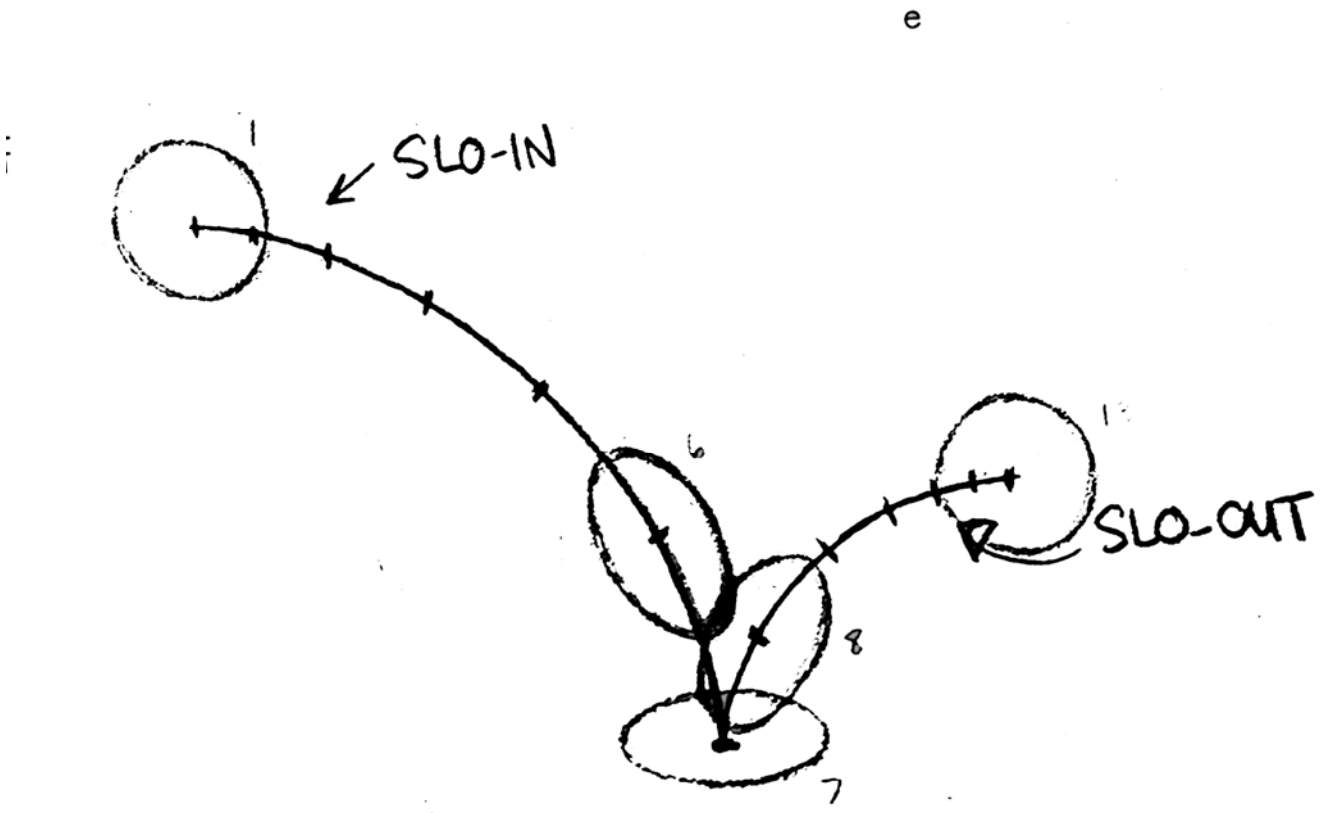
- **Squash and stretch**

  Prinsipnya adalah saat objek mengenai sesuatu maka bentuknya akan berkesan terhimpit (squash), kemudian ia akan terentang (stretch). Konsep dari animasi Disney adalah karakter karton mempunyai sifat elastis seperti karet saat mereka bergerak. Animasi merupakan seni dalam melebih-lebihkan (exaggerating) gerakan.



