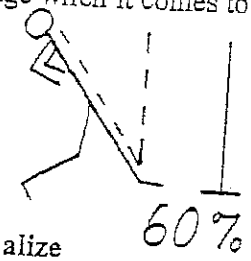
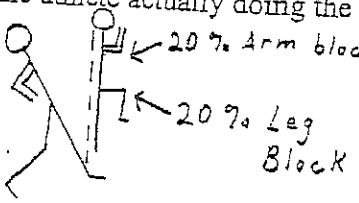
Nebraska Coaches Clinic
High Jump
By Ed Fye Doane College Track and Field

Philosophy of the High Jump

For all events you have to individualize for each athlete. What drill or cue you give to one athlete to improve on technique might be completely different for another to relate to. We believe you need to teach the athlete. Bring them in and teach them visually the proper position you are looking for in a good high jump. This way you are both on the same page when it comes to coaching and the athlete actually doing the drills.





Individualize

As a coach you have to find a way so it relates to each individual. Film them during drills and full jumps so you can show them visually what part of the jump they are missing or hitting.

- As a form of motivation when watching film try to use the Murphy's percentage chart on how much of their jump they are missing out on. (the Percentage)
- ASK FOR HELP
- ACCEPT CRITIQUE
- USE OTHER COACHES

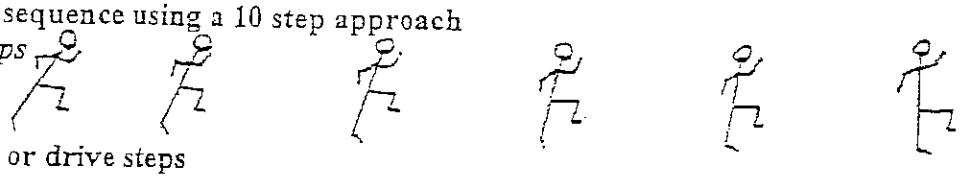
Approach

Objective- To get the feel of gaining momentum to the arch or J and into the takeoff position.

- The hard part of individualizing is finding the correct speed each of the athlete has the strength or technique at takeoff to handle.
- To be a great high jumper you have to hit a great takeoff position. The bigger the angle the better the opportunity to convert a takeoff vertically, because the angle is determined by the momentum generated (speed) into the takeoff.
- Important to remember: If the athlete is not in a good takeoff position and you are falling or hinging into the bar the slower the approach will have to be. This will help the athlete jump higher with not as good technique. It causes the athlete to rotate slower into the bar.

Teaching sequence using a 10 step approach

First 5 steps



1. Power or drive steps

Objective- Teaching the jumper to gain momentum (acceleration) into the J.

- These power or drive steps produces a natural acceleration which will cause the jumper to be in a good tall jumping and running position going into the J.
- Stress rhythm and stepping up over the opposite knee
- To gain a consistent approach the first 5 steps have to be in a straight forward line going into the 6th step.
- The 5th step is where we transition into the J. The 6th step is the beginning of the J.

Five step drills

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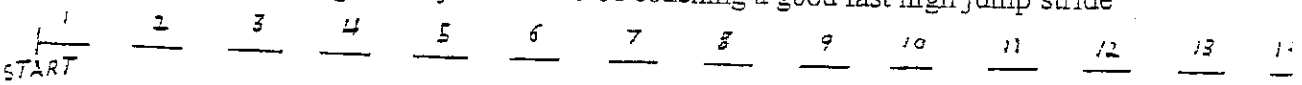
- Line bounds – works on rhythm and cadence
- Work on proper running mechanics
- While running on a straight line you want to be coaching a good fast high jump stride

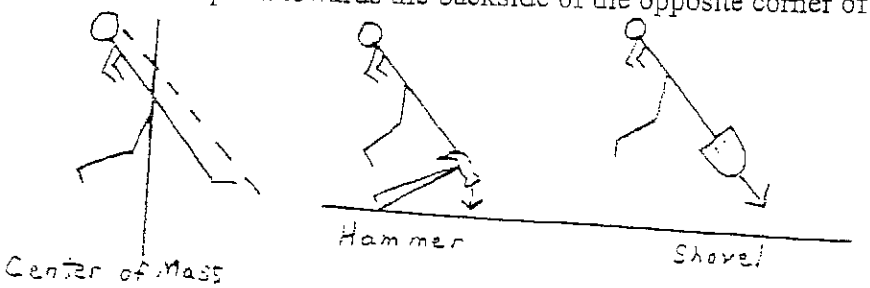


- Running on a # line (see diagram) 5 steps

Takeoff

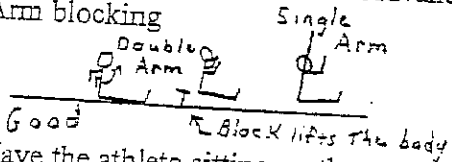
Objective- To develop the coordination of blocking and jumping when the center of gravity is no longer directly over their base.

