

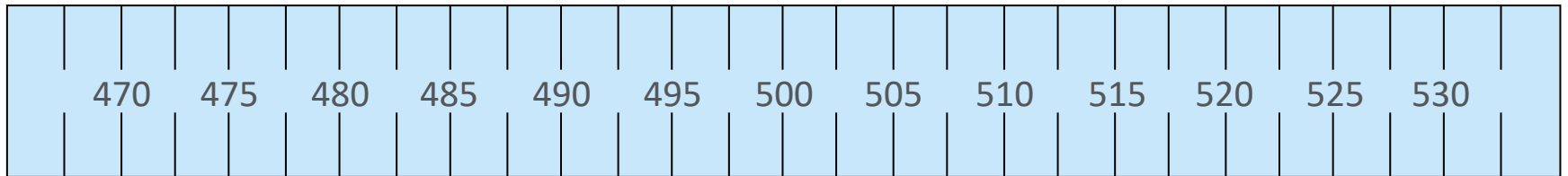
The WJ IV Relative Proficiency Index (RPI)

March 9, 2023

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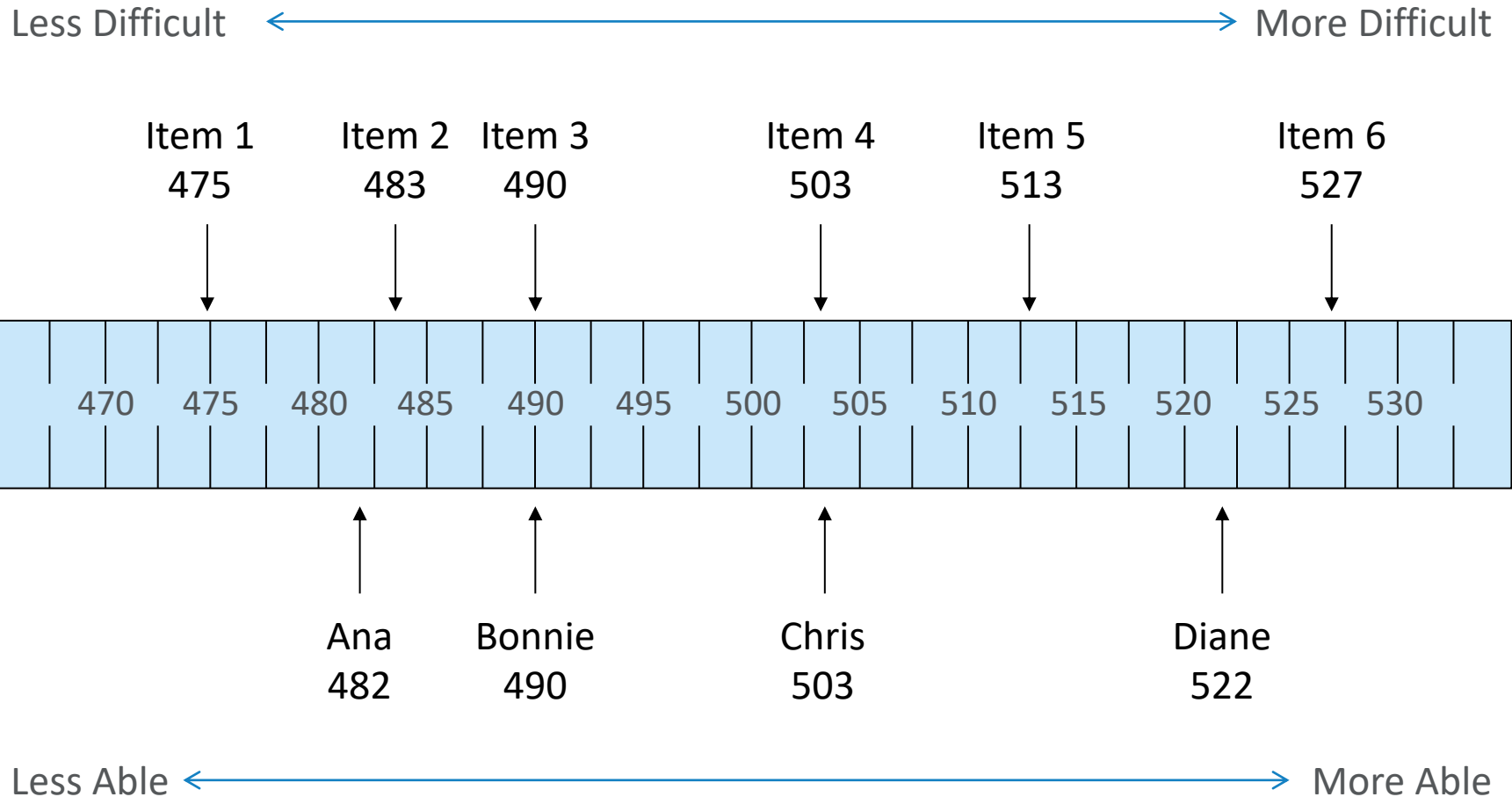
W SCALE = "RULER"

Represents a latent trait or ability



500 = "typical" 10-year old

We can put ITEMS and PEOPLE on the same ruler!