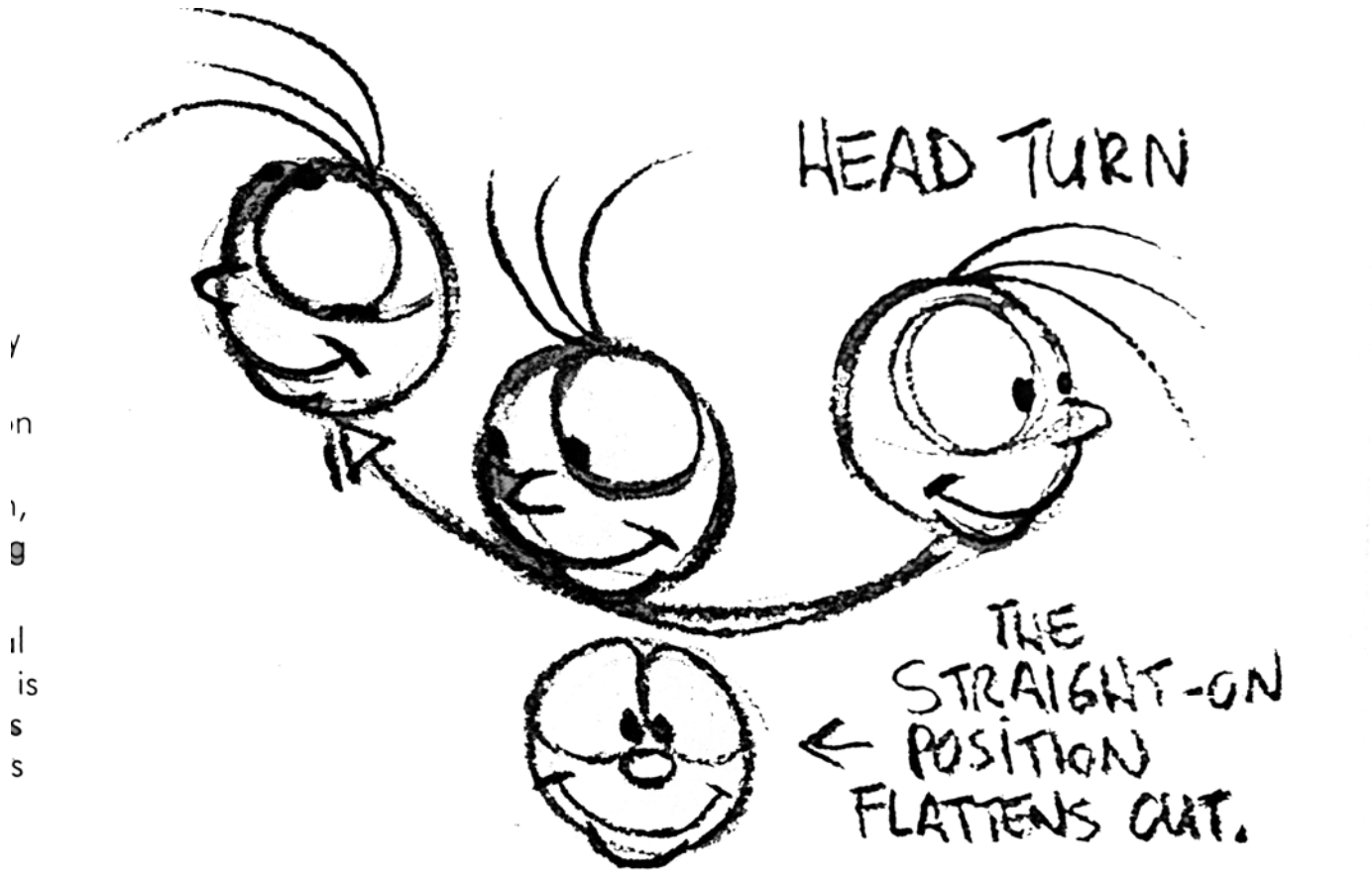
- **Slow in and slow out**

  Objek bergerak secara gradual mulai dari pelan – kencang.



- **Moving in arc**

  Gerakan objek mengikuti kurva parabola.

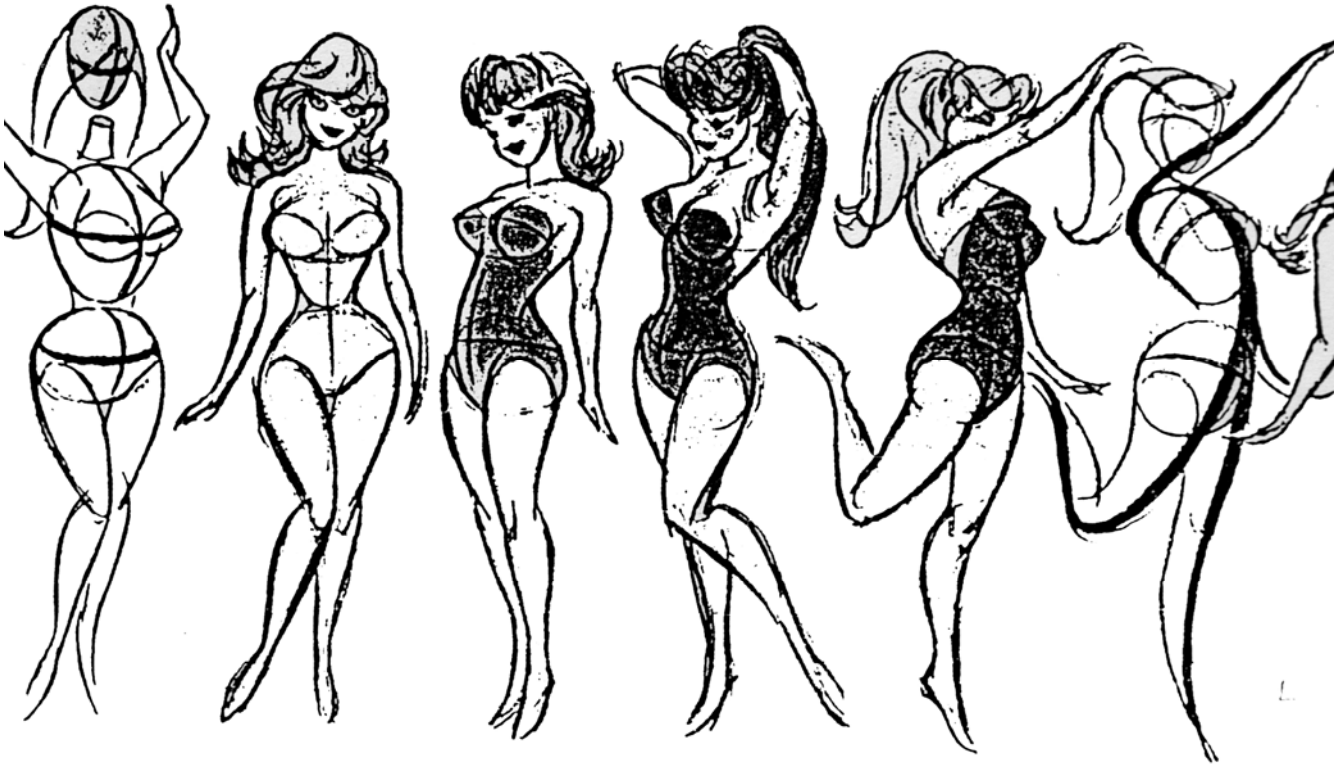


- **Anticipation**

  Dalam animasi kita mengatur waktu dan langkah dari karakter/objek. Untuk mendramatik suatu adegan perlu di buat suatu langkah sebelum adegan/langkah berikutnya terjadi