- Takeoff plant leg should be a hammer step down , NOT a shovel plant
- Plant foot should be point towards the backside of the opposite corner of the mat.



1. Standing box, bleachers, high jump mats, anything you can step (block) up onto.
a. Takeoff foot on the box b. Block leg back on the ground c. Arms back and bent in blocking position
- This is a drill to help introduce the arm and leg block working together to produce a lifting motion.
- As the athlete obtains this skill start backing the block leg which is on the ground a little further back from the box. This will help introduce the athlete to blocking without the center of mass over the athlete's base.

2. Skipping blocks
a. Straight line skipping b. Advance to curve or circle skips
- This drill helps with rhythm and coordination of blocking with the arms and legs
3. Two step blocking takeoffs ---Advance to three step takeoffs
3. Arm blocking



- Have the athlete sitting on the ground with their legs straight out in front of them.
- The athletes arms are back and bent at a 90 degree angle
- If the athlete gets correct blocking action the athletes butt will leave the ground.
- To assist in learning you can use wrist bands on both wrist telling the athlete to punch them together in front of them to help develop power (we actually call them power bands they have to come together to produce power (lift because of the blocking)
- We have also cut broken pole vaulting poles into 6" sections and filled them with sand and used them for more power. When the athlete has something in their hands it makes them concentrate on it more.

<u>This is also the time to teach them how important this blocking action is to the success of the takeoff angle. Have them demonstrate doing it wrong as they are seated. This will show them they cannot generate any lift doing it wrong and that it will produce a bad takeoff angle.</u>

- There are a couple of different blocking techniques. The single arm block, which seems to apply more to the speed jumper.
- The single arm blocker has a tendency to lead with the inside arm, instead of blocking it straight up.
- Cues that have helped correct this incorrect block are as follows:
- 1. Have the athlete shrug the inside shoulder on takeoff
- 2. Have the athlete turn the inside hands thumb in towards the bar. This will pull the elbow back inside and not at the bar.
- 3. Have the athlete bring their inside arm block up and across their body
- The double arm block, which applies more to the power jumper. This is the block that we have use in our drills above.

4. Transition of running motions into the block

a. Leave the athlete seated and have them simulate running with the arms. Then have the athlete transition the arms into a good blocking position.

- A big fault with the arms is that the athletes stops the running motions too early to circle the arms to block. The problem with this is when the athletes stops arm motion they stop or slow the running motion. This causes the athlete to lose that lean or angle they have generated away from the bar that will help with the takeoff angle (vertically).

5. Leg Blocks

a. Skipping b. Step ups

- A lot of the same drills can be use that were used in the arm blocking

Transition

This is the passage of the first 5 steps into another stage, which would be the last 5 steps, or as we have been calling it the J or arch.

- After we have obtained the position we want to be in after the first 5 steps we are ready to start into the J. We want them transitioning into the J on the outside foot (which would be the 5th step). Then on the 6th step starting the arch or J.
- The word transition seems to bring them into the arch a little smoother. It also makes them think about going from a straight forward motion into a curve that puts the center of gravity outside the Center of mass.

