



PAWS
Mathematics
Grade 6
Released Items
With Data

2010

Copyright © **2011** 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.

Pearson and the *Pearson* logo are trademarks, in the U.S. and/or other countries, of Pearson Education, Inc. or its affiliate(s).

Portions of this work were previously published.

Printed in the United States of America.

The 2003 populations of several U.S. cities are listed in the table below.

2003 Populations

City	Population
Indianapolis, Indiana	783,438
Columbus, Ohio	728,432
Jacksonville, Florida	773,781
San Francisco, California	751,682

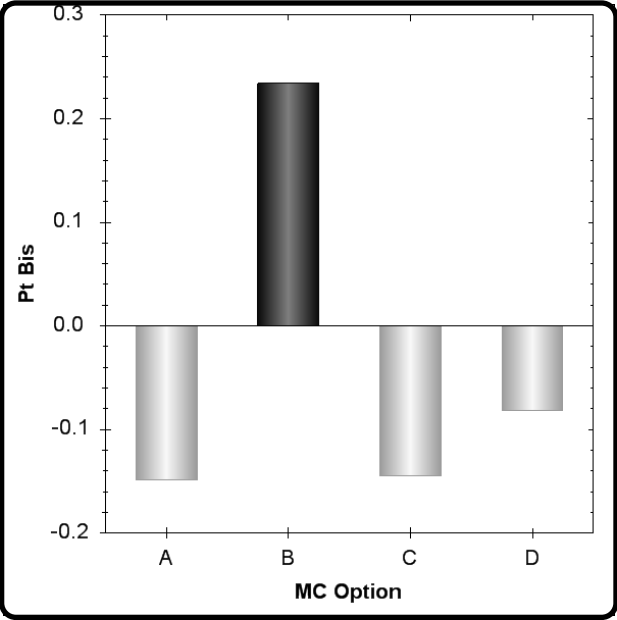
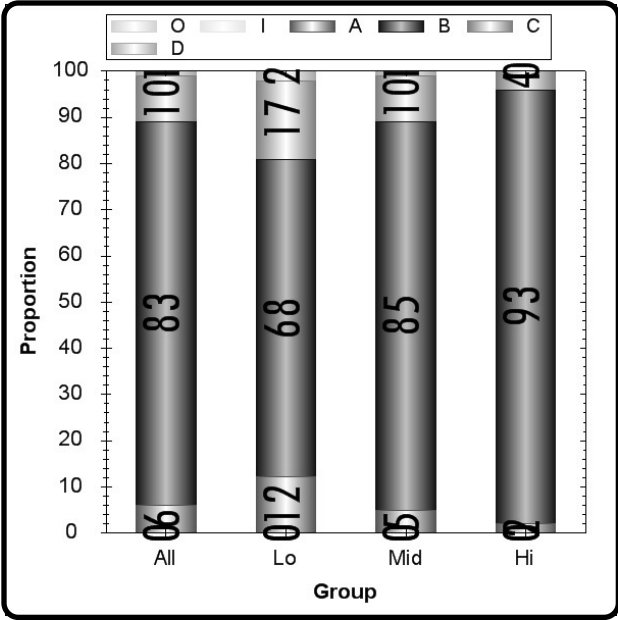
Which list shows the cities in order from the one with the least population to the one with the greatest population?

- A. Columbus, Jacksonville, San Francisco, Indianapolis
- B. Columbus, San Francisco, Jacksonville, Indianapolis
- C. Indianapolis, Jacksonville, San Francisco, Columbus
- D. Indianapolis, San Francisco, Jacksonville, Columbus

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	B	6595	0.830	0.234

	A	B	C	D	Omit	Invalid
All	6	83	10	1	0	0
Low Scorers	12	68	17	2	0	0
Middle Scorers	5	85	10	1	0	0
High Scorers	2	93	4	0	0	0

MC Item Option Discriminations			
A	B	C	D
-0.149	0.234	-0.145	-0.082



Notes:

3376488

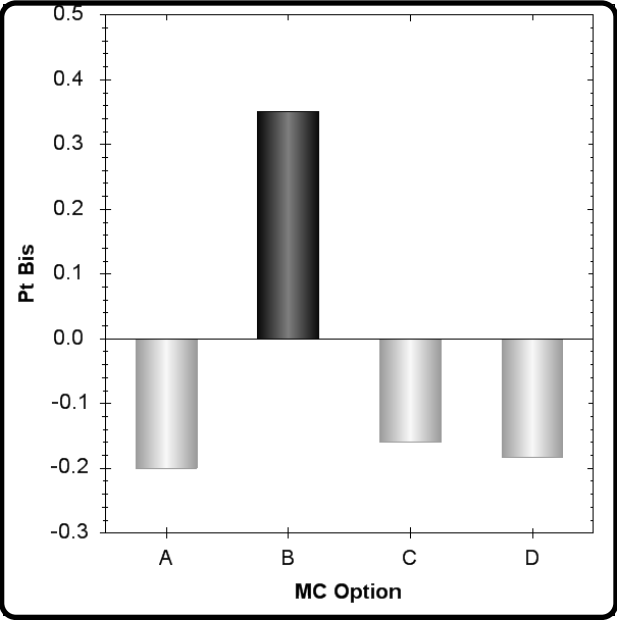
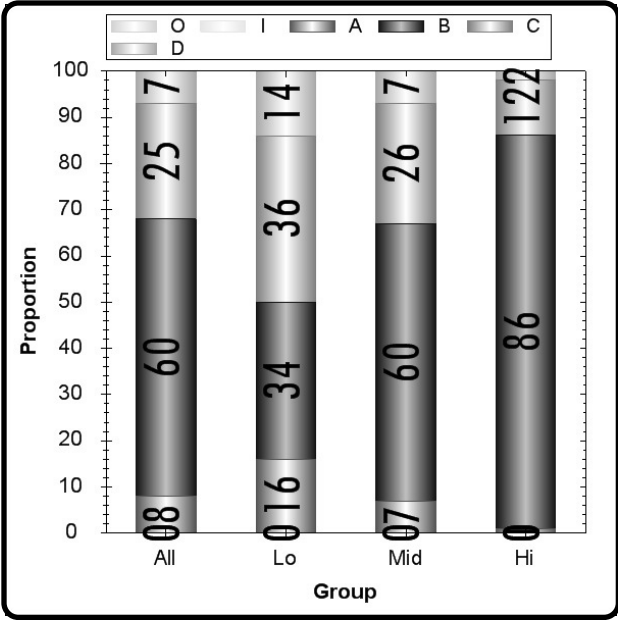
Which of these triangles is a regular polygon?

- A.** Isosceles triangle
- B.** Equilateral triangle
- C.** Right triangle
- D.** Scalene triangle

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	B	6595	0.600	0.351

	A	B	C	D	Omit	Invalid
All	8	60	25	7	0	0
Low Scorers	16	34	36	14	0	0
Middle Scorers	7	60	26	7	0	0
High Scorers	1	86	12	2	0	0

MC Item Option Discriminations			
A	B	C	D
-0.200	0.351	-0.160	-0.183



Notes:

100000032143

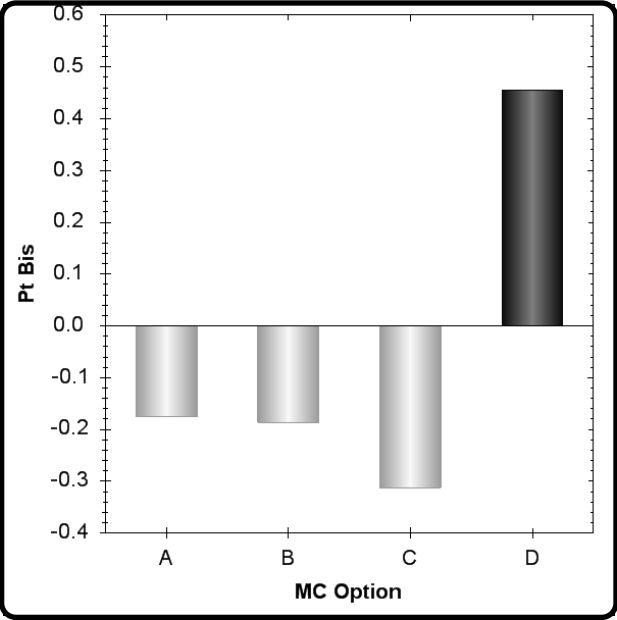
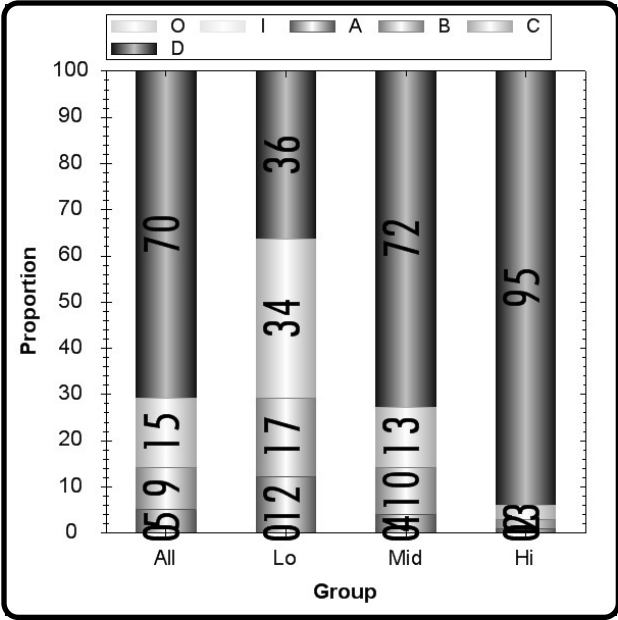
Marisela drew a triangle with two sides that were 9 inches long and one side that was 5 inches long. Conrad drew a triangle that was congruent to the one that Marisela drew. What was the length of the shortest side of the triangle Conrad drew?

