



DEPARTMENT OF EDUCATION

# **PAWS Mathematics Grade 7**

## **Released Items With Data**

### **2015**

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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 2014 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

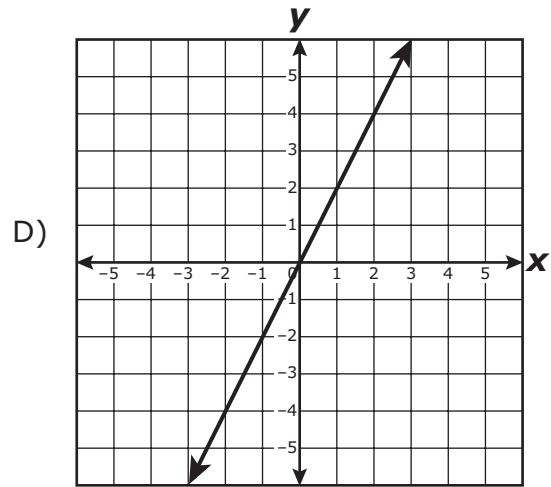
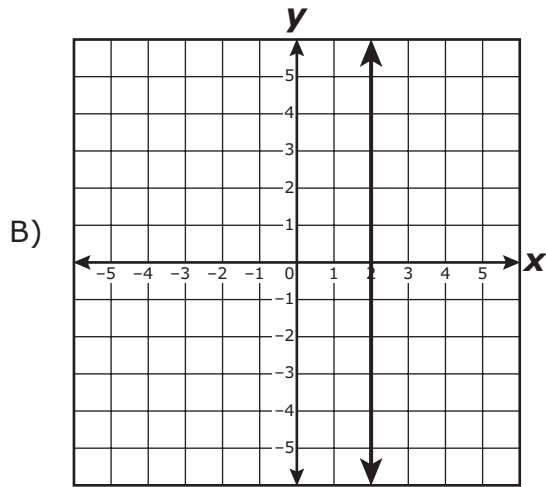
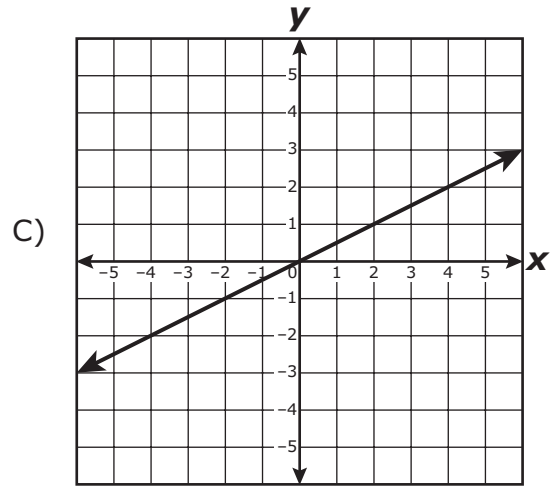
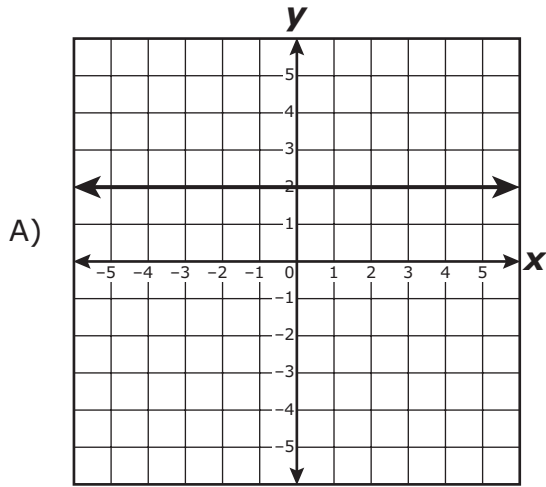
### Score Analysis

**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 graph shows a proportional relationship between  $x$  and  $y$  with a constant of proportionality of 2?



Item Information	
<b>2012 WyCPS Domain:</b>	Ratios and Proportional Relationships
<b>2012 WyCPS Cluster:</b>	Analyze proportional relationships and use them to solve real-world and mathematical problems.
<b>2012 WyCPS Standard:</b>	7.RP.2 Recognize and represent proportional relationships between quantities.
<b>Item Code:</b>	VF819535

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	D	1	650	0.212

Score Analysis					
MC	A	B	C	D*	Omit
%Choosing	26.462	30.308	21.846	21.231	0.154

Item Notes

**00** Jack made a batch of 12 cookies. He ate  $\frac{1}{3}$  of the cookies and took the remaining cookies to school. He split the remaining cookies equally among 4 friends. What fraction of the total batch of cookies did each friend receive?