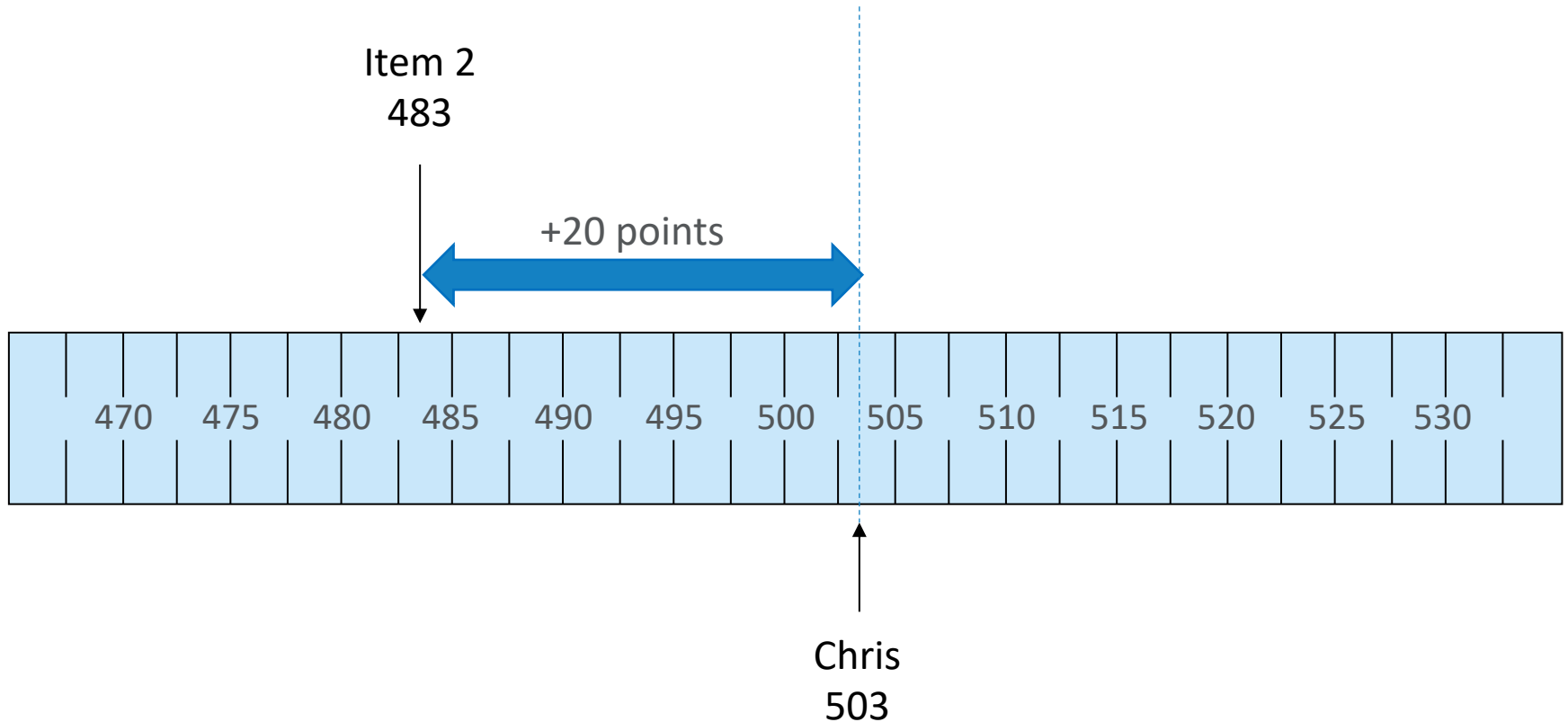


Distances between items and people are meaningful

If examinee ability is...	Then the examinee's chance of success on the item is:
50 points HIGHER than item difficulty	99%
30 points HIGHER than item difficulty	96%
20 points HIGHER than item difficulty	90%
10 points HIGHER than item difficulty	75%
the SAME as item difficulty	50%
10 points LOWER than item difficulty	25%
20 points LOWER than item difficulty	10%
30 points LOWER than item difficulty	4%
50 points LOWER than item difficulty	0%

Easy Item

Likelihood of success = ??