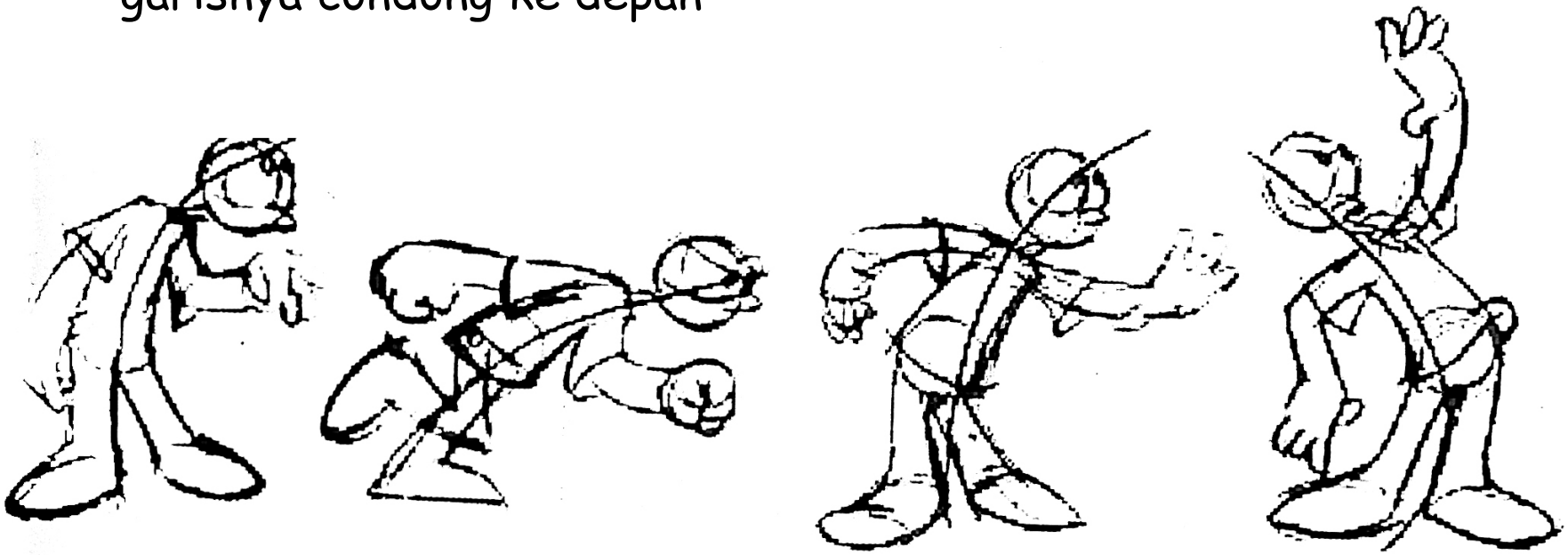
- **Staging & posing**

  Sebuah karakter memerlukan koregrafi dalam menentukan gerakannya agar dapat terlihat ekspresinya.

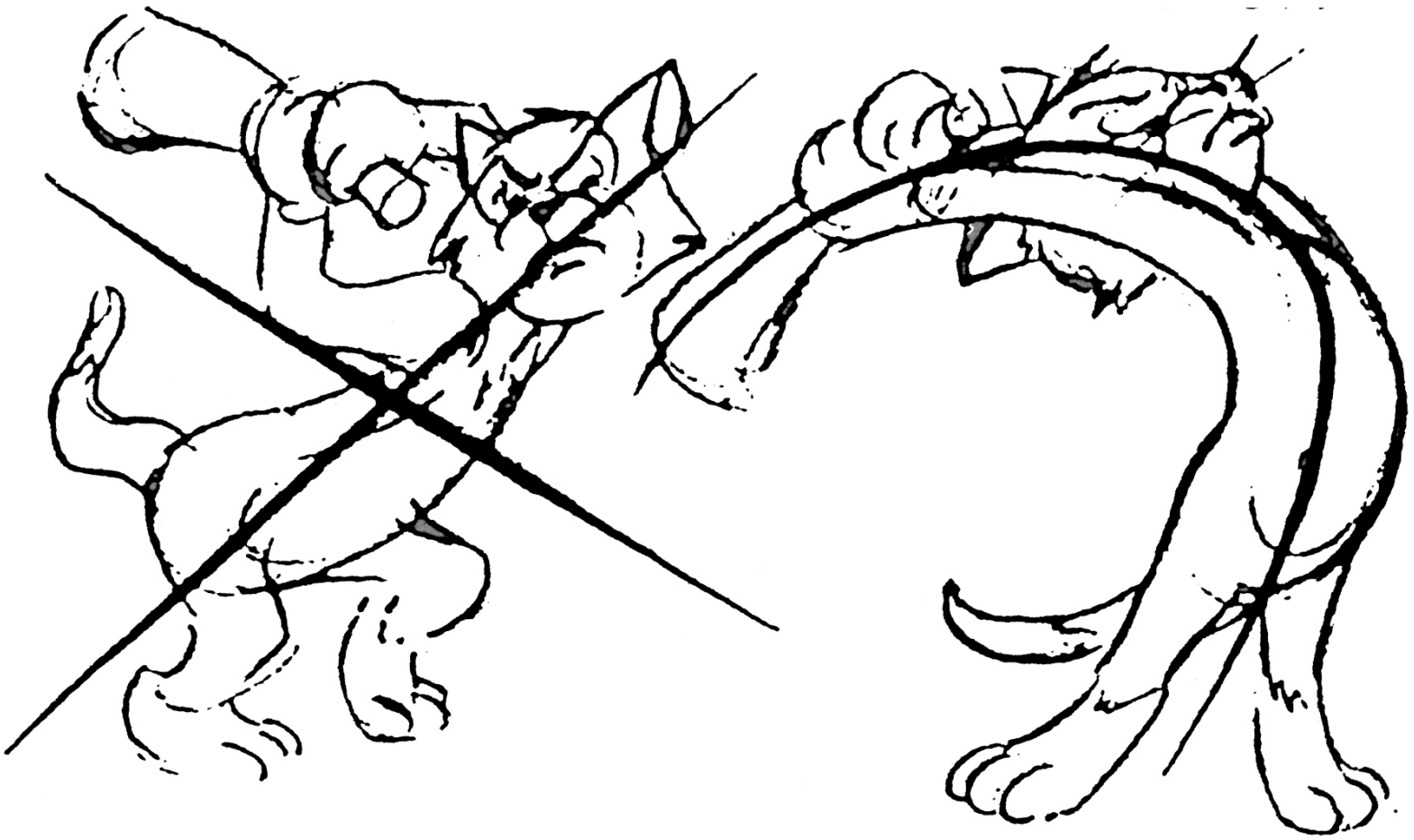


Line in action

Dalam membuat gerakan (action) perlu dibuat garis dasar gerakan. Jika gerakannya ke arah depan maka garisnya condong ke depan



salah **benar**



Kesimpulan

- Teknik animasi tradisional/gambar tangan selalu mengikuti hukum Newton dalam "menghidupkan karakternya"
- Dengan perkembangan media digital,hukum Newton tetap diterapkan agar karakter yang dibuat tampil secara natural.
- Untuk media komputer animasi kadang disebut sebagai in between artist (membuat pose-pose diluar pose awal dan akhir).

