



September 22, 2018

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VERTICALITY





How to teach Verticality?

- Understanding the rule & principles
- Demonstrate with visuals.....seeing is believing
- Examples with use of video

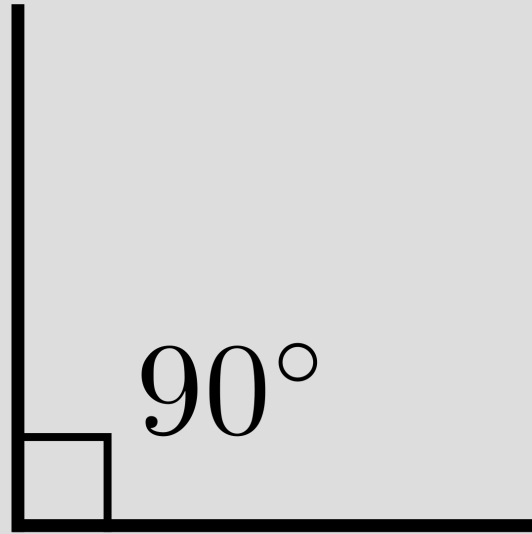


When we used
to teach
verticality, we
would compare
it to this.....



Today, this...

geometry



Understanding the rule...

$$\begin{aligned} \left(\frac{d^2}{dr^2} + \frac{2}{r} \frac{d}{dr} \right) \frac{u(r)}{r} &= \frac{d}{dr} \left(\frac{1}{r} \frac{du}{dr} - \frac{u}{r^2} \right) + \frac{2}{r^2} \frac{du}{dr} - \frac{2u}{r^3} \\ &= \frac{1}{r} \frac{d^2u}{dr^2} - \frac{1}{r^2} \frac{du}{dr} - \frac{1}{r^2} \frac{du}{dr} + \frac{2u}{r^3} + \frac{2}{r^2} \frac{du}{dr} - \frac{2u}{r^3} = \frac{1}{r} \frac{d^2u}{dr^2} \\ \frac{1}{r} \frac{d^2u(r)}{dr^2} + \frac{2\mu}{\hbar^2} \left[E - V(r) - \frac{\ell(\ell+1)\hbar^2}{2\mu r^2} \right] \frac{u(r)}{r} &= 0 \\ \frac{d^2u(r)}{dr^2} + \frac{2\mu}{\hbar^2} \left[E - V(r) - \frac{\ell(\ell+1)\hbar^2}{2\mu r^2} \right] u(r) &= 0 \end{aligned}$$



LOCATION
POSITIONING
LOCATION
POSITIONING
LOCATION
POSITIONING



Become familiar with:

- Defense initiated contact
- Offense initiated contact



Definition of VERTICAL PLANE:

1: a plane that passes through a vertical line

2: a plane of perspective passing through the point of sight and perpendicular to the ground plane and to the picture





POV applies to a legal position.

- Obtain & Maintain apply as in guarding
- **Defensive player** should receive full protection under the rule as it relates to their position
- Must understand components of POV to properly officiate post play and other plays involving verticality



Most often, attempt involved

Rebounding plays

Trapping situations



“Over the back”

MYTH



On the back = FOUL



REALITY



VERTICALITY 4-45

- **Verticality applies to a legal position. Following are the basic components of the principle of verticality.**



Verticality 4-45

- Art. 1..Legal guarding position must be obtained initially and movement thereafter must be legal.







Verticality 4-45

- Art. 2..From this position, the defender may rise or jump vertically and occupy the space within his/her vertical plane.





Verticality 4-45

- Art. 3... The hands and arms of the defender may be raised within his/her vertical plane while on the floor or in the air.