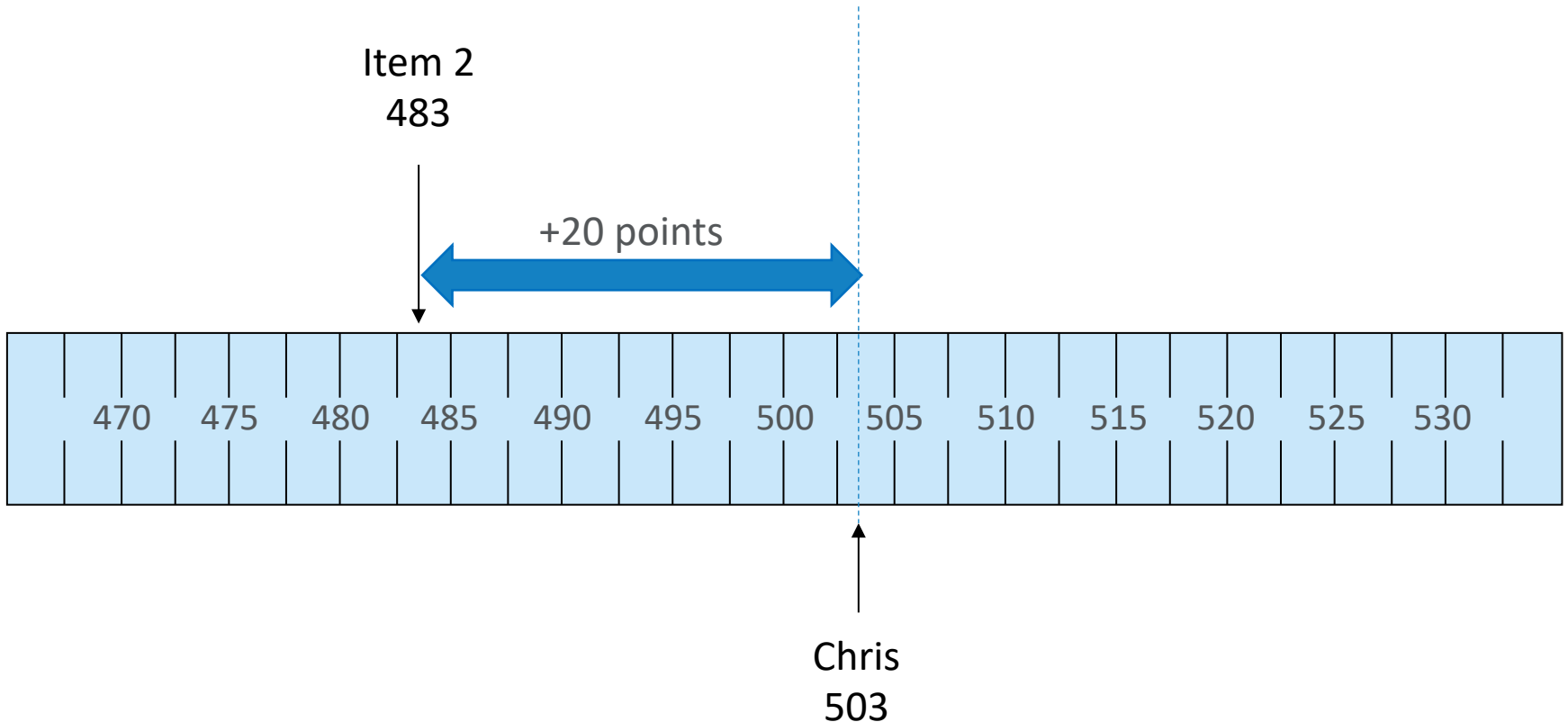


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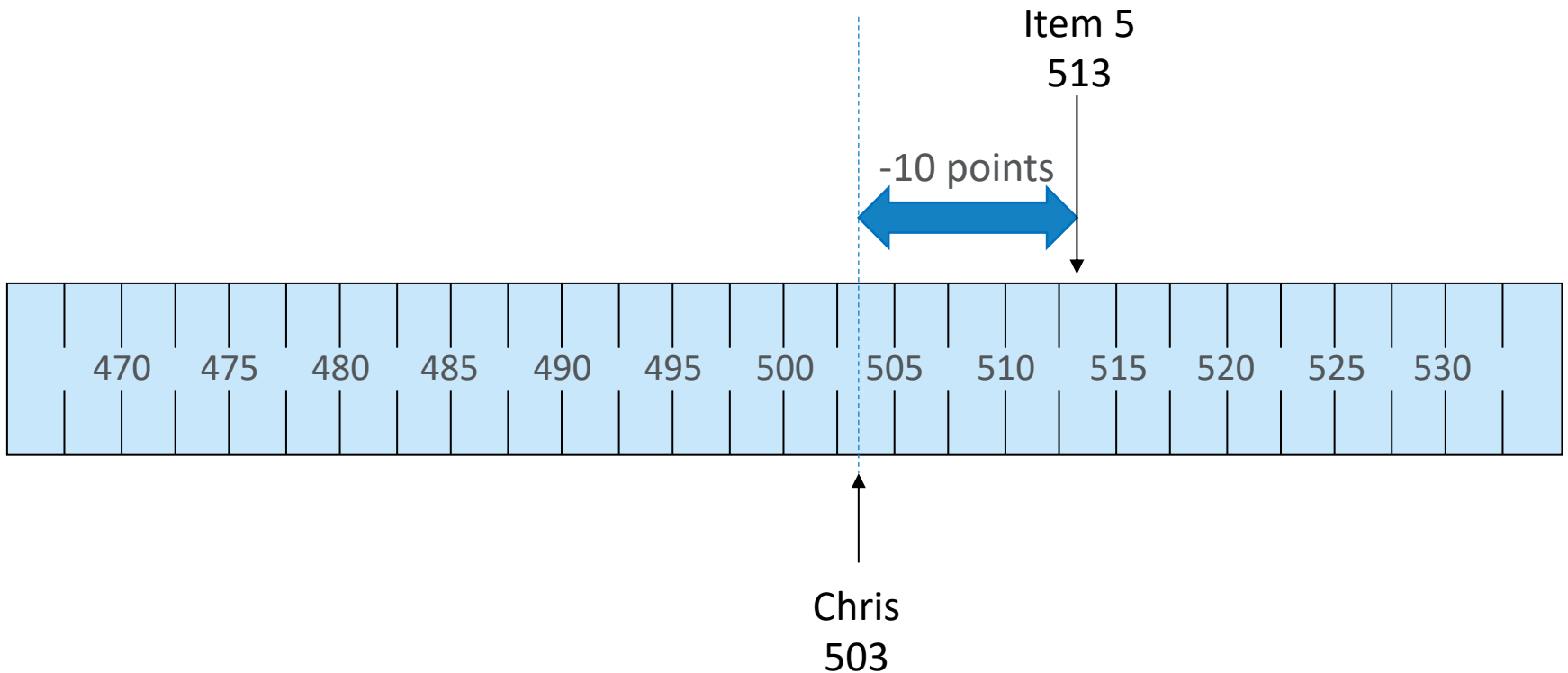
Easy Item

Likelihood of success = **90% (EASY!)**



Difficult Item

Likelihood of Success = ??