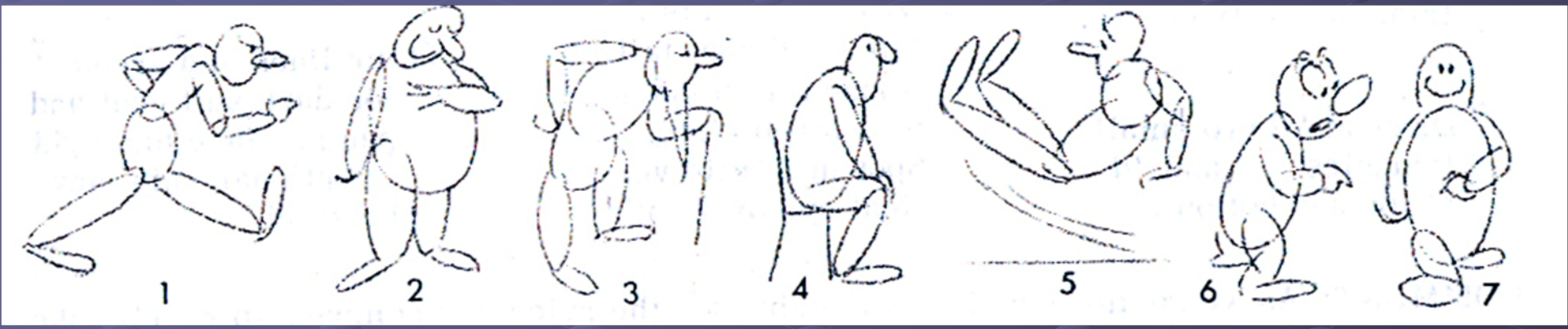
Daftar pustaka:

- Walter Foster, Story Cartoons
- Marcia Keperberg, A guide to computer animation for TV, games, multimedia & web, focal press 2002

TUGAS 2

- Buatlah sebuah karakter bisa orang atau hewan, benda (dalam gambar cartoon) di kertas gambar A3 dengan pensil
- Buat dengan 2 Key frame dan 8 in between

