



# MASTER MARKSMANSHIP TRAINING COURSE



# Moving Targets



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## Moving Targets

**Targets on the battlefield are often in motion.**

**In order to successfully engage a moving target the shooter must know how far ahead of the target to aim.**

**This is called using a LEAD or LEADING the target.**



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## Leads

**Factors involved in determining moving target leads**

- 1. Time of flight of the round**
- 2. Speed of target**
- 3. Direction of movement**
- 4. Wind**



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## Leads

**It is important to reference your leads from center mass of the target, rather than the lead edge**

- This assures the impact of the round is not effected by the size and/or angle of the target**
- Will result in more consistent leads**
- Creates better sight picture maximizing accuracy**



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## Lead Formula

***Range in meters X 7 = Lead in inches***

(Only for a target moving 3 mph or 4 feet per second)

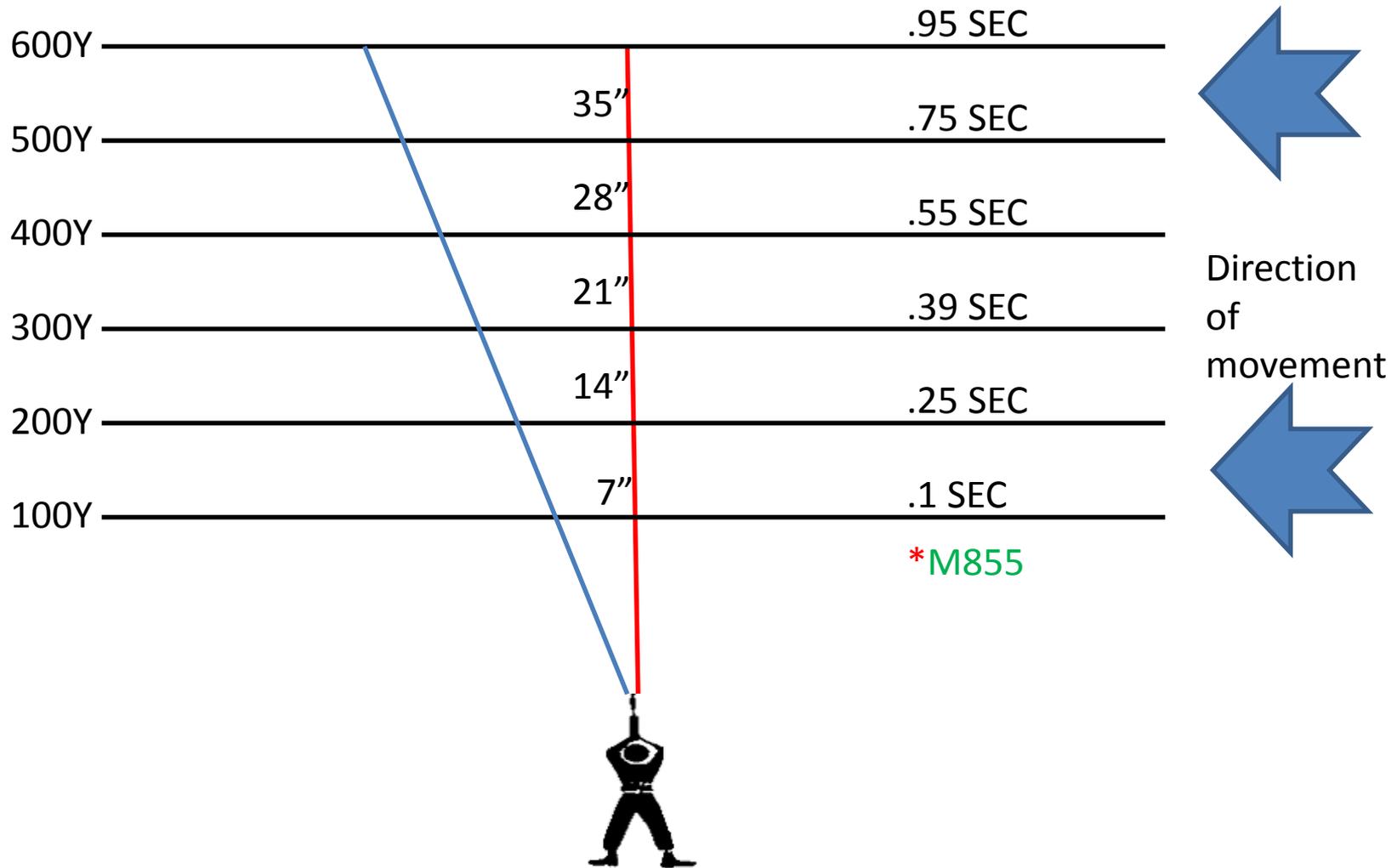
BASE LEADS	
RANGE	INCHES
100m	7
200m	14
300m	21
400m	28
500m	35