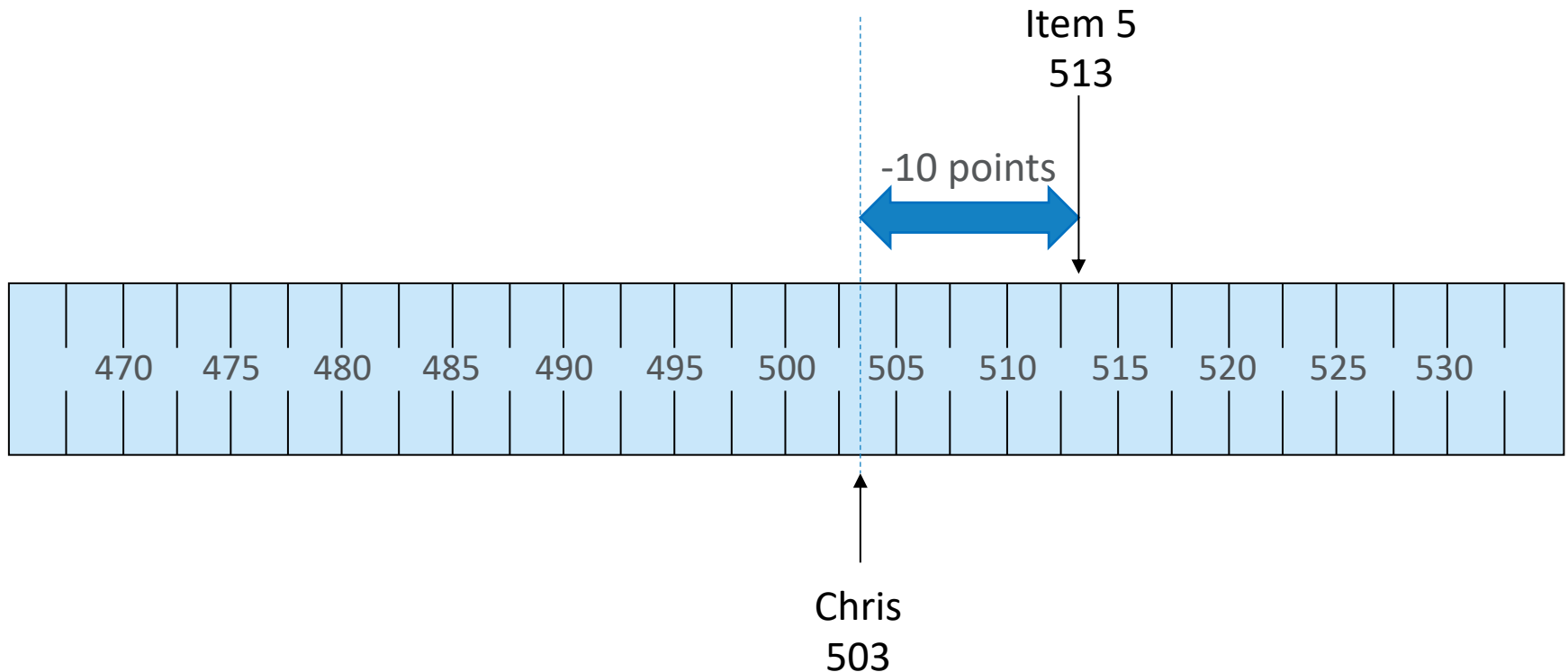


Distances between items and people are meaningful

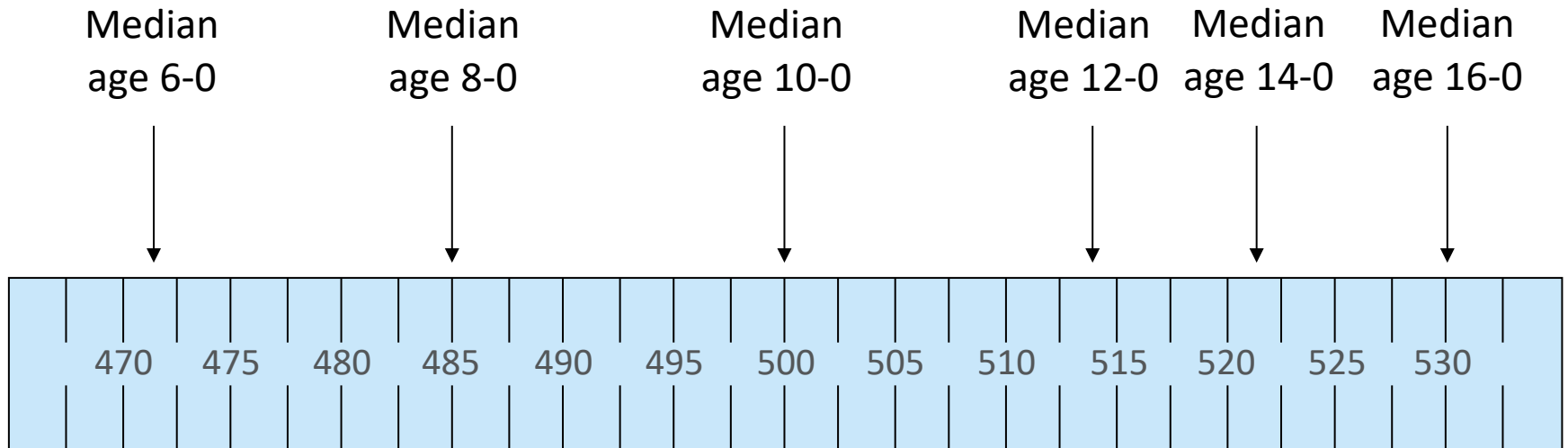
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Difficult Item