Incorrect athletes approach

good approach

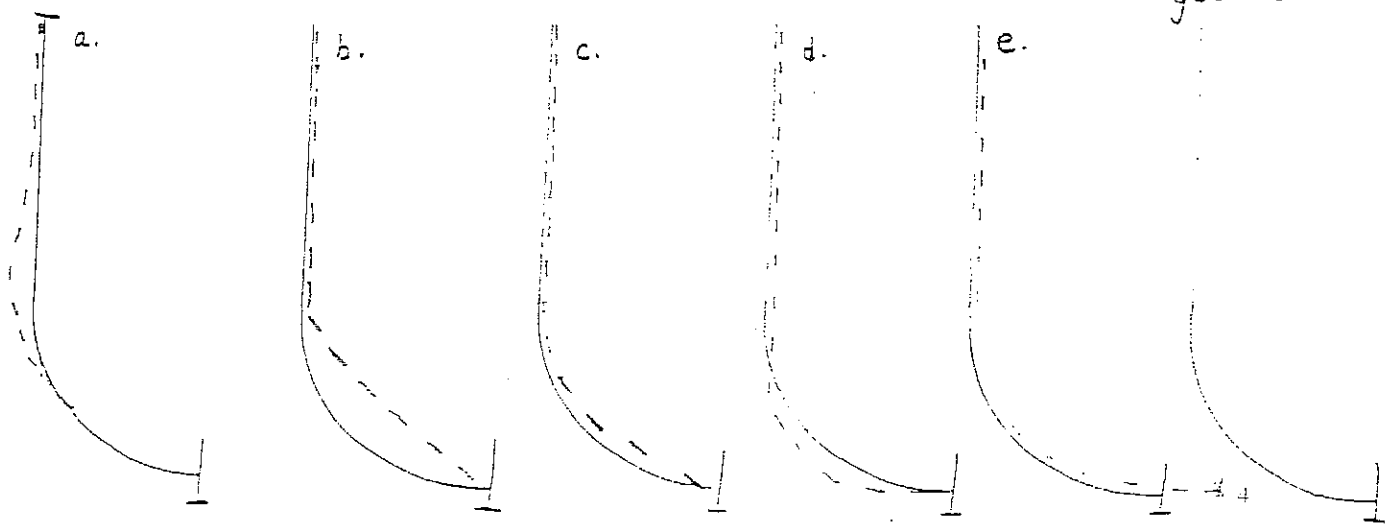
Last 5 steps (J or arch)

Objective- To reduce or eliminate all lateral inconsistencies.

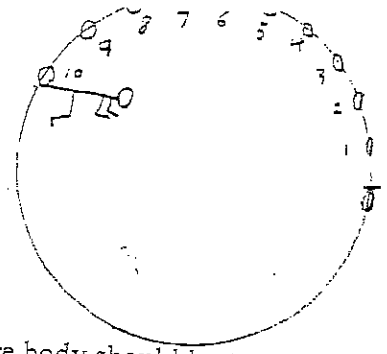
These consist of many, which causes the athlete to lose the lean away at the bar. (Takeoff angle). The following are some examples:

a. Fading five b. Jab step c. Stepping out last two d. Dropping down e. Two flat deep

good J



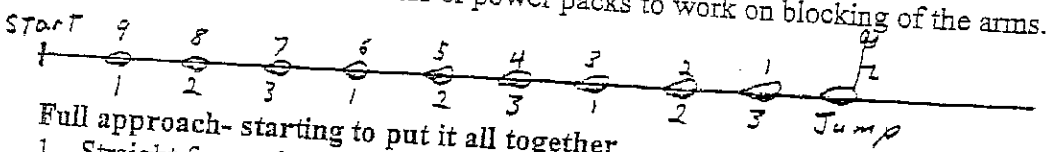
1. Full Circle drill



- Running the curve J the entire body should lean to the inside of the arch from the ankle, not the waist.
- Teaches the jumper to become a curve runner
- Helps teaching them to run with the center of gravity outside of the base. This has to be a learned habit, because we do not do it in any other event or sport.

2. 10 step circle approaches

- Have them run the circle counting and coaching the stride and rhythm.
- You can count down from 10 or we have used the 1 .. 2.. 3..—1. 2. 3.—123jump count down
- Watch and show the athlete the lean that is generated during this drill.
- A great drill for takeoff angle is to tell the athlete you want them after takeoff to come down back inside the circle.
- You can use the wristbands or power packs to work on blocking of the arms.

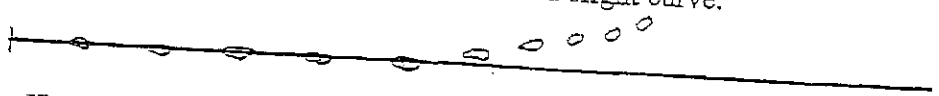


Full approach- starting to put it all together

1. Straight forward count downs and takeoffs

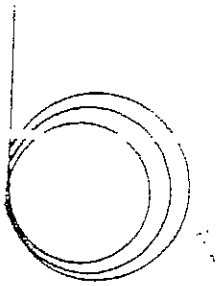
- Run them straight forward working on drive power steps the first 5. Then the last 5 steps work on the rhythm and penultimate takeoff.
- This is a good starter so the athlete doesn't have to worry about staying of the J.
- This allows you to continue working on the drive steps rhythm and coordination on the arm and leg blocking without any J.

