

# COMBINED EVENTS OFFICIATING©



**By George Kleeman**

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This monograph is part of the copyrighted Pacific Association Officials Monograph Series on how to officiate track and field. Each monograph covers the various techniques for each officiating assignment. These monographs are intended for more in depth understanding of each job. They are intended for both the novice and seasoned official. They cover the real details of the job and how it should be performed. They summarize various techniques to accomplish the job. These monographs belong to the author and the USATF Pacific Association Officials Committee. They can be copied and used for officials training only.

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## Introduction

There are a number of different kinds of combined events. The more common are the decathlon and heptathlon. But there are Triathlons, Pentathlons, Weight Pentathlons, and Ultra Weight Pentathlons. There are some differences depending on if they are held indoors or outdoors. This monograph will generally focus on the decathlon and heptathlon but will also point out the variations for the other combined events. In the past the Combined Events have also been known as Multievents but that name has dropped out of favor. With very few exceptions Combined Events for all age categories and rulebooks follow the same rules. The exceptions are generally in implement weights, race lengths and hurdle heights and distances. Combined Events are listed in all five rulebooks, i.e. IAAF, USATF, NCAA, WMA, and NFHS. The high school book has the least information since it only lists the events involved but gives no other guidance concerning conducting the event. In particular they don't say how to score the 1600. All other events scores are available either in the NCAA book or the IAAF Combined Events Scoring Tables.

The Combined Events, particularly the decathlon and heptathlon are mini track meets having most of the running races up to 1500 meters and all of the throwing events when you include the weight pentathlon. As such they are a good place to learn general officiating of all the events. The throwing and horizontal jumping events are limited to three attempts each so they are shorter in duration. Warm-up times are generally restricted to 30 minutes or less. Thus even a decathlon doesn't normally take more than 4 or 5 hours to complete each day. Officiating crews tend to be smaller and more versatile unless the events are part of a larger meet. You get an opportunity to know the athletes better since you are with them for all of the events. Although very competitive the events tend to be more friendly, with athletes helping one another and rooting for each other. When the events are held separately, it is usually only friend and family who attend.

## Combined Event Summaries:

The following tables summarize the various types of combined events. Note the differences between men's and women's events of the same type and between indoor and outdoor versions. The first table is for the combined track and field events from Pentathlon to Decathlon. The second table includes the events for Youth competitions and the thirds summarizes the Throwing events. Note 1-2 and 2-3 mean the second event the first day and the third event the second day. A single integer indicates the order of events during the single day of competition.

### Track & Field Combined Event Summary

Open & Master Events	Indoor Pentathlon	Indoor Pentathlon	Outdoor Pentathlon	Outdoor Pentathlon	Indoor Heptathlon	Heptathlon*	Decathlon	Decathlon USATF	Decathlon IAAF
	Men	Women	Men/HS	Women/HS	Men	Women/HS	Men/HS	Women	Women
60m**					1-1				
60m H	1	1			2-1				
80m									
100m							1-1	1-1	1-1
100m H				1		1-1		2-1	2-1
110m H							2-1		
200m			3			1-4			
400m							1-5	1-5	1-5
800m		5		5	Mas W 2-3	2-3			
1000m	5				2-3				
1500m			5****				2-5***	2-5	2-5
Long Jump	2	4	1	4	1-2	2-1	1-2	1-2	2-2
High Jump	4	2	****	2	1-4	1-2	1-4	1-4	2-4
Shot Put	3	3		3	1-3	1-3	1-3	1-3	2-3
Discus			4				2-2	2-2	1-2
Javelin			2			2-2*****	2-4***	2-4	1-4
Pole Vault					2-2		2-3	2-3	1-3

\* Can be one or two days for USA TF but IAAF and NCAA say two days.

\*\* International standard as well as USA TF but 50 and 55m are also allowed for both this race and hurdle race.

\*\*\* High School allows the triple jump in place of the javelin and uses 1600 m in place of the 1500m.

\*\*\*\* High School substitutes the high jump for the javelin and the 1600m for the 1500m.  
 \*\*\*\*\*Some state High School federations substitute the discus for the javelin throw.

**Youth Combined Events Summary**

Youth Events	Triathlon Bantam	Triathlon Bantam	Pentathlon Midget	Pentathlon Midget	Pentathlon Youth	Pentathlon Youth	Heptathlon Intermediate & Young Women**	Octathlon IAAF	Decathlon Intermediate & Young Men
	Boys	Girls	Boys	Girls	Boys	Girls	Girls	Boys	Boys
80m*			1	1					
100m								1-1	1-1
100m H				1	1	1	1-1	2-1	
110m H									2-1
200m		3	3				1-4		
400m	3							1-4	1-5
800m				5		5	2-3		
1000m								2-4	
1500m			5		5				2-5
Long Jump			4	4	4	4	2-1	1-2	1-2
High Jump	2	2	3	3	3	3	1-2	2-2	1-4
Shot Put	1 w 6#	1 w 6#	2 w 6#	2 w 6#	2 w 4kg	2 w 6#	1-3 w 12 #	1-3	1-3 w 4kg
Discus									2-2 w 1.6 kg
Javelin							2-2 w 600g	2-3	2-4 w 800g
Pole Vault									2-3

\* See Rule 302.6b for scoring these races and it is suggested that even lanes only be used for all youth hurdle races.

\*\* Must be over two days for Youth meets.

Otherwise youth events with the exception of implement weights, hurdle spacing and height and a difference in vertical jump increments follow the open rules for these events.

**Throw Combined Events:**

There are two throwing combined events, the Weight Pentathlon and the Ultra Weight Pentathlon. The Weight Pentathlon is listed by USATF and WMA. The Ultra Weight Pentathlon is a new event for USATF only in 2005 although it has been held as an unofficial event in the past.

Note: the various weight categories are not defined for age groups under 20 years old.

**Weights Used By Age Group.**

Age Group	Weight Pentathlon				Ultra Weight Pentathlon						
	Hammer	Shot	Discus	Javelin	Weigh#	Super - Weight #*	35# 15.88kg	56# 25.40kg	98# 44.50kg	200# 90.80kg	300# 136.10kg
Open-49	7.26kg	7.26kg	2kg	800g	35	56			98	200	300
50-59	6kg	6kg	1.5kg	700g	25	56			98	200	300
60-69	5kg	5kg	1kg	600g	20	56			98	200	300
70-79	4kg	4kg	1kg	500g	16	35		56	98	200	
80 +	4kg	4kg	1kg	400g	12	25	35	56	98		
Women											
Open-49	4kg	4kg	1kg	600g	20	35		56	98	200	
50-59	3kg	3kg	1kg	500g	16	25	35	56	98		
60-79	3kg	3kg	1kg	400g	12	25	35	56	98		
80 +	3kg	3kg	1kg	400g	12	20	35	56	98		

Note the Weight is both in the weight pentathlon and the ultra weight pentathlon. The super weight is just in the Ultra Weight Pentathlon.