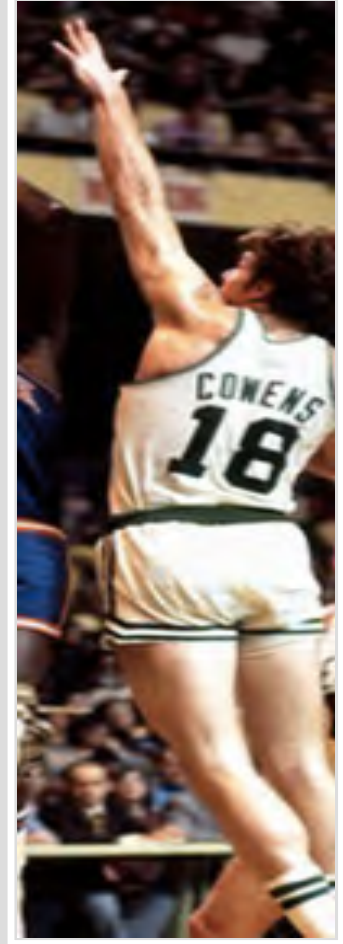




Verticality 4-45

- Art. 4... The defender should not be penalized for leaving the floor vertically or having his/her hands and arms extended within his/her vertical plane.







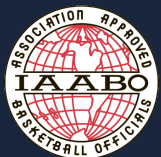


Verticality 4-45

- **Art. 5... The offensive player whether on the floor or airborne may not “clear out” or cause contact within the defender’s vertical plane which is a foul.**







Verticality 4-45

- Art. 6...The defender may not “belly up” or use the lower part of the body or arms to cause contact outside his/her vertical plane which is a foul.







Verticality 4-45

- Art. 7... The player with the ball is to be given no more protection or consideration than the defender in judging which player has violated the rules.







VERTICALITY: AREAS OF IMPROVEMENT...



1. OFFENSIVE PLAYER JUMPING BACK INTO DEFENDER



OH NO!



Areas of Improvement...

2. Inside Player Jumping Back Into Outside Player During Rebound Action





Areas of Improvement...

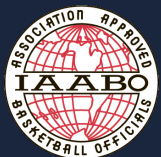
3. Inside Player Having Vertical Space Violated From Behind