Likelihood of Success = **25% (PRETTY DIFFICULT!)**

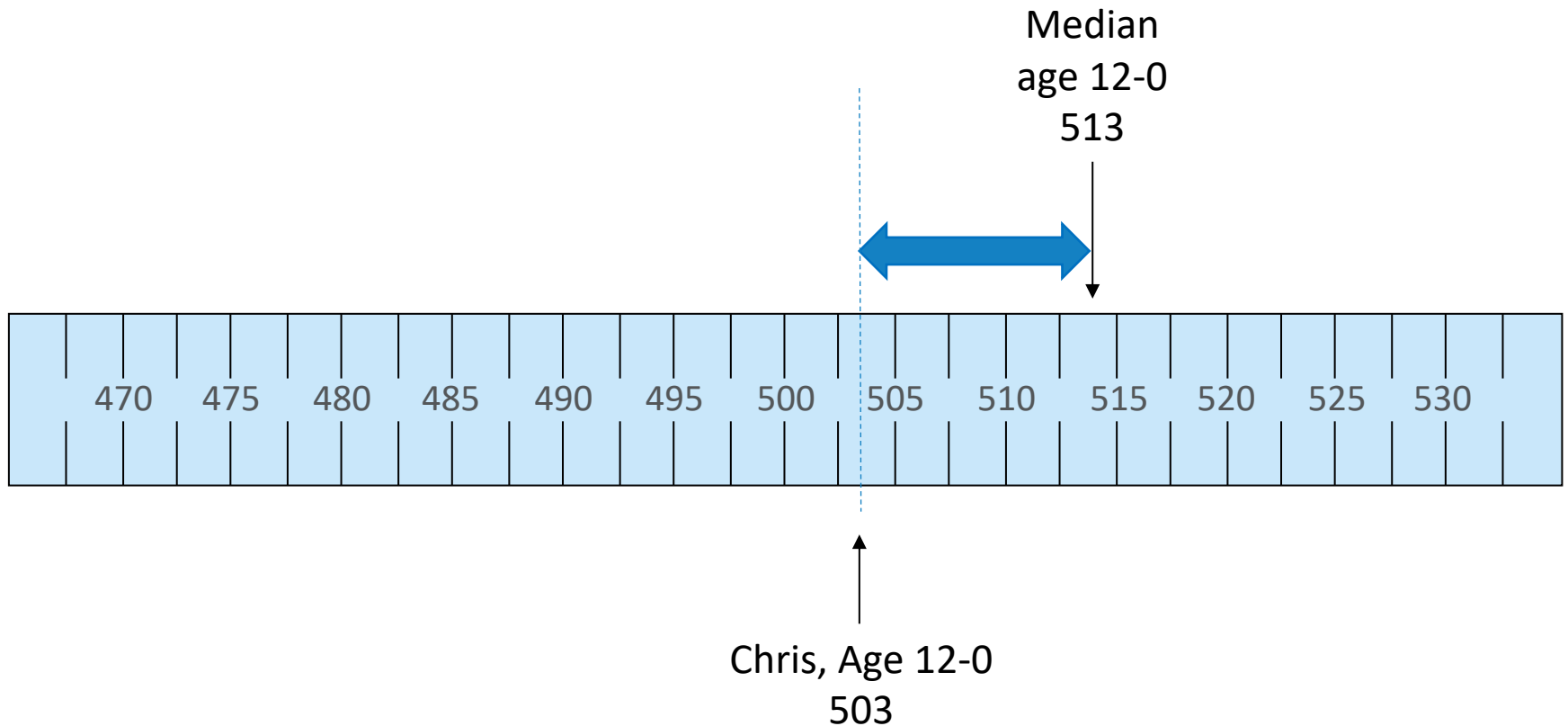


We can also locate **groups of people** on the *W* scale



(“REFERENCE *W*”)

The distance between an examinee's *W* score and their Reference *W* has meaning!



(“*W* DIFFERENCE”)

Relative Proficiency Index

Based on the *W* Difference score

Expressed as a “ratio”:

$$\frac{\{\text{examinee's likelihood of success}\}}{90}$$

where the 90 in the denominator represents tasks that same-age or same-grade peers can complete with 90% success.

