**Purpose**

- eliminates ambiguous or misleading items in a single test administration
- increases instructors’ skills in test construction
- identify specific areas of course content which need greater emphasis or clarity

**Item Difficulty Index**

- the percentage of students who answered a test item correctly

$p$-value: helps determine significance of results
• occasionally, everyone knows the answer

\( p \)-value:
helps determine significance of results

An unusual high level of success may be due to:

a) previous teacher
b) knowledge from home; child’s background
c) excellent teaching

Low scores mean—
Motivation level?
Ability of teacher?
Construction of the assessment item?

Is it the students fault for “not trying”?
**Item Difficulty Index**

\[ p = \frac{\text{total who answered correctly}}{\text{total taking the test}} \]

\*p is the difficulty index

- p value = 0.88

- High Difficulty Level at \( p > .80 \)
- Were students taught well?
- Was the item too easy?

88% of the students were correct
Sample Problem:
In a Math test administered by Mr. Reyes, seven students answered word problem #1 correctly. A total of twenty-five students took the test.

What is the difficulty index for word problem #1?

\[ p = 0.28 \]

- Low Difficulty level at \( p < .30 \)
- Students did not understand concept?
- Badly constructed item?
- Poorly taught?

28% of the students were correct

- When should we use \( p \) value?
- Determine significance of an item
- Determine effective teaching
- Make better inferences

Questions?