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## DISTANCE TO TARGET/TIME OF FLIGHT

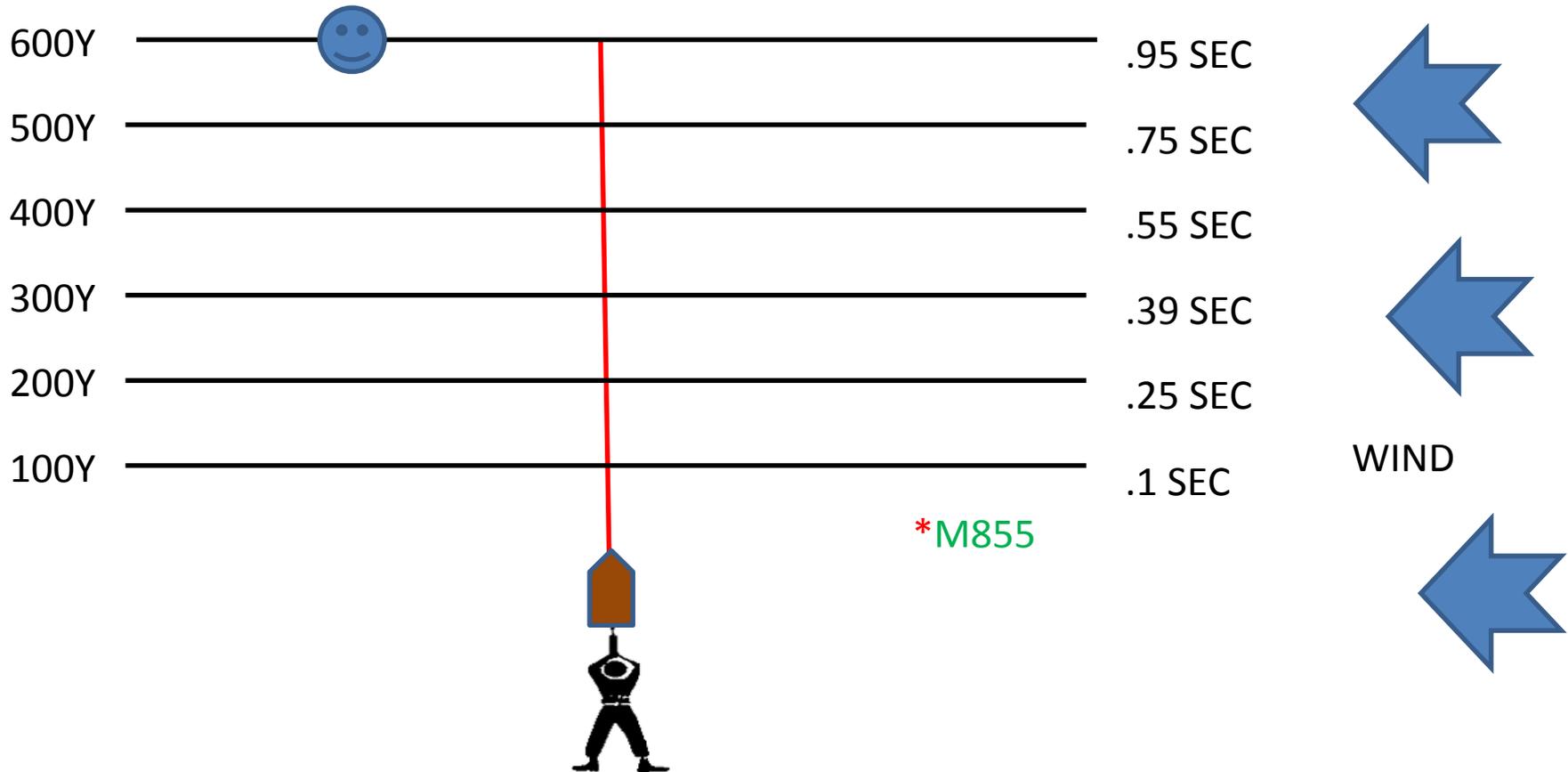




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## DISTANCE TO TARGET/TIME OF FLIGHT