- A.** 2 in.
- B.** 3 in.
- C.** 4 in.
- D.** 5 in.

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	D	6595	0.700	0.456

	A	B	C	D	Omit	Invalid
All	5	9	15	70	0	0
Low Scorers	12	17	34	36	0	0
Middle Scorers	4	10	13	72	0	0
High Scorers	1	2	3	95	0	0

MC Item Option Discriminations			
A	B	C	D
-0.176	-0.186	-0.312	0.456



Notes:

3377430

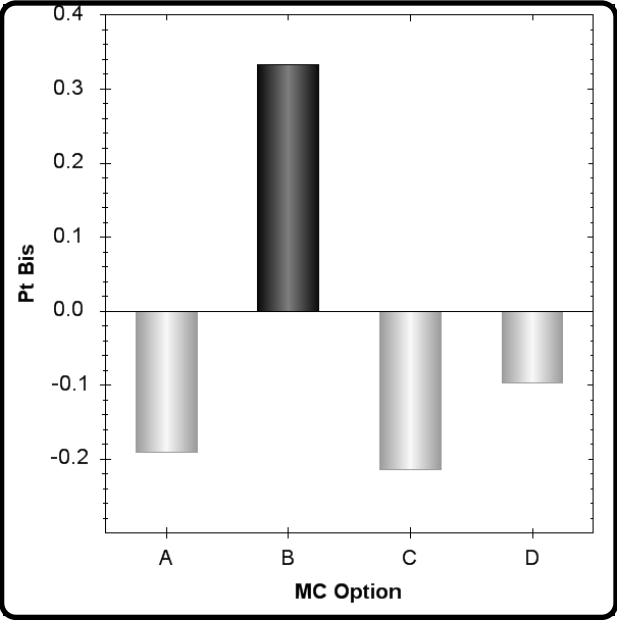
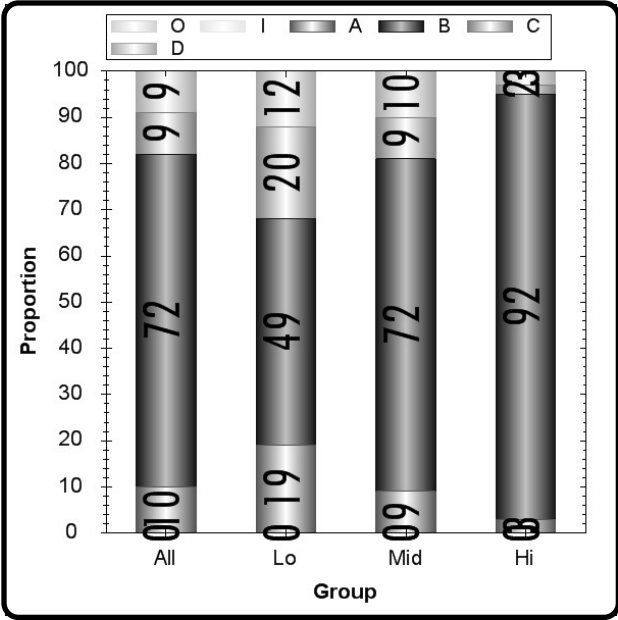
Pamela bought 5 pounds of ground meat at the grocery store. She plans to make meat patties that weigh 4 ounces each. What is the maximum number of patties Pamela can make using 5 pounds of ground meat?