**Equivalent Weights for Implements**

Specification	Name
Metric kg	Imperial lb
5.450	12
7.260	16
9.080	20
11.340	25
15.880	35
25.400	56
44.500	98
90.800	200
136.100	300

**Combined Event Competition Rules:**

For the most part the rules for the individual events (by age group) apply to the combined events. Rule 200 in both the USATF and IAAF Rulebooks govern the traditional combined events. Rules 201 and 202 in USATF govern the weight pentathlon and the ultra-weight pentathlon, respectively. Rule 9 in NCAA and Rule 19 in WMA cover the combined events. The High School reference is under Special Events in Rule 8-1. For the most part a Masters Combined Event competition follows the same rules as the open events with the exception of changes in the throwing weights and hurdle heights and distances (see Rule 332.3i USATF and 19 WMA in the appendix). Note the following rules from the USATF rulebook apply to all combined event competitions unless an exception is noted.

The notable exceptions to the general rules for the individual events are that:

- 1) In the Long Jump, Shot Put, Discus, and Javelin, each competitor is limited to three throws. NCAA requires these to be in order since they consider it a final. USATF and IAAF (and therefore WMA) requirement is that the attempt must be complete within the round. This can be generalized to that in throwing events and horizontal jumping events competitors will only three attempts.
- 2) If hand timing is used, then each competitor shall be timed by 3 independent timers. (Use USATF Rule 165.6 to determine official time.)
- 3) Runners are not disqualified until the second false start by an individual.
- 4) Intervals between events are up to the games committee but normally at least 30 minutes is allowed between the last competitors completion of the preceding event and the start of the subsequent event for any individual athlete unless all the athletes in the flight or section agree to a shorter interval.
- 5) When possible there should be at least 10 hours between the last event of the first day and the first event of the second day.
- 6) When more than one flight is required, the composition of flights and, where feasible, the approximate scheduled time of each flight shall be posted prior to the competition, except that the composition of flights or heats for the last event shall be determined just prior to the start of that event. The NCAA recommends 12 to 18 competitors in a flight and says they should compete in one continuous flight and in vertical jumps 5 alive should be used. Normally more than one flight would be used if you have more than about 15 athletes competing and you have two equivalent venues that can be used. This is particularly true in the vertical jumps since they are the most time consuming. Thus you may run heats in races, single flights in most field events but simultaneous vertical jump venues. Any combination is acceptable as long as facilities are equivalent.
- 7) a) Permanent Groups: If the number of competitors warrants it, they may be divided into permanent groups of not less than six as determined by the Combined Events Referee (USATF). These groupings shall continue throughout the first seven events of the decathlon and all but the last event of the other combined events (USATF). Indoors IAAF says 4 or more in heats and never less than three. This concept can be generalized to other combined events as appropriate.
- b) No Permanent Groups but have Individual Event Performances: When permanent groups are not used and individual event best performance data are available for most of the combined event competitors, the

games committee, or Combined Events Referee, may make heat and flight assignments using these data. If there are 16 or more competitors, it is recommended that more than one facility be used. (USATF)

c) No Permanent Groups and no Individual Event Performances: When no performance data are available, the competitors for each heat and flight shall be drawn by lot with no fewer than four competitors in each (USATF).

d) The NCAA will allow the group to be split by lot for field events except in the vertical jumps where they may be split based on past performance. Generally if there are two vertical jump venues, it is common practice to split the vertical jump competition that day based on the athletes expected performance for the jump being held that day, i.e. there may well be different groups on each day.

8) In the last event of a Combined Events Competition, the heats should be arranged so that one group contains the leading athletes after the penultimate event. The heat containing the leading athletes should be run last. In the 800 Meters the top placers shall be assigned, one per lane in the last heat, the next best placers in another heat, etc., according to USATF Rule 166.4.

9) The order of competition in a field event, and the assignment of lanes in a track event, is drawn by lot for each event independently.

10) The incremental increase in the High Jump and Pole Vault in Open Men's and Women's Track and Field Championships should be uniform throughout the competition at 3cm and 10cm, respectively. Although not mandated, these increments are generally followed in most Open and Masters competitions and are also recommended by the NCAA. The USATF Youth competitions use slightly larger increments of 5 and 15 cm respectively.

11) An athlete disqualified for fouling a competitor in any event can compete in the remaining events, unless the Referee rules that mere loss of points is not a sufficient penalty. (USATF, NCAA)

12) A competitor failing to attempt to start or take a trial in any event of the competition shall be considered to have abandoned the competition and should not be allowed to participate in any following events in the combined event competition. Such competitor should therefore not be included in the final placing or scoring, but shall have his/her performances before withdrawing recorded in the results of the competition. (Wording after "but" is USATF only). Any competitor deciding to withdraw from the competition should immediately inform the Referee of his/her decision to do so. The NCAA lists the competitor but with no marks in the final summary.

13) The scores of each competitor, separately and combined, should be announced to the competitors after the completion of each event.

14) Scoring for open events shall be based on the current IAAF Scoring Tables for Combined Events. The NCAA publishes those tables as part of their rulebook.

NOTE: For Masters scoring, see Rule 332.2(h) and Rule 19 WMA and in particular their Appendix B; and for Youth see Rule 302.6(b) and note at end of 302.6(f).

15) Scoring can be based on only one system of timing for each separate event. However, for record purposes, fully automatic times shall be applied where they are available, regardless of whether such times are available for other competitors in the event. Where fully automatic timing is used, the times record to the properly rounded 1/100th of a second and use the 1/100th second scoring table. If hand timed then use that chart using properly rounded times for hand timing.

15) The winner is the competitor who has scored the highest number of points in all events. In case of a tie, the winner is the competitor scoring the greatest number of points in a majority of events. If the tie still continues, the winner is the competitor scoring the greatest number of points in any one of the events. If the tie remains, the winner is the competitor with the highest number of points in a second event, etc. This procedure applies to ties for all places in the competition except for the NCAA. Note the NCAA only uses total points and does not break ties, even for first place.