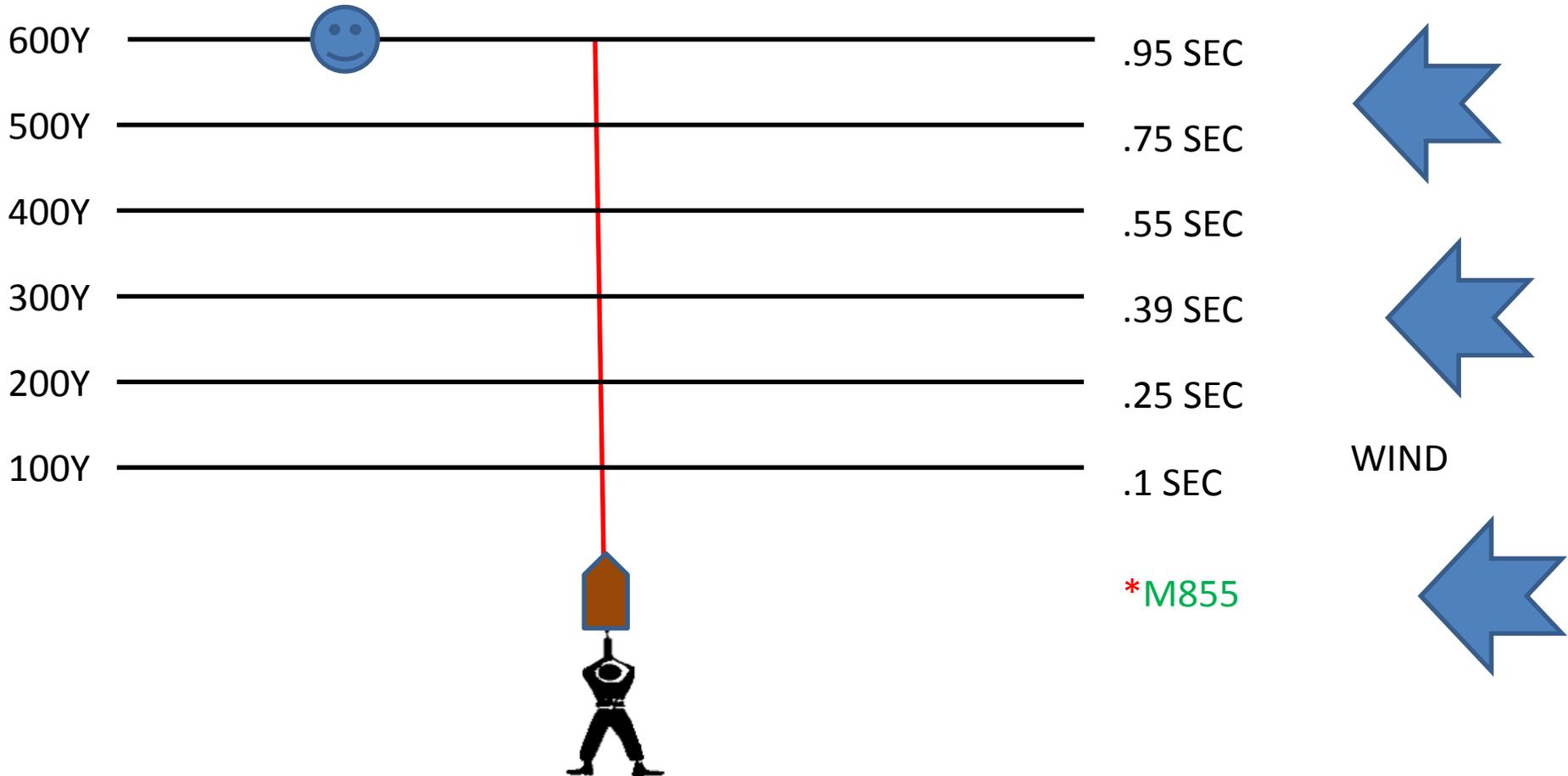




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## DISTANCE TO TARGET/TIME OF FLIGHT





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## Oblique Movers

- When engaging a 45 degree moving target use half the lead
- Half the lead is needed because the target is only covering half the ground