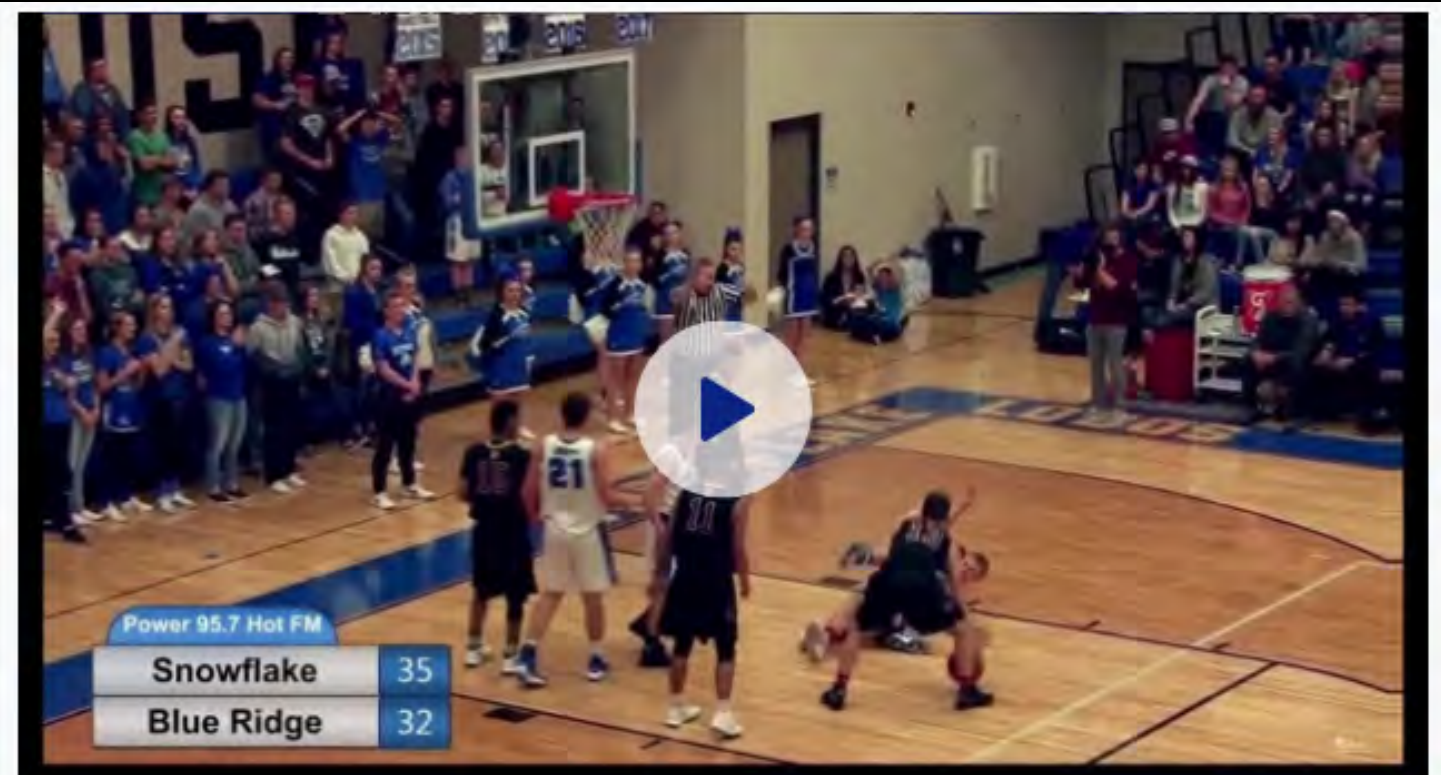


Areas of Improvement...

4. Improper Rebounding Fouls Ruled



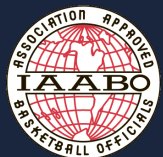




Areas of Improvement...

5. Offensive Player Entering Defender's Vertical Space – Defender Being Penalized





Areas of Improvement...

6. Legal Block of Ball, Defender Fouls on Follow Through





Closing Thoughts on Verticality



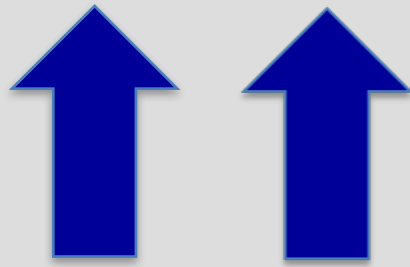
Remember...

- Players have a right to a spot on the floor, and they also have the right to occupy the air space above that spot
- The defensive and offensive players, by rule, can raise their hands and also jump while continuing to remain legal

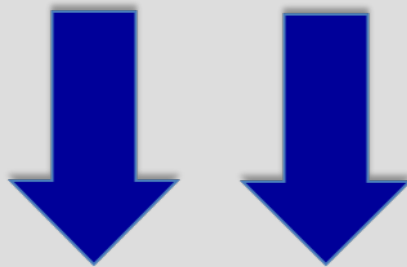


We must train ourselves to not only observe the defender, but also observe the space above the defender.





Concentrate on the vertical plane,
and the defensive player will not
be unjustly penalized.



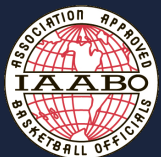
Contact which occurs between 2 players jumping vertically, is more likely to be incidental and in many instances, be deemed a legal play.



See The Foul









Review of Teaching Points

- 1) Legal Guarding Position
- 2) Rise or Jump
- 3) Hands/Arms Can Be Raised
- 4) Defender Should Not Be Penalized For 2 & 3
- 5) Offensive Player Can't Contact Defender's Vertical Plane
- 6) Defensive Player Can't Contact Offensive's Vertical Plane
- 7) Equal Consideration Between Offense and Defense



Questions