16) For a record to be ratified the wind conditions for each event requiring wind readings must meet at least one of the following conditions:

a) The wind velocity in any individual event does not exceed 4.0 meters/second.

b) The average wind velocity for those events having wind requirements during the competition (simple average, sum of all winds divided by number of events such events) is less than 2.0 meters/second.

17) For a combined event record the implements used need to be certified but do not need to be recertified as legal following the record throw.

**Field Event Timing for Combined Events:**

	FIELD	HJ	PV
<b>Greater than 3</b>			
USA TF/IAAF/WMA	1	1	1
NCAA	1	1	1
HS	1	1	1 1/2
<b>If 2-3 remaining<sup>2)</sup></b>			
USA TF/IAAF/WMA	1	1 1/2	2
NCAA	1	1 <sup>1)</sup>	1 <sup>1)</sup>
HS	1	3	4
<b>If 1 remaining</b>			
USA TF/IAAF/WMA	1 <sup>4)</sup>	2	3
NCAA	1	2 <sup>3)</sup>	3 <sup>3)</sup>
HS	1	5	6
<b>CONSECUTIVE ATTEMPTS</b>			
USA TF/IAAF	2	2	3
NCAA	1	2	3
HS <sup>5)</sup>	-	-	-
<b>WARNING</b>			
USA TF/IAAF	1/4	1/4	1/4
NCAA	1/2	1/2	1/2
HS <sup>5)</sup>	-	-	-

Table Footnotes:

- 1) Because this continues to be an area for change, please review your rulebook when moving from event to event or meet to meet to make sure you are applying the appropriate time increment.
- 2) Note to be fair to all competitors this change occurs when a new round is started with only 2 or 3 remaining then all should be given the extended time for each jump including their first jump.
- 3) There is no rule covering this item but with one remaining the consecutive jump rule applies.
- 4) Same as consecutive attempts after the first attempt which will have the normal time limit unless a consecutive attempt. (Note this normally applies only to vertical jump competitions since other event should not have more than one attempt per round.)
- 5) There is no rule covering this event for high school.

**Event Schedule:**

The NCAA is the only one recommending start times or the amount of time for field events as given below. I have listed what I have found to be useful in estimating combined event schedules.

Event	NCAA	GEK
<400m	8 min per heat	5 min per heat
400m	8 min per heat	5 min per heat
<800m	8 min per heat	5 min per heat
800,1000,1500m	10 per heat	10 min per heat
Shot	3/4 min per throw or 2 1/4 min per athlete	3min/athlete
Discus	1 min per throw=3 min	3min/athlete
Javelin	1 min per throw=3 min	3min/athlete
High Jump	1minx20 jumps=20 min	10 min/athlete
Pole Vault	2 minx 8 jumps=16 min	15 min/athlete
Long Jump	2 2/3 min=8 min	5 min/athlete

**Officials:**

When combined events are held as separate events and not part of a normal track and field meet, the officials need to have a wide background in order to officiate all the events. Other than championship events it is quite common to have 6 officials per crew. You would like to have at least two officials who are proficient in throws, two in vertical jumps and two in horizontal jumps. Although six is not enough to have three timers for each runner it will get you by in all of the field events. Of course more is better but when combined events are held during the week, getting more is often a problem. If you have two flights in any venue then you will need 12 officials for each combined event. With help from the athletes, parents, and friend you can do the field event with just 2 officials. Timing sets the number of officials needed. If you have automatic timing which is most often the case for these events then having a single timer for each athlete is acceptable. But with a starter, a timing operator and up to 8 people per heat, then the minimum number of people is 10. Sometimes if you have both a decathlon and heptathlon scheduled you can use the other crew to help with the track races so that you can get by with 12 people (6 for each crew). But what should be apparently clear is that combined event officials need to have some capability for both track and field officiating and the more the better. For the throwing combined events you can get away with a minimum of 2 but more comfortably with 4 officials. For Championship meets you should have a minimum of about 10 per crew. The number of crews needed is dependent on how many simultaneous events are being conducted. Normally this is at least 4 so that about 40 people are needed. When you have that many you can have more specialized people and the track crew can be independent of the field crews. Track crew would amount to 10 or 11 people and the remaining would be split between the various field events with average crews of 7 or 8. And if you have a few more you can start to have umpires for the hurdles and the 200m. At a meet this size you would also have a combined event referee or possibly one for men and one for women, plus a Combined Events Coordinator for each group. In major meets the normal track and field event crews often also do the combined events in their area of expertise so that you have just 4 or 6 combined events officials namely, a referee and/or coordinator for each event. Although the rules for the individual events are almost identical to the open events, the scoring, timing needs and scheduling do require someone who is familiar with each of the events to make sure all of the requirements are met.

The ideal combined event official for the track and field combined events is probably a field official who also has done some combined events or timing at some level. You want a generalist. For the throws combined events a good well rounded throws official should be able to do the events.



## Appendix

### Combined Event Competition Rules

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# USATF Rules on Combined Events

## SECTION IV COMBINED EVENTS

### RULE 200 EVENTS - GENERAL RULES

1. Competition for men:

- (a) The Outdoor Pentathlon, which shall be conducted on one day in the following order:

Long Jump  
Javelin Throw  
200 Meters  
Discus Throw  
1500 Meters

- (b) The Decathlon, which shall be conducted on two consecutive days in the following order:

First Day: 100 Meters  
Long Jump  
Shot Put  
High Jump  
400 Meters  
Second Day: 110 Meter Hurdles  
Discus Throw  
Pole Vault  
Javelin Throw  
1500 Meters

- (c) The Indoor Pentathlon, which shall be conducted on one day in the following order:

60 Meter Hurdles (or 55 or 50 Meter Hurdles)\*  
Long Jump  
Shot Put  
High Jump  
1000 Meters

**\*NOTE:** *The international distance is 60m.*

- (d) The Indoor Heptathlon, which shall be conducted on two consecutive days in the following order:

First Day: 60 Meters  
Long Jump  
Shot Put  
High Jump  
Second Day: 60 Meter Hurdles  
Pole Vault  
1000 Meters

- (e) The Weight Pentathlon, which shall be conducted on one day (see Rule 201).