- Targets moving toward and away do not need to be led



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## Engaging moving targets

There are two methods of engagement:

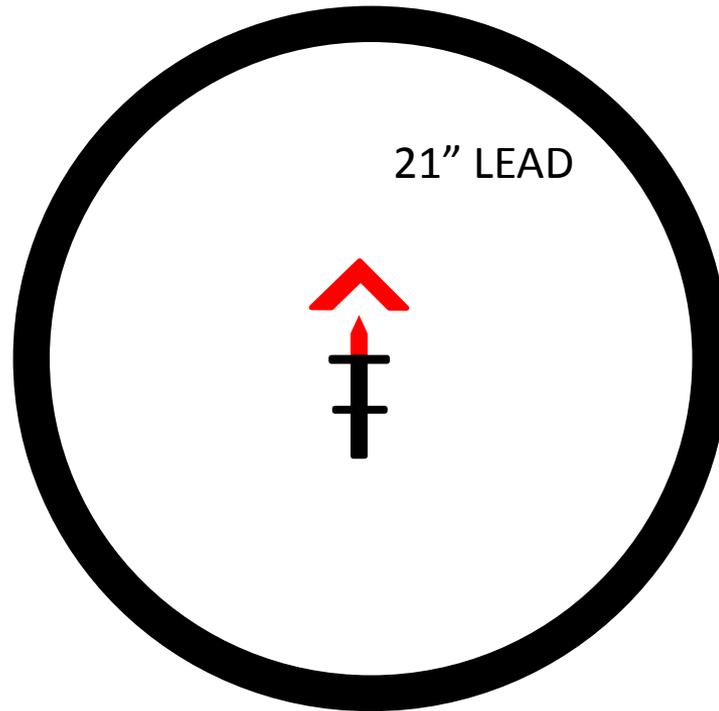
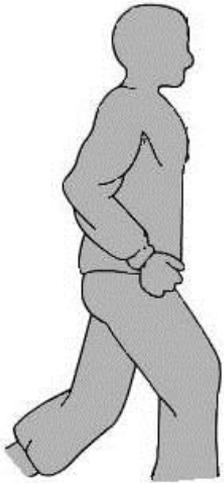
1. Trapping
2. Tracking