3. Straightforward working on transition and slight curve.



- Have them running on the line as we did on the last drill the first 5 steps then have them transition and run a slight (very slight) curve from the line.
- As they pick up the transition and blocking have the athlete start tightening the J.

4. Combo J's

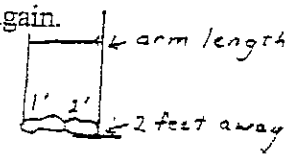


a. Using the above drill and # line to catch the length of the first 5 steps bring that measurement over to this drill.
b. Measure your # line out straight and put down 3 different radius circles. Example from our chart would be 17'(10'2"),18'(11'10"),19'(12'6")
c. The different radius gives you a chance to see how they look at each one. This will help you determine if the radius is too tight. Look for short choppy steps and if they have trouble staying on the line. This would indicate the radius is too tight for them at this time.
d. **IMPORTANT –When doing any J movements watch for the last two steps. They will want to step out and get the center of gravity back under them. This seems to be a bigger problem with basketball players that dunk a lot. This causes a false takeoff angle. When looking for a true angle at takeoff you want to look for the angle at the ankle and not the waist.**

5. Figure 8 drill

a. You can set up cones or two radius circles.
b. This is a drill that will help with the transition at takeoff. Gives them the body awareness that goes from the center of gravity not being under the athlete to the weight shifting back over the base to away again.

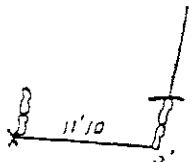
Steering into the takeoff mark



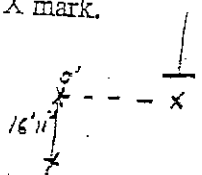
- How does a long jumper know where to take off from? Yes, of course, the long jump board. We spend hours trying to get our athletes consistently on the board. This eliminates scratching and taking off too far out.
- For the high jumper it is more complicated because we are trying to hit a consistent takeoff mark while running in a circle with the center of gravity outside of our body. My point being that we have to be able to steer into the same takeoff point in the high jump without a takeoff board.
- We use the standard as our takeoff point. The near side standard is where the athlete is trying to steer into after taking their first 5 steps in a straight line. The 5th step is the transition step into the J. This is where you are trying to teach the athlete to eliminate their lateral inconsistencies by steering into the same takeoff point.
- We use a cut out piece of 1" foam as our visual takeoff practice mark (use it as if it were a long jump board). We call it the NO ZONE!!! We use it so the athletes can visually see where they are to takeoff. This helps the athlete steer into the high jump standard and helps the athlete from going to flat or to deep down the bar or standard.

Step Finder Set up

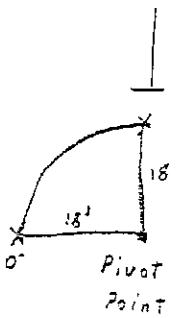
1. The first measurement is 11'10" or A, from the takeoff mark of the athlete. We use the 2 feet straight out from the standard as our starting takeoff point. **A lot of coaches try to use this chart and measure from the base of the standard. This is incorrect, it is the takeoff mark or point not the base of standard!!!!!** At the end of the two steps make an X to mark the takeoff spot. Then hold the zero end of the tape measurer on the X and measure 11'10" away from the takeoff mark as shown above and mark that point with and X.



2. The second measurement will measure as in the example 16'11" or B from the end of the 11"10"X mark Hold the zero end of the tape and measure straight back as shown in the above diagram 16'11" and mark it with and X mark.



3. The third measurement will measure 18' or C back to the middle of the high jump area. You need to switch ends of the tape measure. The 18'mark of the tape will be pulled back towards the middle and held stationary. The zero mark of the tape measure will be held at the end of the 16'11 X mark as shown in the diagram. Then walk the 18' mark down to the takeoff point to see if they match up. If they are off a little you need to adjust it until they match.



4. **Marking the # LINE (See step finder diagram on following page)**
Take the zero end of the tape measure and hold it down on the 11'10"X mark. Then run the tape straight back as far as you will need for your jumpers. The tape should bisect through, or run straight over the 16'11" or B X mark as shown in the diagram. Where the tape measure bisects the B X mark you will mark with tape or sidewalk chalk every other foot. You need to number them 1 through whatever you need for an approach.