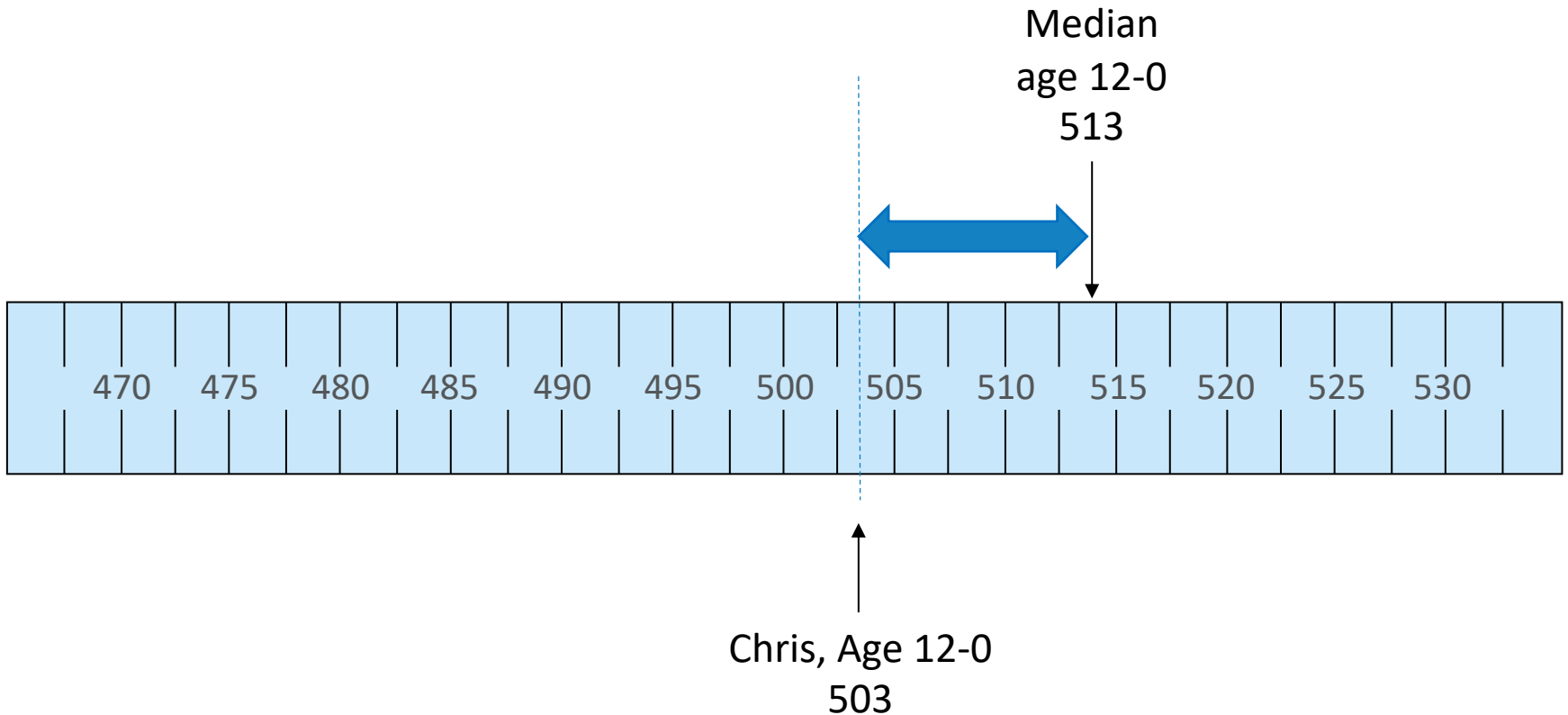
Relative Proficiency Index

W DIFF	RPI	W DIFF	RPI	W DIFF	RPI	W DIFF	RPI
>28	100/90	-5	84/90	-21	47/90	-37	13/90
20-28	99/90	-6	82/90	-22	45/90	-38	12/90
14-19	98/90	-7	81/90	-23	42/90	-39	11/90
11-13	97/90	-8	79/90	-24	39/90	-40	10/90
8-10	96/90	-9	77/90	-25	37/90	-41	9/90
6-7	95/90	-10	75/90	-26	34/90	-42	8/90
5	94/90	-11	73/90	-27	32/90	-43	7/90
4	93/90	-12	71/90	-28	29/90	-44	7/90
3	93/90	-13	68/90	-29	27/90	-45	6/90
2	92/90	-14	66/90	-30	25/90	-46	5/90
1	91/90	-15	63/90	-31	23/90	-47	5/90
0	90/90	-16	61/90	-32	21/90	-48 to -50	4/90
-1	89/90	-17	58/90	-33	19/90	-51 to -53	3/90
-2	88/90	-18	55/90	-34	18/90	-54 to -58	2/90
-3	87/90	-19	53/90	-35	16/90	-59 to -68	1/90