  Untuk mempermudah Anda perlu membuat keyframe atau pose awal dan pose akhir. Selanjutnya diisi dengan pose diantara awal dan akhir (in between frame)
- Karakter tersebut dibuat sedang melakukan sesuatu (in action)
- Dikumpulkan pada asisten selesai perkuliahan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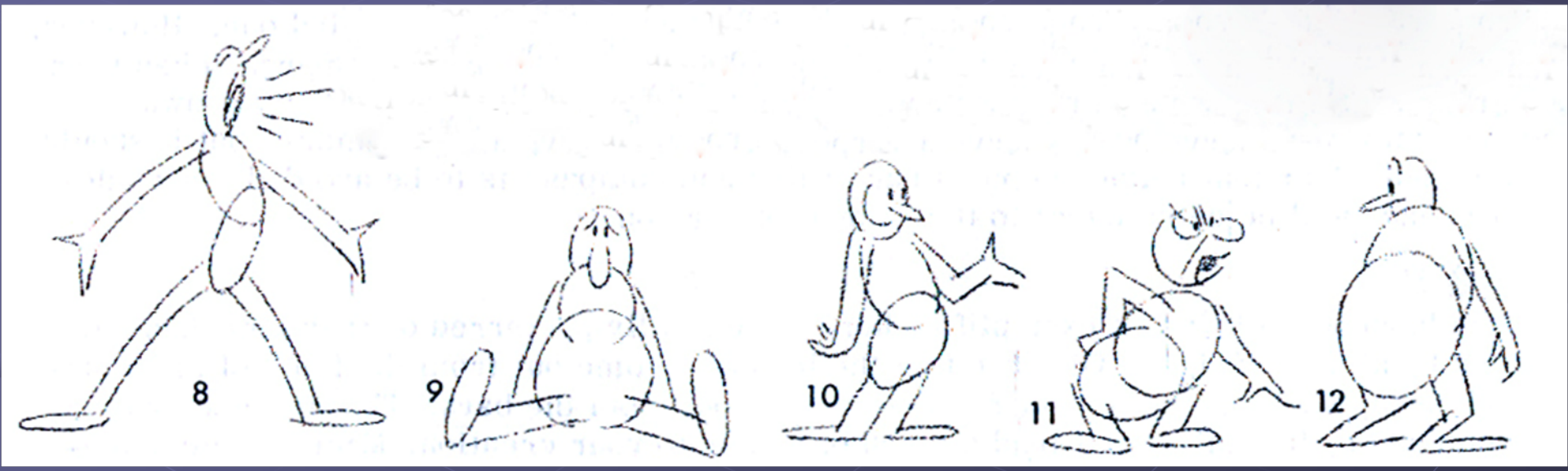
8
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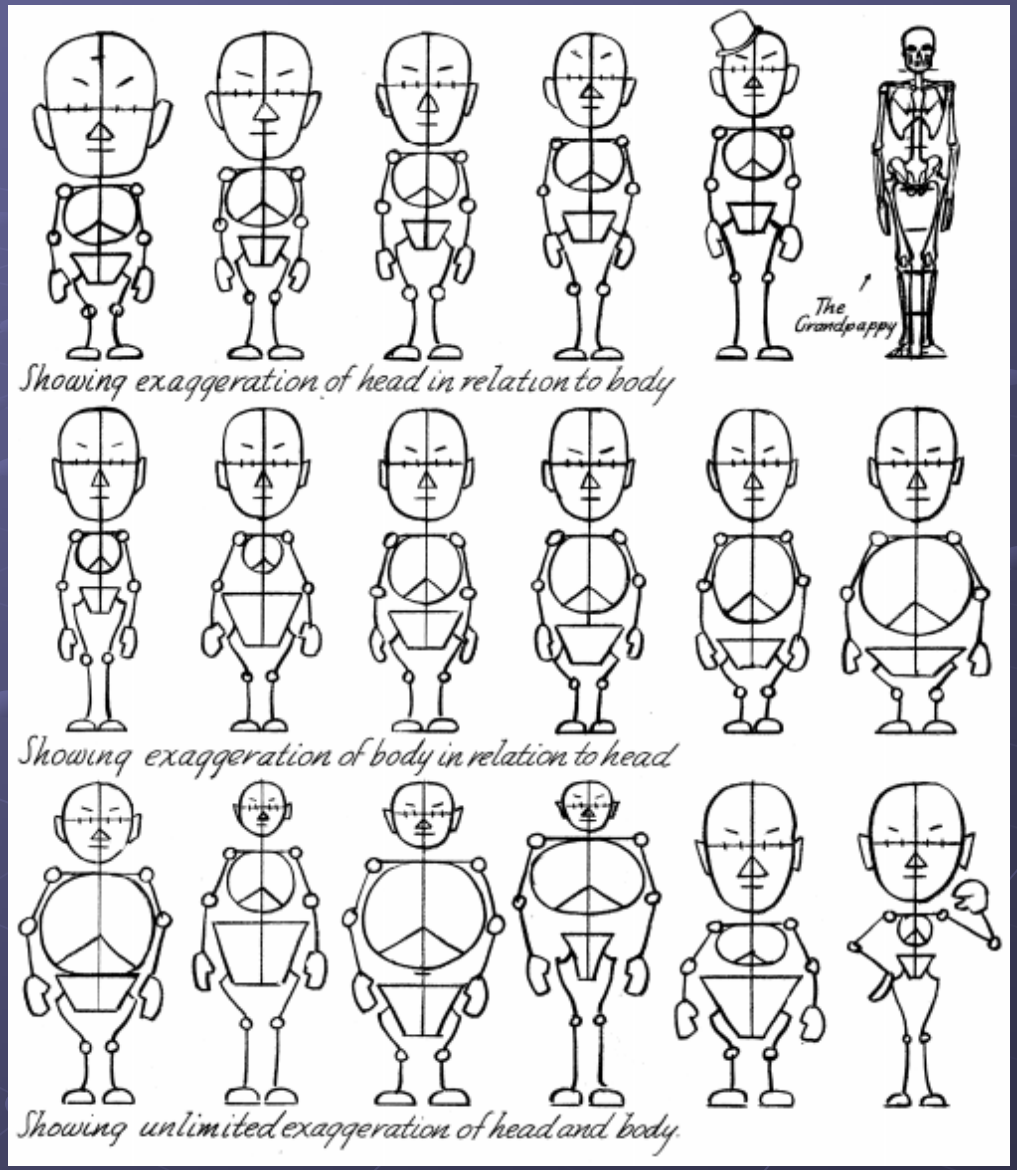
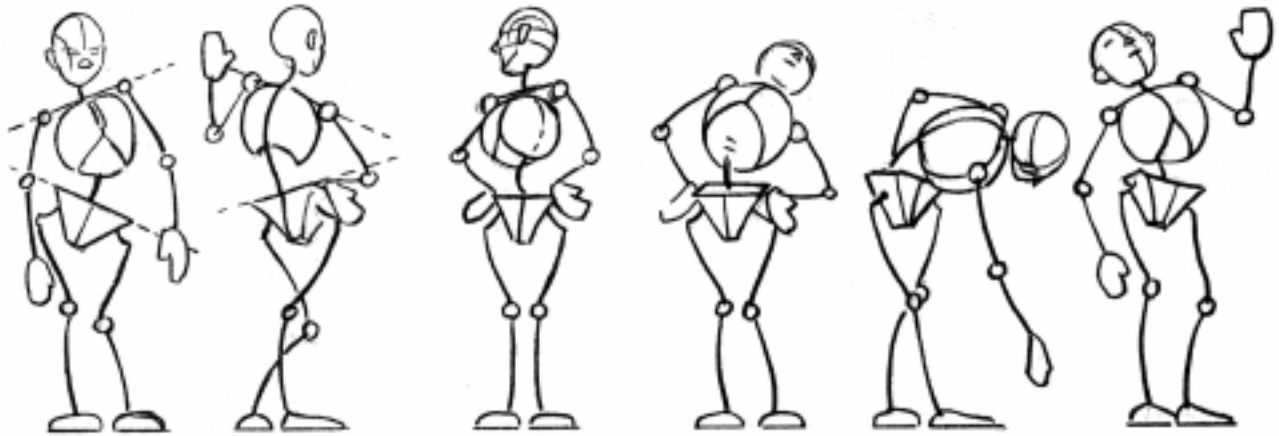
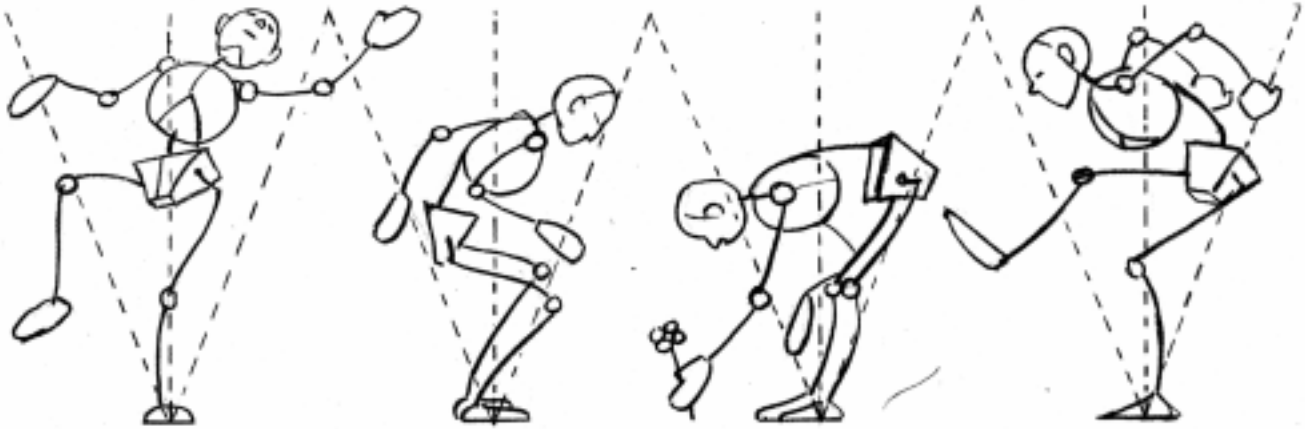
As he was
As he will be