2. Competition for women:

- (a) The Outdoor Pentathlon, which shall be conducted on one day in the following order:

100 Meter Hurdles  
 High Jump  
 Shot Put  
 Long Jump  
 800 Meters

- (b) The Indoor Pentathlon, which shall be conducted on one day in the following order:

60 Meter Hurdles (or 55 or 50 Meter Hurdles)  
 High Jump  
 Shot Put  
 Long Jump  
 800 Meters

**\*NOTE:** *The international distance is 60m.*

- (c) The Heptathlon, which may be conducted on the same day or on two consecutive days, in the following order:

First Day: 100 Meter Hurdles  
 High Jump  
 Shot Put  
 200 Metes  
 Second Day: Long Jump  
 Javelin Throw  
 800 Meters

- (a) The Decathlon, which shall be conducted on two consecutive days in the following order:

First Day: 100 Meters  
 Long Jump  
 Shot Put  
 High Jump  
 400 Meters  
 Second Day: 100m Hurdles  
 Discus Throw  
 Pole Vault  
 Javelin Throw  
 1500 Meters

3. The Rules of Competition of USATF for each event shall apply, with the following exceptions:

- (a) In the Long Jump, Shot Put, Discus Throw, and Javelin Throw, each competitor shall be allowed three trials only.  
 (b) If hand timing is used, each competitor's time shall be timed by three Timers independently, using Rule 165.6 to determine the official time.  
 (c) No penalty shall be imposed for the first false start, but the Starter shall disqualify the offender or offenders on the second false start. False starts are called on individuals, not on the field.

**NOTE:** *In practice, when one or more competitors make a false start, others are inclined to follow and, strictly speaking, any competitor who does so has also made a false start. The Starter should charge only the competitor or competitors who, in the Starter's opinion, were responsible for the false start. This may result in more than one competitor being charged with a false start. If the unfair start is not due to any competitor, no competitor shall be charged.*

4. (a) The events, except as otherwise provided in these rules, shall be contested at such intervals as determined by the Track and Field Committee. Whenever possible, there shall be an interval of at least 30 minutes

between the time one event ends and the next event begins for any individual athlete. If possible, the time between the last event on the first day and the first event on the second day should be at least 10 hours.

- (b) When more than one flight is required in events, the composition of flights and, where feasible, the approximate scheduled time of each flight shall be posted prior to the competition, except that the composition of flights for the last event shall be determined just prior to the start of that event. Where field event flights are conducted sequentially, a minimum of 30 minutes between field event flights shall be allowed between the last attempt or finisher of one and the beginning of competition in the next unless approval for an earlier start is obtained from all competitors in the subsequent flight.
5. (a) If the number of competitors warrants it, they may be divided into permanent groups of not less than six as determined by the Combined Events Referee. These groupings shall continue throughout the first seven events of the decathlon and all but the last event of the other combined events.
    - (b) When permanent groups are not used and individual event best performance data are available for most of the combined event competitors, the games committee, or Combined Events Referee, may make heat and flight assignments using these data. If there are 16 or more competitors, it is recommended that more than one facility be used. Why changing from flight to section in b and c?
    - (c) When no performance data are available, the competitors for each heat and flight shall be drawn by lot with no fewer than four competitors in each.
    - (d) In the last event of a Combined Events Competition, the heats should be arranged so that one group contains the leading athletes after the penultimate event. The heat containing the leading athletes should be run last. In the 800 Meters the top placers shall be assigned, one per lane in the last heat, the next best placers in another heat, etc., according to Rule 166.4.
    - (e) The order of competition in a field event, and the assignment of lanes in a track event, shall be drawn by lot for each event independently.

**NOTE:** *For Youth Athletics exception, see Rule 302.6*

6. The incremental increase in the High Jump and Pole Vault in Open Men's and Women's Track and Field Championships shall be uniform throughout the competition at 3cm and 10cm, respectively.
7. An athlete disqualified for fouling a competitor in any event shall be permitted to compete in the remaining events, unless the Referee shall rule that mere loss of points is not sufficient penalty.
8. A competitor failing to attempt to start or take a trial in any event of the competition shall be considered to have abandoned the competition and shall not be allowed to participate in any following events. Such competitor shall therefore not be included in the final placing or scoring, but shall have his/her performances before withdrawing recorded in the results of the competition. Any competitor deciding to withdraw from the competition shall immediately inform the Referee of his/her decision to do so.
9. The scores of each competitor, separately and combined, should be announced to the competitors after the completion of each event.
10. Except as otherwise provided in these rules, scoring shall be based on the current IAAF Scoring Tables for Combined Events.

**NOTE:** *For Masters scoring, see Rule 332.2(h).*
11. Scoring based on only one system of timing shall be used throughout each separate event. However, for record purposes, fully automatic times shall be applied where they are available, regardless of whether such times are available for other competitors in the event. Where fully automatic timing is used, the times shall be given to 1/100th of a second and the 1/100th second scoring table shall be used.
12. The winner shall be the competitor who has scored the highest number of points in all events. In case of a tie, the winner shall be the competitor scoring the greatest number of points in a majority of events. If the tie still continues, the winner shall be the competitor scoring the greatest number of points in any one of the events. If the tie remains, the winner is the competitor with the highest number of points in a second event, etc. This procedure shall apply to ties for any place in the competition.

- For record purposes, if the automatic timing device should fail in a heat not involving the competitor who set the record, then the record may be scored using the automatic timing tables, although the competition would be scored and decided using the manual timing tables.

**NOTE:** For Rules applicable to Youth Athletics competition, see Rule 302.6.

**RULE 201  
WEIGHT PENTATHLON**

- The competition consists of the following five (5) events: Hammer Throw, Shot Put, Discus Throw, Javelin Throw, and Weight Throw. The events shall be contested in the above-mentioned order, and at such intervals as shall be determined by the Games Committee.
- Three trials shall be allowed in each event.
- The winner shall be the one who has scored the highest total of points (counting the best performance in each event) for all five (5) events, scored on the basis of the Official International Scoring Tables for the Hammer, Shot Put, Discus, and Javelin Throws, and on the basis of similarly prepared scoring tables for the Weight Throw.

**NOTE:** For Masters exception, see Rule 332.2(h).

**RULE 202  
ULTRA WEIGHT PENTATHLON**

- The competition consists of throwing the five weights listed for each age group in the following table, in the order from lightest to heaviest. The events shall be contested at such intervals as determined by the Games Committee.
- Three trials shall be allowed with each weight.
- The winner shall be the one who has scored the highest total of points (counting the best performance in each weight) for all five weights, scored on the basis of the Ultra Weight Pentathlon Table.