Relative Proficiency Index

W Difference = -10

$$\text{RPI} = 75/90$$

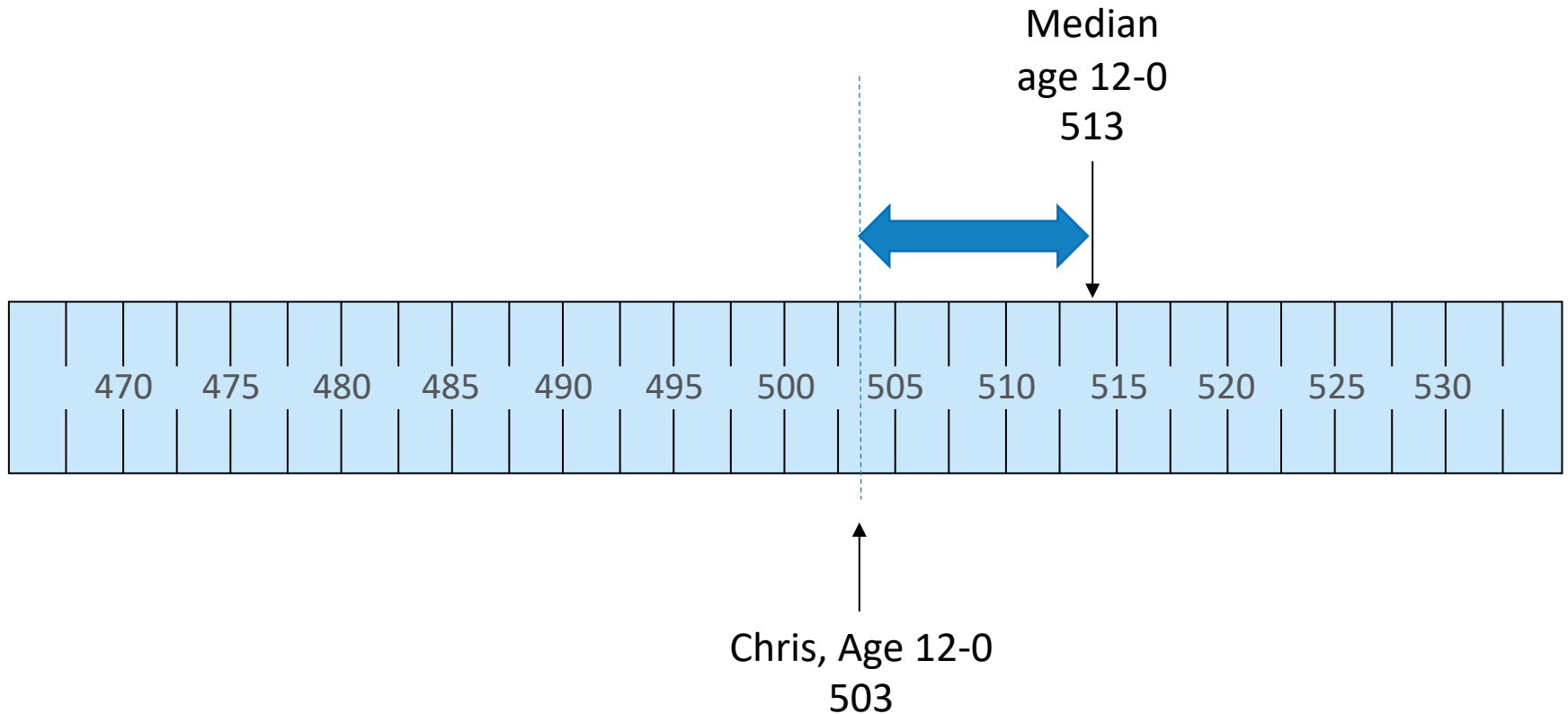


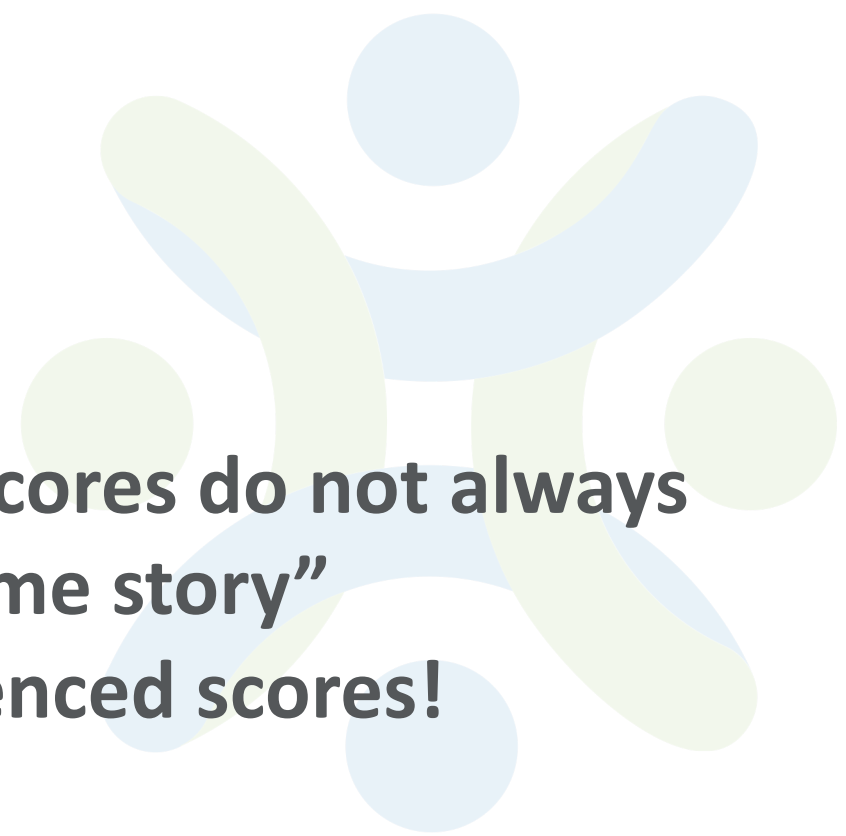
The *W* Difference and RPI ranges also tell us how *easy* or *difficult* tasks will be for the examinee

W Difference	RPI Range	Proficiency Level	Examinee will find age- or grade-level tasks:
> +30	100/90	Very Advanced	Extremely Easy
+14 to +30	98/90 to 100/90	Advanced	Very Easy
+7 to +13	95/90 to 98/90	Average to Advanced	Easy
-6 to +6	82/90 to 95/90	Average	Manageable
-13 to -7	67/90 to 82/90	Limited to Average	Difficult
-30 to -14	24/90 to 67/90	Limited	Very Difficult
-50 to -31	3/90 to 24/90	Very Limited	Extremely Difficult
< -50	0/90 to 3/90	Extremely Limited	Virtually Impossible

Chris will be **75% successful** with tasks his peers can complete with 90% success.

Age-level tasks will be **difficult** for Chris.





W Difference-based scores do not always
“tell the same story”
as norm-referenced scores!



SLD

The RPI adds that missing information when the SS is “average”



Measure of Proficiency

- Offers criterion-referenced information
- Describes the quality of performance
- Helps monitor progress
- Indicates the range of development or instruction



What Is the Relative Proficiency Index (RPI)?

- Provides a criterion-referenced index of a person's proficiency or functionality
- Compares a person's proficiency to that of the average age or grade peer
- Predicts level of success on similar tasks
- Shows distance from average
- Based on W Difference



What SS/PR Can and Cannot Provide

SS/PR DO:

Compare students
and give their
relative standing
among age or grade
peers.

SS/PR DO NOT:

~~Give us specific
information to drive
instruction.
Speak to
proficiency.~~



Understanding RPIs

RPI

52/90

When average grade or age students have 90-percent success on this skill, this student has **52-percent** success.

Criterion-Referenced Interpretation of RPI Scores

RPI	Instructional Level
96/90 to 100/90	Independent
76/90 to 95/90	Instructional
75/90 and below	Frustration



Describing RPI scores



Julie's RPI of 5/90 on spelling indicates she will be frustrated compared to average grade mates.