1
The Grandpappy
Showing exaggeration of head in relation to body
Showing exaggeration of body in relation to head
Showing unlimited exaggeration of head and body

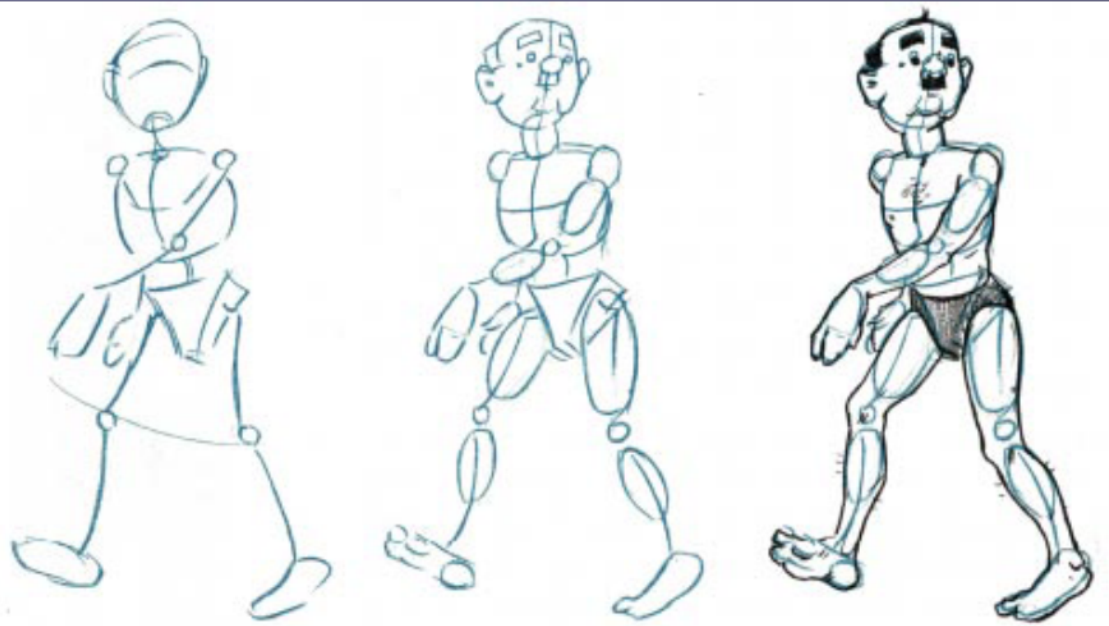
The head can take any position of the ball and plane. See page 39.



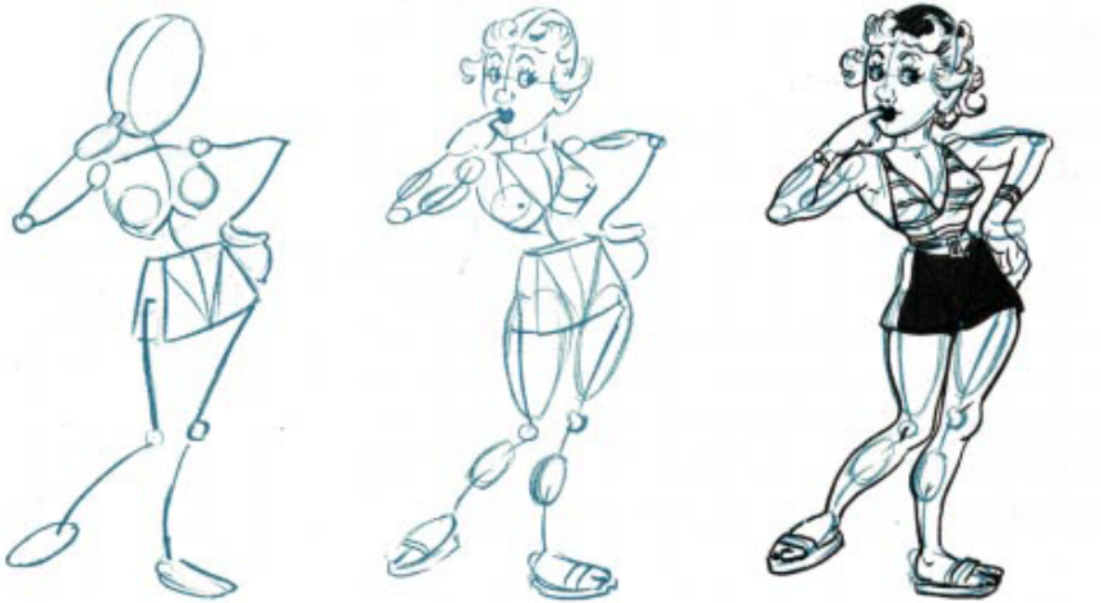
Movement of the shoulders, hips, spine and pelvis. Twisting. Bending.