- Now that you have set up the J approach you can begin finding numerous athletes starting points.
- Example- To find three peoples approach marks named Chad, Justin, and Tiffany. We start all of them on the # 13 mark. Chad takes his 10 steps on the #line and J and is 3' over the takeoff point (standard) or no zone if you are using it. Justin is right on his takeoff point and Tiffany is 4 feet back or short of the standard.

- Adjustments that would be made for Chad, Justin and Tiffany

a. Chad would move up 3' b. Justin would stay the same * Even if Justin was over the next time I would mark it and then let him go one more time before I moved him. We have a rule that we don't move them until they take three approaches from the same starting point after they hit the takeoff the first time.

c. Tiffany would move up 4 feet.

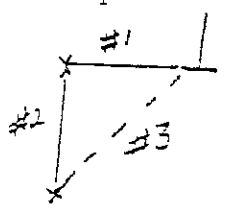
- This continues until we get a consistent takeoff mark.
- You can use the # line to help with consistence. We use the #line to catch 5th step check marks. This way we see if it is the first 5 steps or the last that are causing us problems.
- Remember to keep adjusting them until they hit the proper takeoff mark three times.
- Make sure the athlete runs all the way through the approach. A lot of athletes want to slow up at the end. I use the finish of the 100-meter dash as an example of what you want to be like at the end of the approach. You don't want to be slowing down at the end of the 100, or stride out, or stutter step because it slows you down. Then everyone in the race will pass you. If you are not fast at the end of and race or field event you will lose. Only good things can happen if you stay aggressive and fast.
- After you find their mark you need to measure it. It is magical how a coach can change and athletes step by putting a bar up in front of them. A lot of times after you have found this mark and you go into the next drill (scissors drill) they will start stuttering, reaching, cutting to the bar. Then you take the bar away and have them run through again. This will just take the athlete a lot of repetitions.

Measuring the approach (see step finder diagram)

1. The first measurement is from the base of the standard directly under where the end of the bar will be setting.

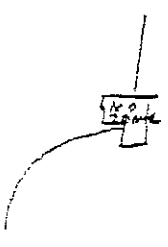
- Measure straight out from the standard. Make sure you line the bases of the standards up to be more accurate.
- From that mark measure back the distance of your approach and mark it.
- Then to make sure you are accurate you need to triangulate the mark. Measure the distance from your takeoff mark back to the base of the standard. If you are not on the same takeoff mark you need to adjust the end of the tape so it bisects the takeoff mark.

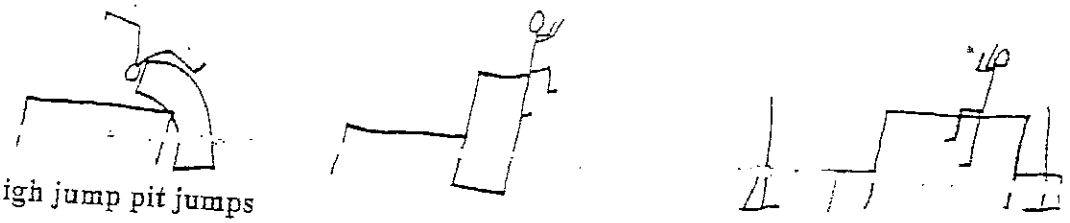
Taped or chalked out J –No Zone- Scissor jumps



1. This is done with the step you have just developed for the athlete from the #line.

- This drill helps the athlete get into a good takeoff position.
- This drill helps the athlete block and driving the knee
- This drill helps with steering into the standard.





Standing high jump pit jumps

1. Using your same approach that has been established with the step finder and scissor jumps. You will use the No Zone and the regular chalked out J approach. Simply stand a high jump mat up in front of the mats next to the high jump standard. You might have to slide the regular high jump sections back so the front of the mat that is standing is even with the standards.
- This is a great drill that allows the athlete not to worry about the bar and can concentrate on the approach, takeoff, arm and leg blocking.
- You want the athlete to try and takeoff and just set up on the standing mat in this position.
- When the athlete jumps up on the mat it will catch them and let them rotate in and around the standing mat.

Spring board or box jumps

1. Use this with a full or 5 step approach
- Helps with timing around the bar
- Helps with seeing over height bars

Bar hold on – Over height jumps

1. Have yourself and another person holding the bar on.
- Usually when a jumper misses the bar they quit the jump.
- We hold it on so the athlete will continue the jump and work on whatever part of the jump we are working on.
- It helps with rotation because the athlete can feel where they are hitting the bar and when that happens you tell them to continue working or rotating around the bar.
- You can also assist the athlete in making the bar with bar bends. It also helps with confidence.