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## Trapping

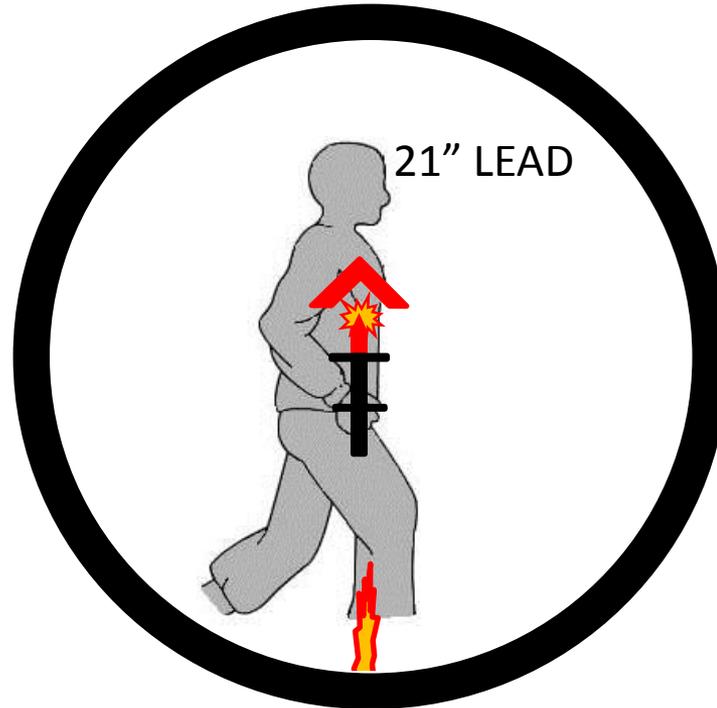




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## Trapping

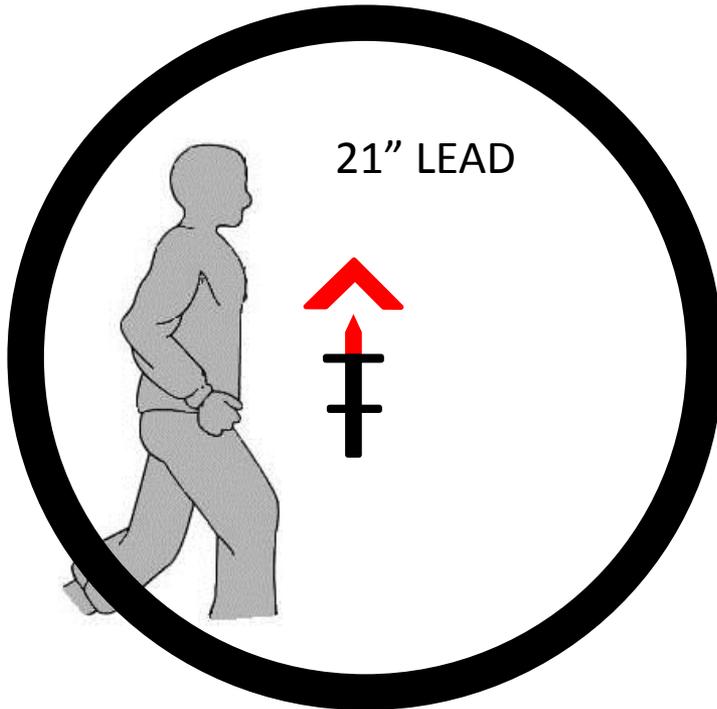




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## Tracking

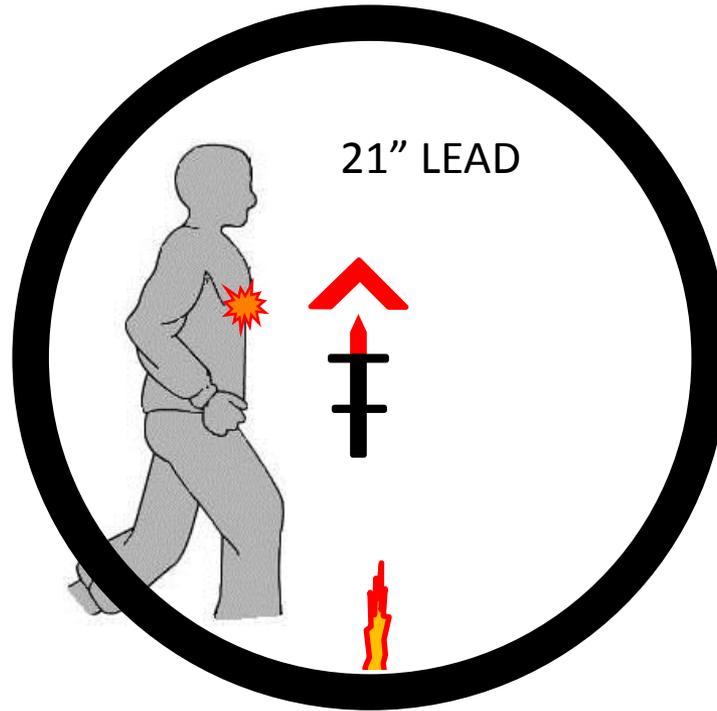




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## Tracking





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## Wind Compensation

- With Subtract- If the target is moving with the wind you must subtract the wind value from your lead
- Against Add- If your target is moving against the wind you must add the wind value to your base lead

