DEPARTMENT OF EDUCATION

PAWS
Mathematics
Grade 8

Released Items
With Data

Statistics and Probability

Copyright © **2016** by the Wyoming Department of Education.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the Wyoming Department of Education.

Portions of this work were previously published.

Printed in the United States of America.

Mathematics Released Items with Data
Introduction Page / Data Definitions

This Released Items with Data document provides a subset of items from the 2015 administration of the PAWS test. The data for an item is on the page that follows that item. The following provides definitions for the data fields on the data page.

Item Information

Title: Title of the passage/stimulus the item belongs to

2012 WyCPS Domain: The reporting category of the state content standards

2012 WyCPS Standard: State content standard

Item Code: Identification code assigned to the item

Admin: The year an item is administered

Item Type: The mode in which a student responds (MC means multiple-choice)

Correct Answer: The option letter (A, B, C, or D) that corresponds to the correct answer

Item Dok: The item's Depth of Knowledge designation, also called Cognitive Complexity;
1 - Recall and reproduction
2 - Skills and concepts
3 - Strategic and extended thinking

Total N-count: Number of students counted as taking the test in which the item appears during the listed administration (Includes item omissions)

Pvalue/Mean Score: For a multiple-choice item, the percent of students choosing the correct answer

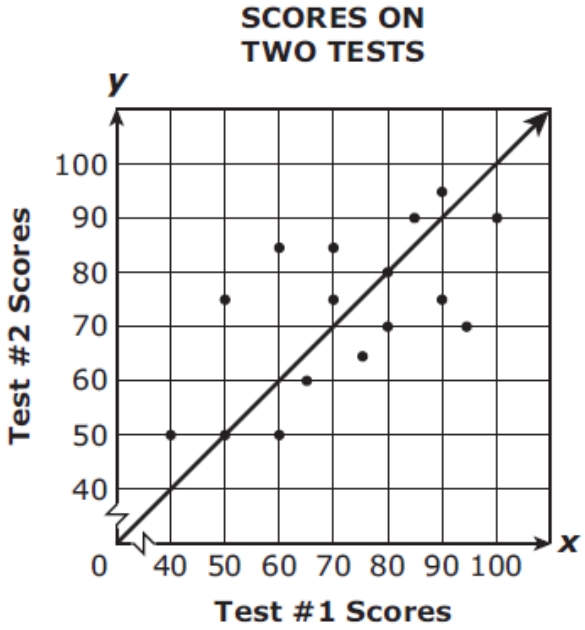
Score Analysis

MC Row: Answer options available for students to choose from (including those who do not choose any option); an asterisk designates the correct answer

%Choosing Row: Percent of students choosing an option (or omitting)

Item Notes: Area where user can make notes

00 **The scores of 16 students on two of their math tests are shown in the scatter plot. A line has been drawn to show where the students' scores on both tests would be the same.**



Which statement represents a valid conclusion that is best supported by this scatter plot?

A) The majority of students had a lower score on Test #2 than Test #1.

B) The majority of students had a higher score on Test #2 than Test #1.

C) The majority of students had a score that is less than or equal to 70 on both tests.

D) The majority of students had a score that is greater than or equal to 70 on both tests.

Item Information	
2012 WyCPS Domain:	Statistics and Probability
2012 WyCPS Cluster:	Investigate patterns of association in bivariate data.
2012 WyCPS Standard:	8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
Item Code:	VF492439

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2013	MC	D	2	667	0.435

Score Analysis					
MC	**A**	**B**	**C**	**D***	**Omit**
%Choosing	14.243	33.583	7.946	43.478	0.75

00 **Nathan constructed a scatter plot with the data shown in the table.**

x	9	3	7	5	2	1	6	8	4
y	92	45	71	62	44	31	73	87	59

Which statement is true with respect to the data?

A) The relationship among the data represents no association.

B) The relationship among the data represents a nonlinear association.

C) The relationship among the data represents a positive, linear association.

D) The relationship among the data represents a negative, linear association.

Item Information	
2012 WyCPS Domain:	Statistics and Probability
2012 WyCPS Cluster:	Investigate patterns of association in bivariate data.
2012 WyCPS Standard:	8.SP.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
Item Code:	VF883692

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	657	0.341

Score Analysis					
MC	**A**	**B**	**C***	**D**	**Omit**
%Choosing	29.528	27.854	34.094	7.915	0.609

00 **Christine surveyed 70 randomly selected students to determine if they preferred Song X or Song Y. She summarized the data in a two-way table. Based on the data, Christine made the following conclusion.**

- **Approximately 14% of the students surveyed are both female and prefer Song X.**

Which two-way table best supports Christine's conclusion?

A)

Song Survey

	Song X	Song Y
Males	26	14
Females	12	18

C)

Song Survey

	Song X	Song Y
Males	14	26
Females	18	12

B)

Song Survey

	Song X	Song Y
Males	25	15
Females	20	10

D)

Song Survey

	Song X	Song Y
Males	15	25
Females	10	20

Item Information	
2012 WyCPS Domain:	Statistics and Probability
2012 WyCPS Cluster:	Investigate patterns of association in bivariate data.
2012 WyCPS Standard:	8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?
Item Code:	VH148460

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2015	MC	D	3	666	0.297

Score Analysis					
MC	**A**	**B**	**C**	**D***	**Omit**
%Choosing	27.628	17.417	25.075	29.73	0.15