**NOTE:** For Masters exception, see Rule 332.2(h).

Age Group	Weight	Super-Weight	35#	56#	98#	200#	300#
<b>MEN</b>							
Open-49	35	56			x	x	x
50-59	25	56			x	x	x
60-69	20	56			x	x	x
70-79	16	35		x	x	x	
80 +	12	25	x	x	x		

Age Group	Weight	Super-Weight	35#	56#	98#	200#	300#
<b>WOMEN</b>							
Open-49	20	35		x	x	x	
50-59	16	25	x	x	x		
60-79	12	25	x	x	x		
80 +	12	20	x	x	x		

- For specifications for the implements, see Rules 195.8 and 195.9.

## Applicable Masters Rules

### Rule 332.2

(h) Combined event scoring will use current WMA scoring procedures, WMA Age Factors and IAAF scoring tables.

**NOTE:** Age factors for ages 30 to 39 are published in Masters Age-Graded Tables.

(i) The Masters Track & Field Committee may approve exceptions to the use of listed specifications if items are unavailable. The tables on the following pages show WMA specifications:

<b>HURDLE HEIGHTS AND SPACINGS</b>						
<b>Ages</b>	<b>Distance</b>	<b>Height</b>	<b>#</b>	<b>To 1st</b>	<b>Between</b>	<b>to Finish</b>
<b>WOMEN'S INDOOR</b>						
30-39	60m	0.840m (33")	5	13.00m	8.50m	13.00m
40-49	60m	0.762m (30")	5	12.00m	8.00m	16.00m
50-59	60m	0.762m(30")	5	12.00m	7.00m	20.00m
60&up	60m	0.686m (27")	5	12.00m	7.00m	20.00m
<b>MEN'S INDOOR</b>						
30-49	60m	0.991m (39")	5	13.72m	9.14m	9.72m
50-59	60m	0.914m (36")	5	13.00m	8.50m	13.00m
60-69	60m	0.840m (33")	5	16.00m	8.00m	12.00m
70-79	60m	0.762m (30")	5	12.00m	7.00m	20.00m
80&up	60m	0.686m (27")	5	12.00m	7.00m	20.00m
<b>WOMEN'S OUTDOOR SHORT</b>						
30-39	100m	0.840m((33")	10	13.00m	8.50m	10.50.m
40-49	80m	0.762m(30")	8	12.00m	8.00m	12.00m
50-59	80m	0.762m(30")	8	12.00m	7.00m	19.00m
60&up	80m	0.686m(27")	8	12.00m	7.00m	19.00m
<b>MEN'S OUTDOOR SHORT</b>						
30-49	110m	0.991m (39")	10	13.72m	9.14m	14.02m
50-59	100m	0.914m (36")	10	13.00m	8.50m	10.50m
60-69	100m	0.840m (33")	10	16.00m	8.00m	12.00m
70-79	80m	0.762m (30")	8	12.00m	7.00m	19.00m
80&up	80m	0.686m (27")	8	12.00m	7.00m	19.00m
<b>WOMEN'S OUTDOOR LONG</b>						
30-49	400m	0.762m (30")	10	45m	35m	40m
50-59	300m*	0.762m (30")	7	50m	35m	40m
60&up	300m*	0.686m (27")	7	50m	35m	400m
<b>MEN'S OUTDOOR LONG</b>						
30-39	400m	0.914m(36")	10	45m	35m	40m

50-50	400m	0.840m (33")	10	45m	35m	40m
60-69	300m*	0.762m (30")	7	50m	35m	40m
70&up	300m*	0.686m (27")	7	50m	35m	40m

\*The locations for the hurdles in the 300m event are the same as those of the last seven hurdles of the 400m event. They are not same as the high school 300m hurdle race, which uses eight hurdles.

**Rule 332.3**

(f) Privately owned implements shall be exempt from the loss of identity rule (Rule 187.12).

(g) The WMA specifications for throwing implements, including the superweight, are shown in the following table:

<b>WMA IMPLEMENTS</b>					
<b>Ages</b>	<b>Shot</b>	<b>Discus</b>	<b>Hammer</b>	<b>Javelin</b>	<b>Weight</b>
<b>WOMEN</b>					
30-49	4 kg	1 kg	4 kg	600 g	9.08 kg (20 lb)
50-59	3 kg	1 kg	3 kg	500 g	7.26 kg (16 lb)
60&up	3 kg	1 kg	3 kg	400 g	5.45 kg (12 lb)
<b>MEN</b>					
<b>Ages</b>	<b>Shot</b>	<b>Discus</b>	<b>Hammer</b>	<b>Javelin</b>	<b>Weight</b>
30-49	7.26 kg (16 lb)	2 kg	7.26 kg (16 lb)	800 g	15.88 kg (35 lb)
50-59	6 kg	1.5 kg	6 kg	700 g	11.34 kg (25 lb)
60-69	5 kg	1 kg	5 kg	600 g	9.08 kg (20 lb)
70-79	4 kg	1 kg	4 kg	500 g	7.26 kg (16 lb)
80&up	4 kg	1 kg	4 kg	400 g	5.45 kg (12 lb)

<b>SUPERWEIGHT</b>	
<b>Ages</b>	<b>Weight</b>
<b>WOMEN</b>	
30-49	15.88kg (35 lb)
50-79	11.34kg (25 lb)
80 & up	9.08kg (20 lb)
<b>MEN</b>	
30-69	25.40kg (56 lb)
70-79	15.88kg (35 lb)
80 & up	11.34kg (25 lb)

# NCAA Combined Events

## RULE 9

### Combined Events

#### SECTION 1. Order of Events

##### **Decathlon**

ARTICLE 1. The decathlon consists of 10 events that shall be held on two consecutive days in the following order:

<i>First Day</i>	<i>Second Day</i>
100 Meters	110-Meter Hurdles
Long Jump	Discus Throw
Shot Put	Pole Vault
High Jump	Javelin Throw
400 Meters	1,500 Meters

##### **Heptathlon—Women (Outdoor)**

ARTICLE 2. The heptathlon consists of seven events that shall be held on two consecutive days in the following order:

<i>First Day</i>	<i>Second Day</i>
100-Meter Hurdles	Long Jump
High Jump	Javelin Throw
Shot Put	800 Meters
200 Meters	

##### **Heptathlon—Men (Indoor)**

ARTICLE 3. The heptathlon consists of seven events that shall be held on two consecutive days in the following order:

<i>First Day</i>	<i>Second Day</i>
55/60 Meters	55-/60-Meter Hurdles
Long Jump	Pole Vault
Shot Put	1,000 Meters
High Jump	

