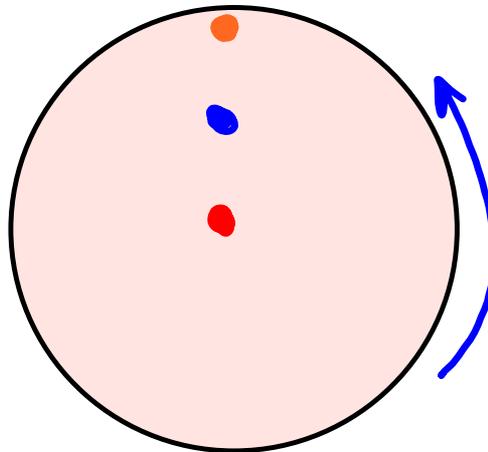


## Angular Velocity (Rate of turn or spin)

rotations  
minute

**RPMs**



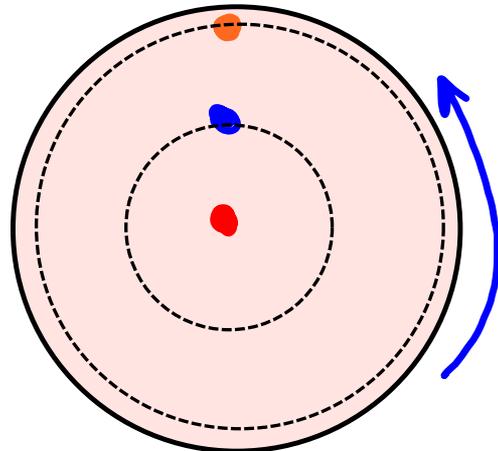
**Everybody has the same angular  
velocity**

## Tangential Velocity

Distance around the circle (meters)

Time (seconds)

Objects further out make a  
bigger circle in the same  
time.



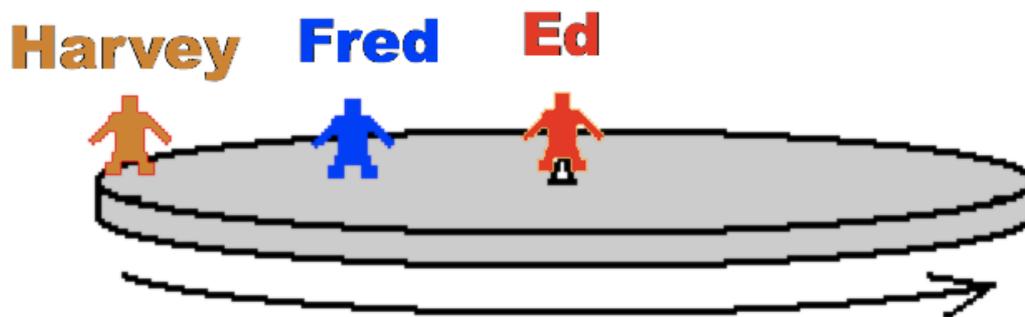
**FURTHER OUT IS FASTER.**

**CENTER = 0.**

**Who has the largest angular velocity**

**Who has the largest actual velocity?**

**Who really has no actual velocity?**



Angular velocities are all the same.

Harvey has the greatest tangential velocity.

Ed has no tangential velocity.