W - With wind

S – Subtract

A - Against wind

A - Add



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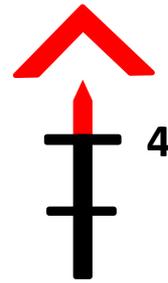
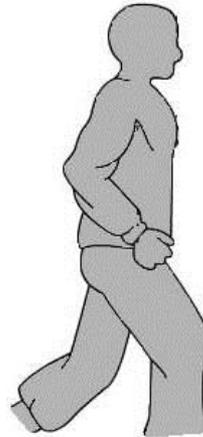
## With Subtract

# 10 MPH WIND



300m

If you don't subtract the wind hold from the lead, you will hit in front of the target



21" Lead + 13" for wind



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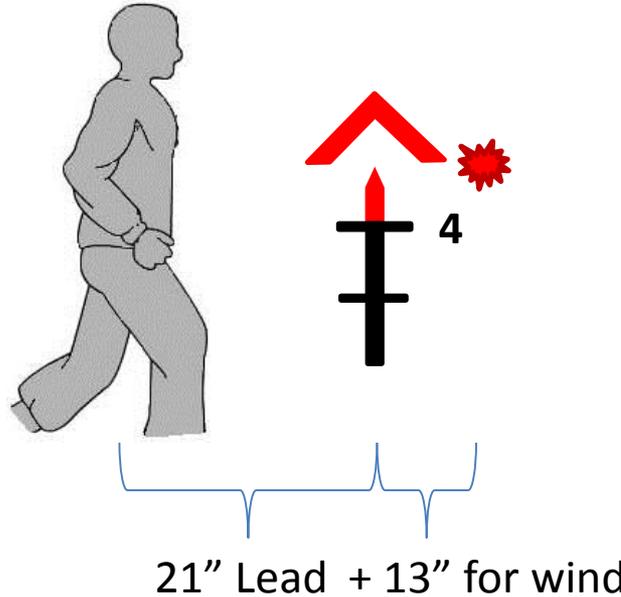
## With Subtract

# 10 MPH WIND



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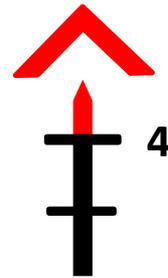
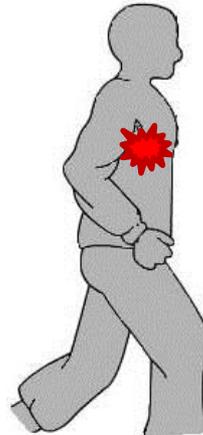
## With Subtract

10 MPH WIND



300m

Subtract the 13" of wind from your lead to hit the target



21" Lead - 13" for wind



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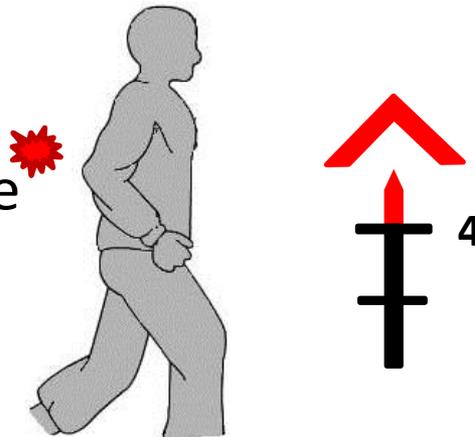


## Against Add



300m

If you don't add  
the wind hold from the  
lead, you will hit  
behind the target