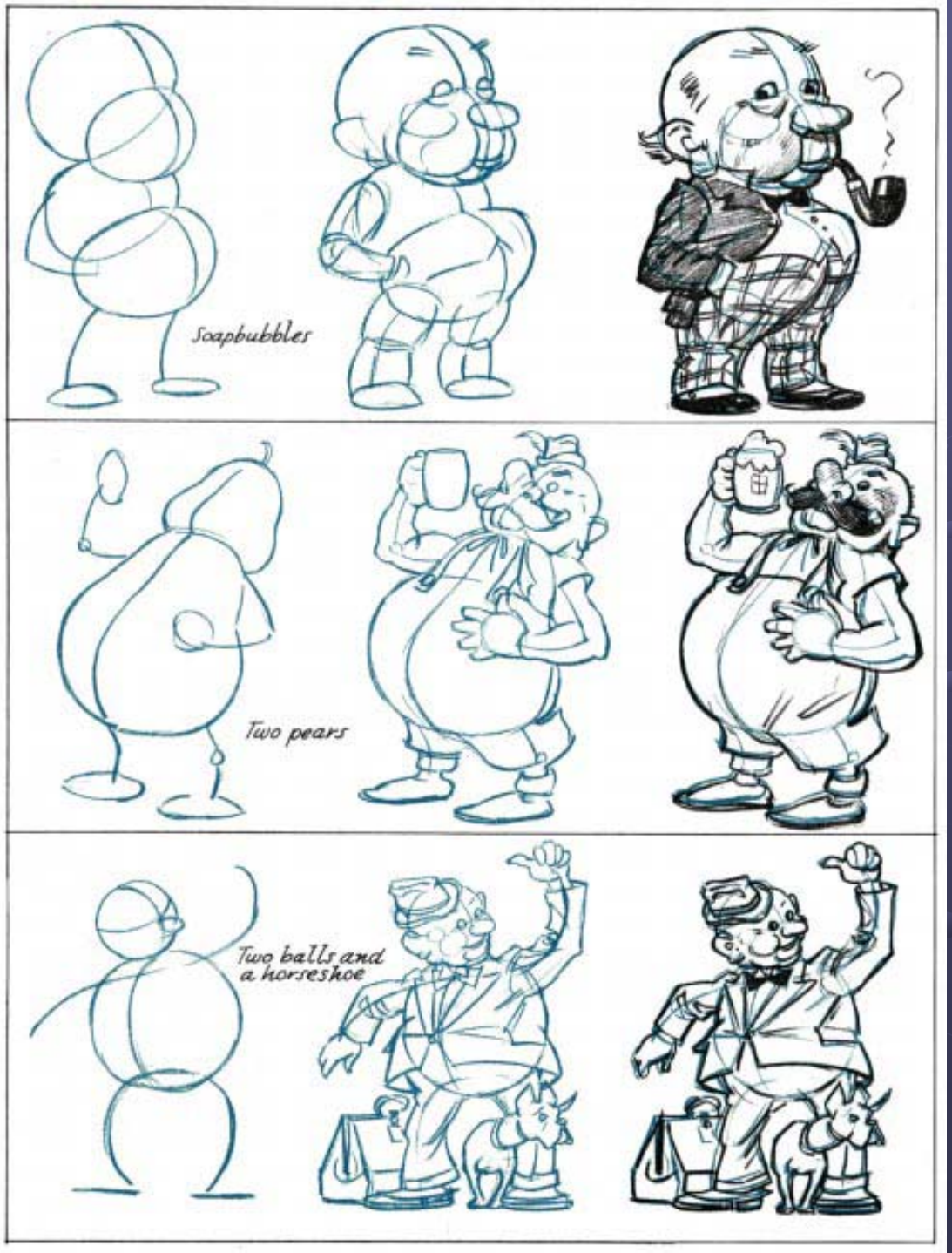
The weight of the body must be evenly distributed over a central point of gravity. This is equilibrium. Just a couple and it's gone, eh what.



It's going to be real fun creating little frames, then building up the figures.



Note, for girls we turn the pelvis block over. Now we'll let the camera help us.


Soapbubbles
Two pears
Two balls and a horseshoe

▼ Catwoman crouching
The slim arms are angular and poised for action, while the shoulders are much closer to the ground than the behind. The head lifts up, creating the impression of movement, further suggested by the hair, which trails slightly.

1. The face is lifted slightly and looks in the direction of the leading leg.
2. The leg is straight and powerful, planted firmly on the ground and defining the direction of the character's gaze.
3. The arm is straight and at right angles to the line of the eyes, adding stability and strength to the composition.
4. The staff is held ready, giving a sense of impending action.
5. The stomach muscles are relaxed but slightly twisted to the side.

▼ Slayer
The shoulders are thrust back, the breast pushes forward, and the slim waist leads to the flare of the hips and a strong, balanced stance.

► Walker in the woods
Both the right arm and right leg extend forward to suggest stillness (movement is represented by simultaneous movement of opposing arms and legs), creating a diagonal hip line and strong leg shape. The left arm pulls backward, causing the shoulders to pull together.

superhero poses

Fantasy heroes are not ordinary characters, and their posture should reflect this. They should be rendered in dynamic poses full of power, forcefully directed energy, and furious vigor!