## Which is which?

**Shot Put World Record**

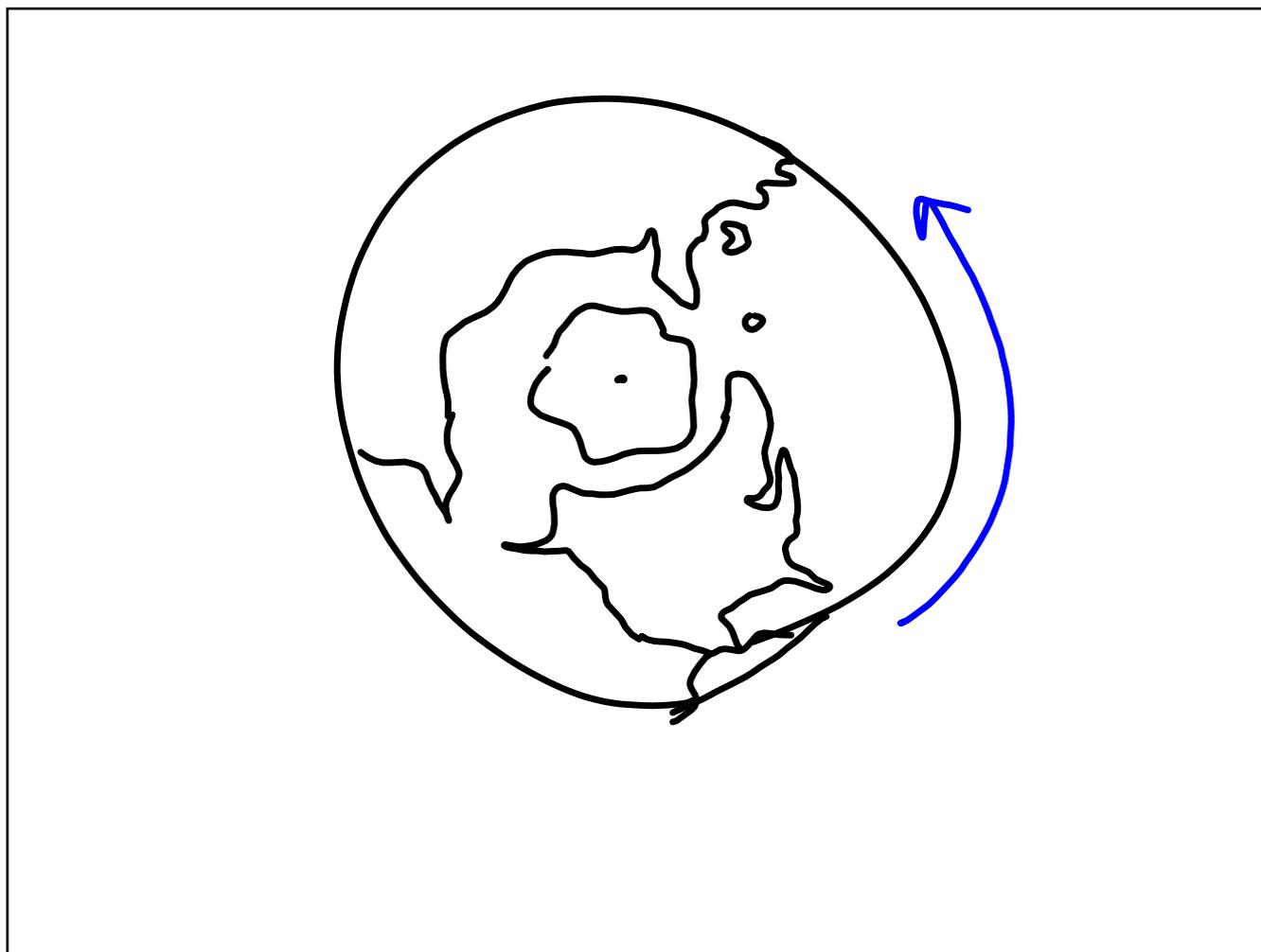
**Hammer Throw World Record**

86.74 m (284 ft 6 in)	Yuriy Sedykh	 Soviet Union	Stuttgart, West Germany	August 30, 1986
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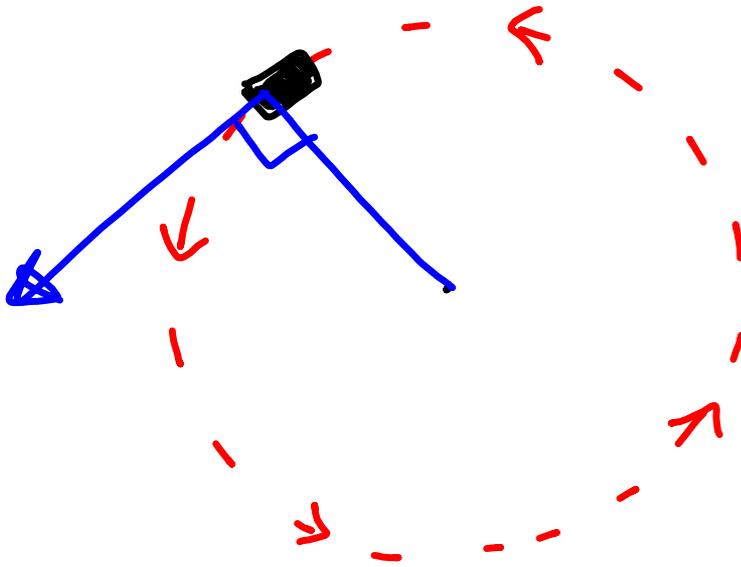
23.12 m	 Randy Barnes (USA)	20 May 1990	Los Angeles, U.S. <sup>[1]</sup>
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Hammer is farther out in the circle - it has more tangential velocity and goes farther.



**Which way does it go when released?**



TANGENTIAL VELOCITY

**Where did he leave the circle?**