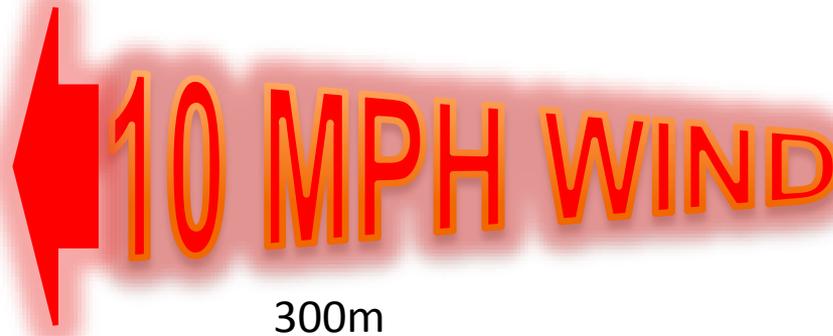
21" Lead - 13" for wind



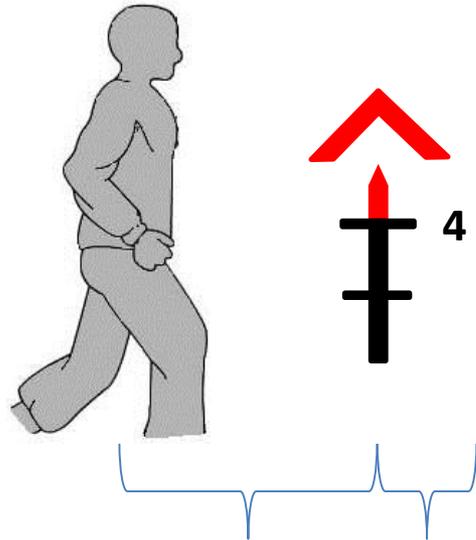
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## Against Add



Add the 13" of wind  
to your lead to hit the  
target



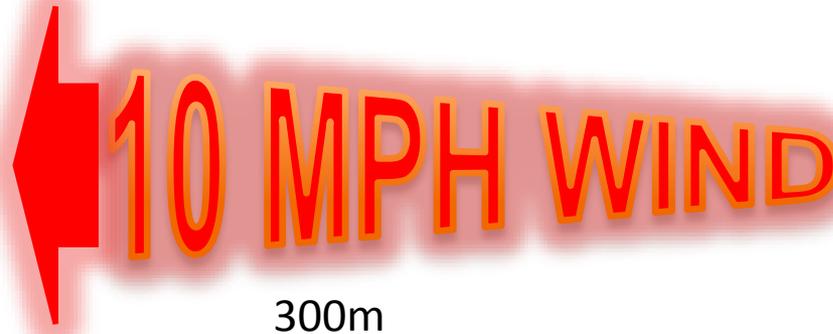
21" Lead + 13" for wind



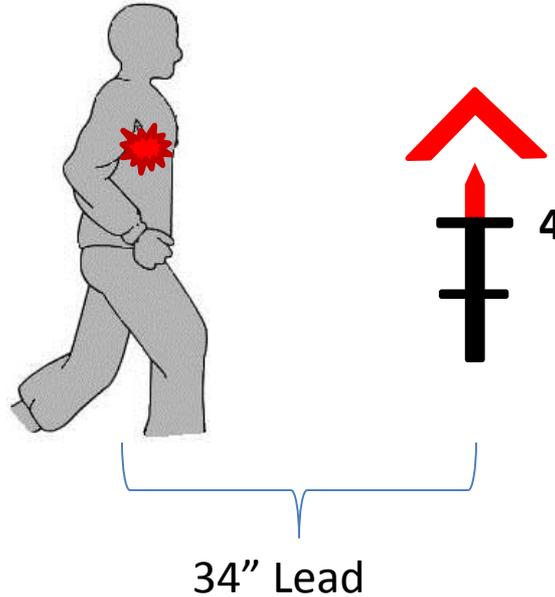
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## Against Add



Add the 13" of wind  
to your lead to hit the  
target





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## Math

Helps us Kill People



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## Shot Process

1. Identify target
2. Establish position
3. Compensate for distance to target, wind, and speed of target
4. Aim
5. Fire/Follow through
6. Call your shot
7. Reassess target/Re-engage target



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Questions?