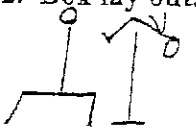
2. Goal post pad jumps
- Take a long pole (we used an old pole vault pole) and the pads that rap around the base of the football goal post.
- Put the pole in the hole of the pads. It will be loose and always the pad to rotate, or spin around the pole.
- Have the athletes come in on their full approaches. You and another person hold the pole up at a height that would be challenging for the athlete.
- Use this drill a lot after we do the standing high jump pit jumps
- As the athlete gets up on top of the pad lift the ends of the poles up. This will help the athlete with rotation, and quick finish

Rotation Drills

1. Standing pit back lay out

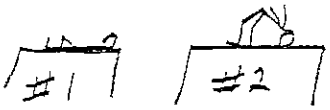
- Film this and show jumper their rotation around the bar
- Teaches the athlete not to be afraid to put their head back.
- Use spotters when teaching this back rotation

2. Box lay outs



3. Stationary lay outs

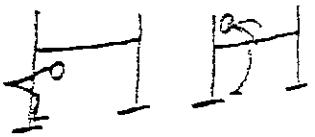
4. Pit presses



5. Limbo

6. Bunge

7. Under bar presses



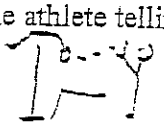
8. Big ball rotations

9. X on the shoulder

1. Put an X on the shoulder of the jumper. Then during the rotation drills have them look for the X on their shoulder. This will separate the chin from the chest which will allow the athlete to rotate.

10. Number game

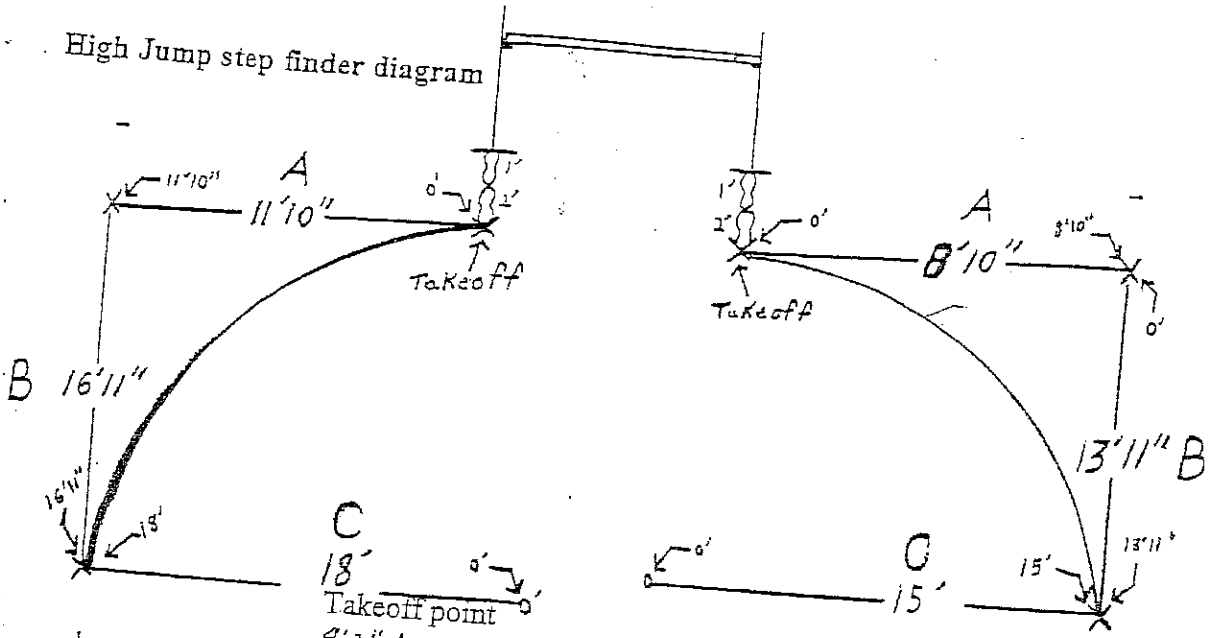
1. During rotation drills have someone stand behind the pit holding their hand with a number of fingers up. Have the athlete telling you how many fingers they were holding up after drill.



11. Swimming pool back dives

12. Floating lay outs

High Jump step finder diagram



1	9'2" A	B 12'11"	C 14'
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3	10'6 ~~9'6"~~	14'11"	16'
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5	11'10"	16'11"	18'
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