*Note: 60 meters is the recommended distance for the dash and hurdles.*

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#### 119 RULE 9-1/COMBINED EVENTS

##### **Pentathlon—Men (Indoor and Outdoor)**

ARTICLE 4. The pentathlon consists of five events that shall be held on the same day in the following order:

<i>Indoor</i>	<i>Outdoor</i>
55-/60-Meter Hurdles	Long Jump
Long Jump	Javelin Throw
Shot Put	200 Meters
High Jump	Discus Throw
1,000 Meters	1,500 Meters

##### **Pentathlon—Women (Indoor and Outdoor)**

ARTICLE 5. The pentathlon consists of five events that shall be held on the same day in the following order:

<i>Indoor</i>	<i>Outdoor</i>
55-/60-Meter Hurdles	100-Meter Hurdles
High Jump	High Jump
Shot Put	Shot Put
Long Jump	Long Jump
800 Meters	800 Meters

#### SECTION 2. Officials and Administration

##### **Officials**

ARTICLE 1. The officials for the combined events shall be the following, plus any other officials that the meet director deems necessary:

Games committee Timers	
Combined-events jury	Announcer
Referee	Scorer
Starter	Combined-events director
Clerk of the course	FAT operators
Field judges	Markers
Marshals	Medical doctor and/or



Umpires (track)                      Certified trainer

### **Applicable Rules**

ARTICLE 2. The rules for each of the events constituting the competition shall apply, except:

- a. Each competitor shall be allowed only three attempts in the long jump and throwing events. These attempts must be taken in order.
- b. In the running events and hurdles, competitors shall be disqualified in any event in which they have made two false starts.

#### 120 RULE 9-2/COMBINED EVENTS

- c. Each competitor shall be independently timed by at least three timers, and the times shall be recorded in accordance with track and field rules. If FAT is used, it is suggested that two timing systems be utilized throughout the competition.
- d. If both FAT systems fail, hand times for all competitors in that event shall be used.
- e. If both FAT systems fail in the 800 and 1,500 meters, a conversion is not necessary. The results for competitions timed electronically and timed manually for these events are strictly comparable.
- f. Altitude adjustment is not applicable to the 1,500 meters.
- g. If separate but equal facilities are available for the decathlon events (pole vault, high jump and long jump) or pentathlon/heptathlon events (high jump and long jump), the games committee shall make the final determination for use of the facilities.
- h. In the high jump, each competitor shall be allowed two minutes between consecutive attempts;
- i. In the pole vault, each competitor shall be allowed three minutes between consecutive attempts;
- j. In the high jump and pole vault, the starting height of the crossbar shall be determined by the competitors. Each increment rise shall be determined by the games committee and such increment raises shall be followed throughout the competition regardless of the number of competitors.  
The recommended increment for the high jump shall be 3 centimeters and for the pole vault shall be 10 centimeters. When one competitor remains, only multiples of 3 centimeters in the high jump and 10 centimeters in the pole vault may be used.
- k. The javelin and discus shall be measured to the lesser centimeter.
- l. The shot put shall be measured to the lesser centimeter.

*Note: It is recommended that all performances be measured with a steel tape.*

### **Administration**

ARTICLE 3. The administration of combined events always should provide fair and equal competition for all events. The recommended number of competitors for championships meets is 12 to 18.

### **Grouping Field-Event Competitors**

ARTICLE 4. All competitors shall compete in field events in one continuous flight drawn by lot. (Example: If there are 16 entries, all 16 shall take one

#### 121 RULE 9-2/COMBINED EVENTS

attempt, or pass, before the initial competitor takes a second attempt.) In the vertical jumps, the five-alive method of competition shall be used (see Rule 6-4-3).

The exception to this would be if the host institution has two facilities where all conditions are equal. In this event, the 16 competitors could be split by lot, with eight at each facility, except in the vertical jumps, where competitors may be split based on past performance.

### **Forming Sections**

ARTICLE 5. If sections and lane assignments are necessary in any running event, they shall be determined by lot.

- a. It is recommended that not fewer than three competitors start in any section.
- b. When possible and practical, all competitors in the 800, 1,000 and 1,500 meters should run in one section. If the number of competitors in the 800 or 1,000 meters exceed the number of lanes on the track, all groups shall use a waterfall start, which may be staggered (i.e., alleys). When using alleys, two-thirds of the competitors should be placed on the inside and one-third on the outside. The referee shall designate competitors for these groups. The current points leaders shall run in the final section.
- c. Lanes shall be drawn by the games committee by lot for the 100 meters, 200 meters, 400 meters and hurdle events.

### **Hurdle Placement**

ARTICLE 6. In order to assure equitable competition:

- a. Hurdles may be run in alternate or consecutive lanes, as determined by the games committee.
- b. Hurdles must be placed in all lanes.

### **Competitors Fouling Another Competitor**

ARTICLE 7. A competitor who fouls another competitor in any event shall lose all the points gained in that event but shall be permitted to compete in the remaining event(s), unless the referee shall rule that the loss of points is not sufficient penalty.

### **Scoring**

ARTICLE 8. An athlete failing to report and start in any events of the combined-event competition shall be considered to have abandoned the competition and shall not be allowed to participate in any following event of the combined-event competition. The competitor shall be listed in the final results as having abandoned the competition with no marks recorded.

#### 122 RULE 9-2/COMBINED EVENTS

The winner of the combined-events competition shall be the competitor who has scored the highest number of points in all events awarded on the basis of the International Association of Athletics Federations (IAAF) scoring tables. (See Part II) Ties shall not be broken.

### **SECTION 3. Time Schedule**

#### **Intervals**

ARTICLE 1. An interval of at least 30 minutes should be allowed between the time one event ends and the next event begins. Should circumstances dictate and at the discretion of the games committee, this interval may be altered.

#### **Schedule**

ARTICLE 2. a. The following guidelines should be used in preparing the combined-events time schedule (this is not to be confused with the official time allowable between events):

- (1) Forty-five seconds per shot put;
  - (2) One minute per discus and javelin throw;
  - (3) One minute per high jump (average 10 jumps per competitor);
  - (4) One minute and 30 seconds per long jump;
  - (5) Two minutes per pole vault (average eight vaults per competitor);
  - (6) Eight minutes for one heat of any running event less than 800 meters; and
  - (7) Ten minutes for one heat of the 800, 1,000 and 1,500 meters.
- b. The referee shall have the power to designate an approximate starting time for all combined-events competition.
- c. Due to the nature of combined-events competition, it is advisable to take temperature and humidity into consideration when determining the appropriate starting time.
- d. Whenever both men's and women's combined events are conducted together, it is advisable to start the decathlon at least one hour before the heptathlon on both days.