A)  $\frac{1}{3}$

B)  $\frac{1}{4}$

C)  $\frac{1}{6}$

D)  $\frac{1}{9}$

Item Information	
<b>2012 WyCPS Domain:</b>	The Number System
<b>2012 WyCPS Cluster:</b>	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
<b>2012 WyCPS Standard:</b>	7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
<b>Item Code:</b>	VF813104

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	674	0.355

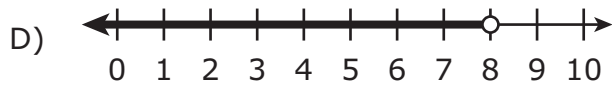
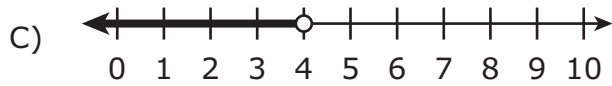
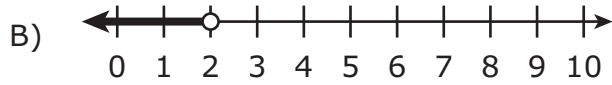
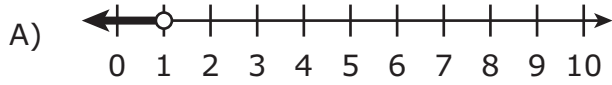
Score Analysis					
MC	A	B	C*	D	Omit
%Choosing	13.947	43.62	35.46	6.677	0.297

Item Notes

**00** An inequality is shown.

$$\frac{1}{2}x + 1 < 3$$

Which graph best represents the solution set to this inequality?





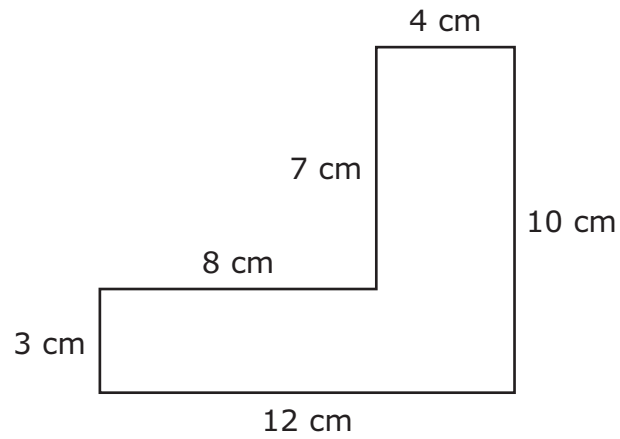
Item Information	
<b>2012 WyCPS Domain:</b>	Expressions and Equations
<b>2012 WyCPS Cluster:</b>	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
<b>2012 WyCPS Standard:</b>	7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
<b>Item Code:</b>	VF883220

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	677	0.343

Score Analysis					
MC	A	B	C*	D	Omit
%Choosing	17.43	39.586	34.269	8.567	0.148

Item Notes

- 00** A builder's blueprint of an L-shaped room is shown. Each angle in the room is a right angle.



**The scale of this blueprint is 1 centimeter equals 3 feet. What is the total area of this L-shaped room in square feet?**

- A) 64 sq ft
- B) 192 sq ft
- C) 576 sq ft
- D) 684 sq ft

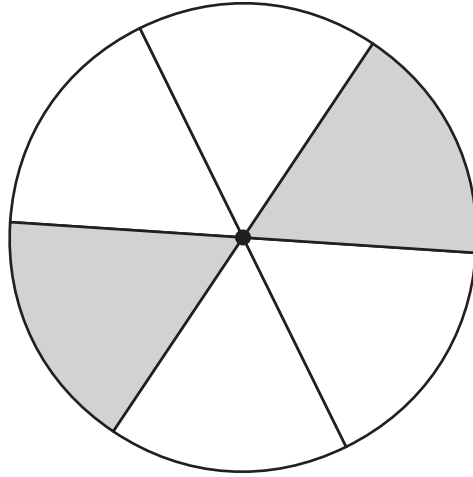
Item Information	
<b>2012 WyCPS Domain:</b>	Geometry
<b>2012 WyCPS Cluster:</b>	Draw, construct, and describe geometrical figures and describe the relationships between them.
<b>2012 WyCPS Standard:</b>	7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
<b>Item Code:</b>	VF819696

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	659	0.226

Score Analysis					
MC	A	B	C*	D	Omit
%Choosing	26.707	42.64	22.61	8.042	0

Item Notes

- 00** A circle with a radius of 9 inches is cut into 6 equal pieces as shown.



**Which value is closest to the total area of the shaded pieces?**

- A) 9.42 square inches
- B) 18.84 square inches
- C) 42.39 square inches
- D) 84.78 square inches

Item Information	
<b>2012 WyCPS Domain:</b>	Geometry
<b>2012 WyCPS Cluster:</b>	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
<b>2012 WyCPS Standard:</b>	7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
<b>Item Code:</b>	VF822889

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	D	3	681	0.172

Score Analysis					
MC	A	B	C	D*	Omit
%Choosing	24.816	38.62	19.09	17.181	0.294

Item Notes

- 00** The table shows the number of employees who earn different hourly wages at two different stores.

### Hourly Wages

	Store N	Store P
Hourly Wage	Number of Employees	Number of Employees
\$8	3	4
\$12	6	5
\$16	6	4
\$20	0	2

**Based on the data in the table, which statement is true?**

- A) The employees' wages at Store N vary more than the employees' wages at Store P.
- B) The employees' wages at Store P vary more than the employees' wages at Store N.
- C) The median hourly wage of employees at Store N is greater than the median hourly wage of the employees at Store P.
- D) The median hourly wage of employees at Store P is greater than the median hourly wage of the employees at Store N.

Item Information	
<b>2012 WyCPS Domain:</b>	Statistics and Probability
<b>2012 WyCPS Cluster:</b>	Draw informal comparative inferences about two populations.
<b>2012 WyCPS Standard:</b>	7.SP.4 Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.
<b>Item Code:</b>	VF867323

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	B	2	686	0.43

Score Analysis					
MC	A	B*	C	D	Omit
%Choosing	12.245	43.003	26.531	18.076	0.146

Item Notes