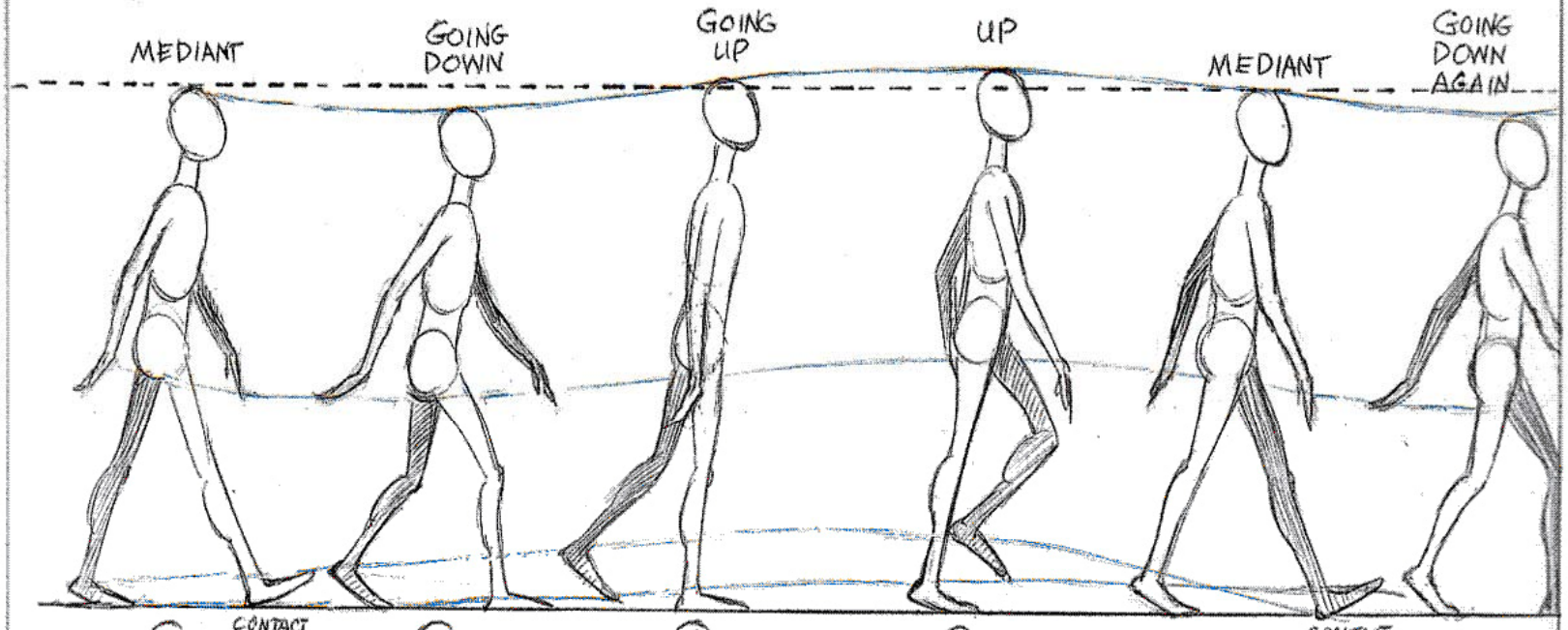
► Jump
This is an attack jump, where the leading leg is extended to deliver a strike. The forward leg is straight, and the trailing leg is curled back and streamlined.

▼ Backward sword
This pose suggests a sword or spear held at the neck of a vanquished opponent. Every muscle is taut and defined, suggesting that our hero has been engaged in a strenuous physical battle.

◄ Victory
Once again successful in battle, the mighty hero raises his muscled arms and shouts his victory to the heavens

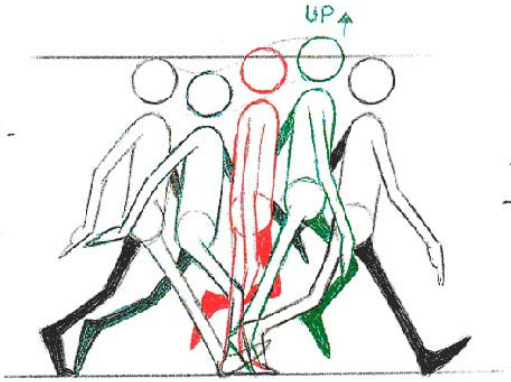
USELESS(?) BUT INTERESTING SCIENTIFIC INFORMATION ON WALKS:

DID YOU KNOW WE PUT A MILLION POUNDS OF WEIGHT ON OUR FEET EACH DAY?



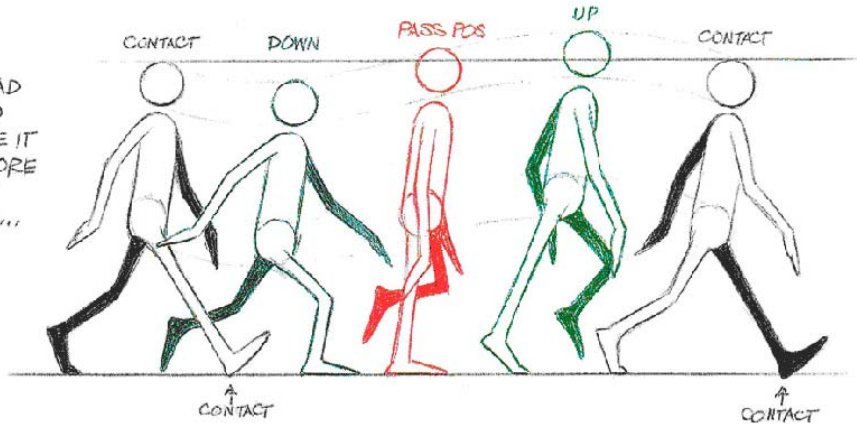
1. EACH ARM MOVES IN COORDINATION WITH the OPPOSITE LEG, GIVING BALANCE and THRUST.
2. AS WE DIP DOWN WE SPEED UP- RELEASING ENERGY. GRAVITY IS DOING SOME OF the WORK.
   OUR ARMS ARE AT THEIR WIDEST POINT.
3. WE'RE LESS THAN ONE CENTIMETER AWAY FROM STUBBING OUR TOE EVERY TIME WE TAKE A STEP. WALKING IS NATURALLY ENERGY CONSERVING. WE LIFT OUR FOOT AS LITTLE AS POSSIBLE.
4. AS WE RISE UP WE SLOW DOWN. WE'RE STORING UP POTENTIAL ENERGY
5. OUR FOOT GLIDES DOWN HEEL FIRST FOR A SOFT LANDING
6. OUR CALVES PRODUCE HORSEPOWER. EVERY TIME WE THRUST FORWARD OUR CALF MUSCLE PUTS OUT UP TO ONE HORSEPOWER (760 WATTS).

DOESN'T HELP YOU MUCH WHEN YOU'RE ASKED TO ANIMATE THE WALK OF A SAD BUT HAPPY MAN — OR DOES IT?



NEXT WE PUT IN THE UP POSITION - -THE PUSH-OFF.

THE FOOT PUSHING OFF LIFTS THE PELVIS, BODY and HEAD UP TO ITS HIGHEST POSITION -THEN THE LEG IS THROWN OUT TO CATCH US ON THE CONTACT POSITION - SO WE DON'T FALL ON OUR FACE.



LETS SPREAD IT OUT AND EXAGGERATE IT A LITTLE MORE SO IT'S CLEARER...

SO, IN A NORMAL 'REALISTIC' WALK
THE WEIGHT GOES (DOWN) JUST AFTER THE STEP - JUST AFTER THE CONTACT.
and THE WEIGHT GOES (UP) JUST AFTER THE PASSING POSITION.