# IAAF

## RULE 200

### Combined Events Competitions

#### **MEN JUNIOR AND SENIOR (Pentathlon and Decathlon)**

1. The Pentathlon consists of five events which shall be held on one day in the following order: Long Jump; Javelin; 200m; Discus; and 1500m.

2. The Men's Decathlon consists of ten events which shall be held on two consecutive days in the following order:

First day 100m; Long Jump; Shot Put; High Jump and 400m.

Second day 110m Hurdles; Discus; Pole Vault; Javelin and 1500m.

#### **WOMEN JUNIOR AND SENIOR (Heptathlon and Decathlon)**

3. The Heptathlon consists of seven events, which shall be held on two consecutive days in the following order: First day 100m Hurdles; High Jump; Shot Put and 200m.

Second day Long Jump; Javelin and 800m.

4. The Women's Decathlon consists of ten events which shall be held on two consecutive days in the following order:

First day 100m; Discus; Pole Vault; Javelin and 400m.

Second day 100m Hurdles; Long Jump; Shot Put; High Jump and 1500m.

168 RULE 200

#### **BOYS YOUTH (Octathlon)**

5. The Octathlon consists of eight events, which shall be held on two consecutive days in the following order:

First Day 100m; Long Jump; Shot Put and 400m

Second Day 110m Hurdles; High Jump; Javelin and 1000m

#### **GIRLS YOUTH (Heptathlon)**

6. The Heptathlon consists of seven events, which shall be held on two consecutive days in the following order:

First Day 100m Hurdles; High Jump; Shot Put and 200m

Second Day Long Jump; Javelin and 800m

#### **GENERAL**

7. At the discretion of the Combined Events Referee, there shall, whenever possible, be an interval of at least 30 minutes between the time one event ends and the next event begins, for any individual athlete. If possible, the time between the finish of the last event on the first day and the start of the first event on the second day should be at least 10 hours.

8. The order of competing may be drawn before each separate event. In the 100m, 200m, 400m, 100m Hurdles and 110m Hurdles events, the athletes compete in groups as decided by the Technical Delegate, so that preferably five or more athletes but never less than three are in each Group. In the last event of Combined Event Competition, the heats should be arranged so that one group contains the leading athletes after the penultimate event. With this exception, the heats for the next event may be drawn as, and when, athletes become available from the previous event. The Combined Events Referee shall have the authority to rearrange any group if, in his opinion, it is desirable.

9. The IAAF Rules for each event constituting the competition will apply with the following exceptions:

169 RULE 200

(a) in the Long Jump and each of the throwing events, each athlete shall be allowed three trials only.

(b) in case automatic timing equipment is not available, each athlete's time shall be taken by three timekeepers independently.

(c) in the track events, an athlete shall be disqualified in any event in which he has made two false starts.

10. Only one system of timing may be applied throughout each event. However, for record purposes, times obtained from a fully automatic Photo Finish system shall be applied regardless of whether such times are available for other athletes in the event.

11. Any athlete failing to attempt to start or make a trial in one of the events shall not be allowed to take part in the subsequent events but shall be considered to have abandoned the competition. He shall not, therefore, figure in the final classification. Any athlete deciding to withdraw from a Combined Events Competition shall immediately inform the Combined Events Referee of his decision.

12. The scores, according to the current IAAF Scoring Tables, shall be announced, separate for each event and as a cumulative total, to all athletes after the completion of each event. The winner shall be the athlete who has obtained the highest total number of points.

13. In the event of a tie, the winner shall be the athlete who, in the greater number of events, has received more points than the other athlete(s) tying. If this does not resolve the tie, the winner shall be the athlete who has the highest number of points in any one event and if that does not resolve the tie, the winner shall be the one with the highest number of points in a second event, etc. This shall also apply to ties for any other place in the competition.

170 RULE 200

## INDOORS

RULE 222

Combined Events Competitions

1. With the following exceptions, Rule 200 shall apply to Combined Events competitions indoors:

### **Men (Pentathlon)**

2. The Pentathlon consists of five events, which shall be held on one day in the following order:

60m Hurdles, Long Jump, Shot Put, High Jump, 1000m

### **Men (Heptathlon)**

3. The Heptathlon consists of seven events which shall be held over two consecutive days in the following order:

First day: 60m, Long Jump, Shot Put, High Jump

Second day: 60m Hurdles, Pole Vault, 1000m

### **Women (Pentathlon)**

4. The Pentathlon consists of five events and shall be held on one day in the following order:

60m Hurdles, High Jump, Shot Put, Long Jump, 800m.

### **Order of Competition**

5. The order of competing may be drawn before each separate event. In the 60m and 60m Hurdle events, the athletes shall compete in groups as decided by the Technical Delegate, so that preferably four or more athletes, but never less than three, are in each group.

181 RULES 221, 222

## WMA

### 19. COMBINED EVENTS COMPETITIONS

(1) All Combined Events Competitions shall be conducted using the specifications as set out in Appendix A. All Combined Events Competition scoring shall be as set out in Appendix B.

(2) In all Combined Events, only a single attempt at each running event is allowed and a maximum of three attempts shall be allowed in all field events except the High Jump and Pole Vault where three successive misses, or voluntary withdrawal, eliminates an athlete.

(3) In Masters Combined Events, IAAF Rule 200(8) (IAAF Handbook 2002-2003) shall apply.

(4) Women's Pentathlon

The order of events for the women's Indoor and Outdoor Pentathlon shall be:

Short Hurdles

High Jump

Shot Put

Long Jump

800 Meters

(5) Men's and Women's Weight Pentathlon

The order of events for the men's and women's Weight Pentathlon shall be:

Hammer Throw

Shot Put

Discus Throw

Javelin Throw

Weight Throw

#### APPENDIX B / ANNEXE B / ANHANG B

##### Scoring of WMA Combined Events Competitions

The scoring of Master's Combined Events competitions is as follows. In all events the scoring procedure is exactly like normal IAAF Combined Events scoring with the addition of one additional step. That additional step is that the actual performance in each event is multiplied by the appropriate Age Factor to arrive at an Age Factored Performance. This Age Factored Performance is then looked up in the current IAAF Combined Events Scoring Tables in the normal manner.