- A.** 10
- B.** 20
- C.** 25
- D.** 40

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	B	6595	0.720	0.333

	A	B	C	D	Omit	Invalid
All	10	72	9	9	0	0
Low Scorers	19	49	20	12	0	0
Middle Scorers	9	72	9	10	0	0
High Scorers	3	92	2	3	0	0

MC Item Option Discriminations			
A	B	C	D
-0.191	0.333	-0.214	-0.097



Notes:

A survey was taken to find the mean ages of the people in 9 different states. The results are shown in the chart below.

State	Mean Age
Alaska	29
Arizona	32
Idaho	33
Iowa	34
Mississippi	31
North Carolina	33
Texas	31
Vermont	33
Wyoming	32

**Part A. What is the mode of the ages shown in the chart?
Write your answer in the space below. Show or explain
how you got your answer.**

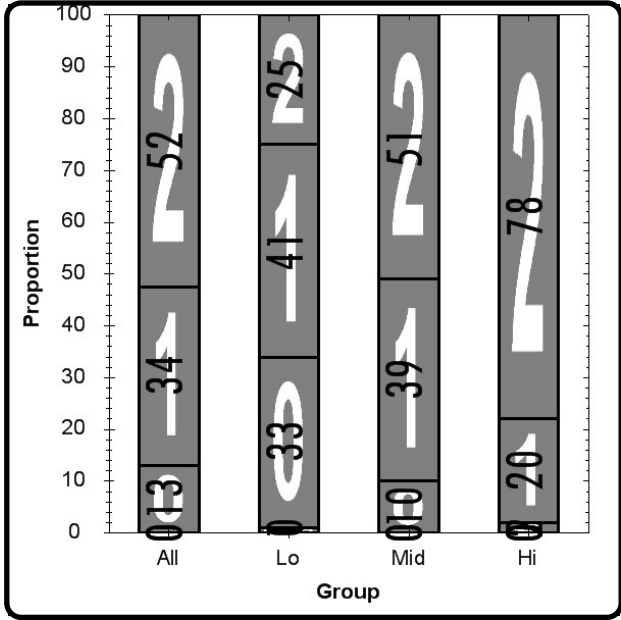
Mode: _____

**Part B. How many states listed in the chart have a mean age of
32 or older? Write your answer in the space below. Show
or explain how you got your answer.**

Number of States: _____

Type SR	Max Points 2	N Count 6595	Item Mean 1.390	Discrimination 0.419
------------	-----------------	-----------------	--------------------	-------------------------

	0	1	2	Omit	Invalid
All	13	34	52	0	0
Low Scorers	33	41	25	1	0
Middle Scorers	10	39	51	0	0
High Scorers	2	20	78	0	0



Notes:

* 33 is the mode of the mean ages. I think 33 is the answer because 33 is the most common number used. It is used 3 times, and all of the other numbers are used 1 or 2 times.

* In 6 states the mean age is 32 and older. There was 2 32's as the mean age, 3 33's and 1 34, so that totals 6 32's and above.

Score Point 2

This response is complete and accurate and contains appropriate statistical reasoning based on mode and mean. In Part A the student states, "33 is the mode . . . is used 3 times, and all of the other numbers are used 1 or 2 times." In Part B the student states, "In 6 states the mean age is 32 and older." and lists the number of each age above 32. Two correct answers with two correct explanations show evidence of sound reasoning and support the solution.

6

Thirty-three shows up the most because Idaho, North Carolina, and Vermont all have thirty three.

Alaska	29
Arizona	30
Idaho	33
Iowa	24
Mississippi	31
North Carolina	33
Texas	21
Vermont	33
Wyoming	32

1
 3
 3
 3
 3
 3
 3
 3
 3
 3
 3
 3
 3
 2
 5
 9

$$\begin{array}{r} 259 \\ 3 \overline{) 259} \\ \underline{24} \\ 19 \\ \underline{18} \\ 1 \end{array}$$

Score Point 1

This response is inaccurate. In Part A the student correctly states, "Thirty-three shows up the most because Idaho, North Carolina, and Vermont all have thirty three." In Part B the student does the math to find the mean of the listed ages instead of listing the number of states with 32 or older as the mean age. The correct answer and explanation in Part A shows some reasoning, but the inaccurate answer and explanation in Part B is inadequate to support the correct solution.

They are all 29 or older

2 states
because
Arizona +
Wyoming have the number
32

Score Point 0

This response is incorrect. In Part A the student incorrectly states, "They are all 29 or older." In Part B the student incorrectly states, "2 states because Arizona and Wyoming have the number 32." Both parts of the response are incorrect and show no understanding of how to successfully address the task of finding and interpreting the mode and mean.

