



DEPARTMENT OF EDUCATION

# **PAWS Mathematics Grade 5**

## **Released Items With Data**

### **2016**

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## 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** Which expression represents this statement?

**8 added to the product of 2 and the quotient of 16 and 4**

- Ⓐ  $8 + 2 \times (16 \div 4)$
- Ⓑ  $8 + 2 \div (16 \times 4)$
- Ⓒ  $(8 + 2) \times (16 \div 4)$
- Ⓓ  $(8 + 2) \div (16 \times 4)$

Item Information	
<b>2012 WyCPS Domain:</b>	Operations and Algebraic Thinking
<b>2012 WyCPS Cluster:</b>	Write and interpret numerical expressions.
<b>2012 WyCPS Standard:</b>	5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$ . Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$ , without having to calculate the indicated sum or product.
<b>Item Code:</b>	VH092936

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2015	MC	A	2	692	0.415

Score Analysis					
MC	A*	B	C	D	Omit
%Choosing	41.474	14.451	29.48	13.584	1.012

Item Notes

**00** The quotient of 13.582 and  $10^4$  will be

- Ⓐ less than 13.582 because the decimal point of 13.582 will move 4 places to the left.
- Ⓑ less than 13.582 because the decimal point of 13.582 will move 4 places to the right.
- Ⓒ greater than 13.582 because the decimal point of 13.582 will move 4 places to the left.
- Ⓓ greater than 13.582 because the decimal point of 13.582 will move 4 places to the right.

Item Information	
<b>2012 WyCPS Domain:</b>	Number and Operations in Base Ten
<b>2012 WyCPS Cluster:</b>	Understand the place value system.
<b>2012 WyCPS Standard:</b>	5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
<b>Item Code:</b>	VH095040

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2015	MC	A	3	684	0.253

Score Analysis					
MC	A*	B	C	D	Omit
%Choosing	25.292	13.889	27.047	33.48	0.292

Item Notes

**00** One step is missing in the multiplication problem shown.

$$\begin{array}{r} 12,485 \\ \times \quad 79 \\ \hline 112,365 \\ + \boxed{\phantom{000000}} \\ \hline 986,315 \end{array}$$

To correctly complete this problem, the product of two numbers must be substituted into the blank. Which expression best represents this product?

- (A)  $12,485 \times 7$
- (B)  $12,485 \times 9$
- (C)  $12,485 \times 70$
- (D)  $12,485 \times 90$



Item Information	
<b>2012 WyCPS Domain:</b>	Number and Operations in Base Ten
<b>2012 WyCPS Cluster:</b>	Perform operations with multi-digit whole numbers and with decimals to hundredths.
<b>2012 WyCPS Standard:</b>	5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.
<b>Item Code:</b>	VH092998

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2015	MC	C	1	684	0.387

Score Analysis					
MC	A	B	C*	D	Omit
%Choosing	40.643	13.743	38.743	6.287	0.585

Item Notes

**00** Dave sold  $2\frac{1}{2}$  bushels of peaches on Friday. On Saturday, he sold  $1\frac{3}{4}$  as many bushels of peaches as on Friday. Which equation can be used to find the number of bushels of peaches Dave sold on Saturday?

Ⓐ  $2\frac{1}{2} \times 1\frac{3}{4} = \frac{5+7}{2+4}$

Ⓑ  $2\frac{1}{2} \times 1\frac{3}{4} = \frac{5 \times 7}{2 \times 4}$

Ⓒ  $2\frac{1}{2} \times 1\frac{3}{4} = (2 \times 1) + \left(\frac{1 \times 3}{2 \times 4}\right)$

Ⓓ  $2\frac{1}{2} \times 1\frac{3}{4} = (2 \times 1) \times \left(\frac{1 \times 3}{2 \times 4}\right)$

Item Information	
<b>2012 WyCPS Domain:</b>	Number and Operations—Fractions
<b>2012 WyCPS Cluster:</b>	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
<b>2012 WyCPS Standard:</b>	5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
<b>Item Code:</b>	VF864618

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	B	2	695	0.295

Score Analysis					
MC	A	B*	C	D	Omit
%Choosing	22.446	29.496	36.547	10.504	1.007

Item Notes

**00** The length of a cord is 8 feet. Terry will cut this cord into pieces with a length of  $\frac{1}{3}$  foot. Which product can be used to determine the total number of pieces Terry can cut from the cord?

Ⓐ  $\frac{1}{8} \times \frac{1}{3}$

Ⓑ  $\frac{1}{8} \times 3$

Ⓒ  $8 \times \frac{1}{3}$

Ⓓ  $8 \times 3$

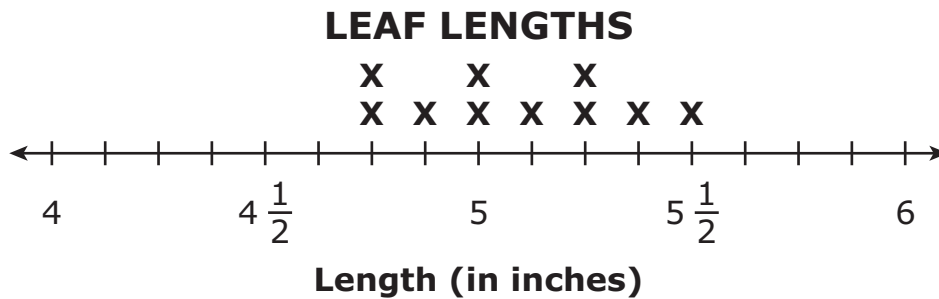
Item Information	
<b>2012 WyCPS Domain:</b>	Number and Operations—Fractions
<b>2012 WyCPS Cluster:</b>	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
<b>2012 WyCPS Standard:</b>	5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. (Students able to multiply fractions in general can develop strategies to divide fractions in general, by reasoning about the relationship between multiplication and division. But division of a fraction by a fraction is not a requirement at this grade.)
<b>Item Code:</b>	VF864641

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	D	2	691	0.1

Score Analysis					
MC	A	B	C	D*	Omit
%Choosing	19.971	9.262	59.913	9.986	0.868

Item Notes

- 00** Alani collected 10 leaves. She measured each leaf to the closest eighth of an inch and recorded the data on a line plot as shown.



Each **X** represents 1 leaf.

**What was the difference between the length of the longest leaf and the length of the shortest leaf?**

- Ⓐ  $\frac{1}{4}$  inch
- Ⓑ  $\frac{3}{4}$  inch
- Ⓒ  $1\frac{1}{4}$  inches
- Ⓓ  $1\frac{1}{2}$  inches

Item Information	
<b>2012 WyCPS Domain:</b>	Measurement and Data
<b>2012 WyCPS Cluster:</b>	Represent and interpret data.
<b>2012 WyCPS Standard:</b>	5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit ( $1/2$ , $1/4$ , $1/8$ ). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.
<b>Item Code:</b>	VH099618

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2015	MC	B	2	679	0.355

Score Analysis					
MC	A	B*	C	D	Omit
%Choosing	9.573	35.493	32.548	22.091	0.295

Item Notes