**Age Factors** The Age factors to be used for each gender and age group are listed in the appropriate WMA Appendix. Use the full, four place, number for Age Factoring. Round the result of the multiplication as shown below. Note: the Age Factors automatically correct for the reducing WMA implements and distances. So a M65-69 man throwing a 5 Kilogram Shot can be looked up in the standard IAAF scoring table for the 7.26 Kilogram shot put after multiplying his actual performance times the Age Factor because the Age Factor takes into account the fact that he is throwing a smaller Shot. The same is true with a W60-64 woman running 80 meter hurdles, .762 meter high with 7 meter spacing. The Age Factor automatically produces an Age Factored Performance that can be looked up in the standard IAAF 100 Meter, .840 high, 8.5 meter spaced women's hurdle table.

**Rounding** The general rule is that rounding is done so as to never give artificial aid to the performer. So, after multiplying the Actual Performance by the Age Factor, be sure to round all running events up to the higher one hundredth of a second and round all throwing and jumping events down to the shorter centimeter. Remember: Run up, Jump down, and Throw down.

Example:

M50-55 man runs a 13.12 second Actual Performance in the 100 Meter event. 13.12 times .8917 Age Factor equals an Age Factored Performance of 11.699104. 11.699104 rounded up equals 11.70 to look up in the standard IAAF Combined Events scoring table. 11.70 is awarded 711 points.

Example:

W35-39 woman jumps a 1.47 meter Actual Performance in the High Jump. 1.47 times the 1.0408 Age Factor equals a 1.529976 Age Factored Performance. 1.529976 rounded down equals 1.52 to look up in the standard IAAF Combined Events scoring table. 1.52 is awarded 644 points.

### Scoring Tables

The scoring tables to use are the current edition of the "Scoring Tables for Men's and Women's Combined Events Competitions" and the various supplements that the IAAF has published. (see below for the formulas that describe the scoring in the tables) If a performance is being scored that does not appear in the tables, be sure to move to the performance that results in less points being scored, not more.

Example:

Looking up a male 66.06 second 400 meter, the 66.09 score must be used not the 66.05 score. 66.06 is closer to 66.05 than it is to 66.09 but is faster than was actually ran. 66.06 therefore is awarded 230 points.

Example:

Looking up a male 12.36 meter Shot Put, the 12.35 score must be used, not the 12.37 score. 12.36 is equally close to 12.37, but 12.37 is farther than was actually thrown. 12.36 therefore is awarded 628 points.

### Hand Timing

If Combined Events running events, from 400 meters down (including hurdles), are hand timed, the times have to be corrected before multiplying by the appropriate Age Factor. Then the score must be looked up in the fully automatic portion of the scoring Tables (The hand times portions of the scoring tables are never used in Master's Combined Events scoring). The IAAF corrections to apply are: 50 through 300 Meters add 0.24 seconds to the hand time 400 Meters add 0.14 seconds to the hand time all above 400 Meters add nothing (use auto or hand time as is) Example: M40-44 man runs a 17.7 second hand timed .991 meter (39") high, 110 meter hurdles.

17.7 plus .24 Correction equals 17.94. 17.94 times .9328 equals a 16.734432 Age Factored Performance.

16.734432 rounds up to 16.74 to look up in standard IAAF scoring table. 16.74 is awarded 652 points.

### Weight Throw

The Weight Throw now has an official IAAF scoring table and is scored as any other throw.

Example: A M70-74 Weight Pentathlete throws the 16 pound Weight 14.67 meters. 14.67 times the 1.2943 Age Factor equals an 18.987381 Age Factored Performance 18.987381 is rounded down to 18.98 18.98 is looked up in men's Weight table as 964 points.

### IAAF Combined Events Scoring Formulas

The official IAAF scoring tables are generated by the following mathematical formulas. The results of the formulas must be truncated to the integer and not rounded up. So a formula result of 674.999 is 674 points, not 675, and 872.001 is 872.

**Running Events:** Points =  $a (b - \text{Performance})^c$

**Jumping and Throwing Events:** Points =  $a (\text{Performance} - b)^c$

#### Men:

55 m  $a=78.8196$   $b=10.75s$   $c=1.81$

60 m  $a=58.015$   $b=11.5s$   $c=1.81$

100m  $a=25.4347$   $b=18s$   $c=1.81$

200m  $a=5.8425$   $b=38s$   $c=1.81$

300m  $a=2.58503$   $b=60.1s$   $c=1.81$

400m  $a=1.53775$   $b=82s$   $c=1.81$

1000m  $a=.08713$   $b=305.5s$   $c=1.85$

1500m  $a=.03768$   $b=480s$   $c=1.85$

55m hurdle  $a=54.5278$   $b=14.25s$   $c=1.92$

60m hurdle  $a=20.5173$   $b=15.5s$   $c=1.92$

110m hurdle  $a=5.74352$   $b=28.5s$   $c=1.92$

high jump  $a=.8465$   $b=75cm$   $c=1.42$

pole vault  $a=.2797$   $b=100cm$   $c=1.35$

long jump  $a=.14354$   $b=220cm$   $c=1.40$

shot put  $a=51.39$   $b=1.5m$   $c=1.05$

discus  $a=12.91$   $b=4m$   $c=1.10$

hammer  $a=13.0449$   $b=7m$   $c=1.05$

javelin  $a=10.14$   $b=7m$   $c=1.08$

weight  $a=47.8338$   $b=1.5m$   $c=1.05$

**Women:**

55m a=66.2501 b=12s c=1.81  
60 m a=46.0849 b=13s c=1.81  
100m a=17.857 b=21s c=1.81  
200m a=4.99087 b=42.5s c=1.81  
400m a=1.34285 b=91.7s c=1.81  
800m a=.11193 b=254s c=1.88  
1000m a=.07068 b=337 c=1.88  
1500m a=.02883 b=535 c=1.88  
55m hurdle a=28.7345 b=15.5s c=1.835  
60m hurdle a=20.0479 b=17s c=1.835  
100m hurdle a=9.23076 b=26.7s c=1.835  
high jump a=1.84523 b=75cm c=1.348  
pole vault a=.44125 b=100 c=1.35  
long jump a=.188807 b=210cm c=1.41  
shot put a=56.0211 b=1.5m c=1.05  
discus a=12.3311 b=3m c=1.10  
hammer a=17.5458 b=6m c=1.05  
javelin a=15.9803 b=3.8m c=1.04  
weight a=52.1403 b=1.5m c=1.05

**NFHS** See Rule 8-1 for the events listing.