Nico is likely to have 90% success on similar math calculation tasks (RPI=90/90).



Karen will find decoding tasks easy at a beginning 3rd grade level, but difficult at a mid-4th grade level

**Can standard scores and RPIs
tell different stories?**

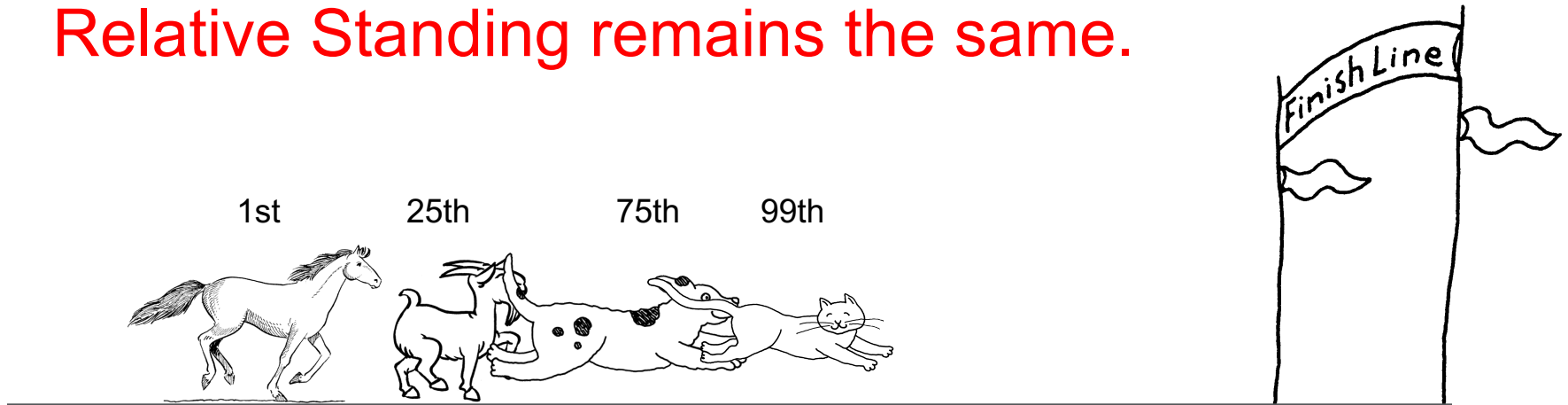
YES



SS/PR Versus RPI

Notice that the percentiles do not change:

Relative Standing remains the same.



PR 25 = SS 90

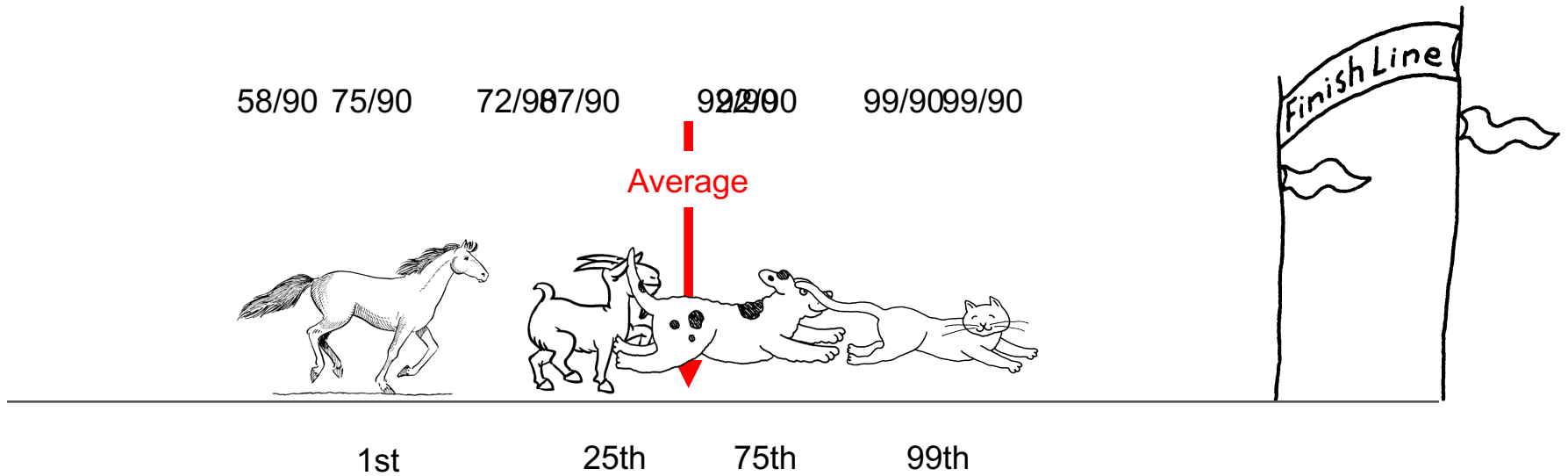
PR 75 = SS 110



SS/PR Versus RPI

But the distance from “average” has changed:

Proficiency does NOT remain the same.



Case Study #1: Daniel

Introducing Daniel

- 9 years old
- 4th grade
- Has been receiving Basic Skills for Reading since 2nd grade



CLASSROOM OBSERVATION

- Daniel struggles in subjects where reading is required
- His participation in classroom discussions is limited
- He sometimes “acts out” and tries to be the class clown, especially during independent work time

HOME OBSERVATIONS

- Does not like to read at home for pleasure
- Reports that Daniel has been withdrawing from his friends
- Parents are considering getting a tutor for reading

Questions?