



**PAWS
Mathematics
Grade 8**

**Released Items
With Data**

2011

Copyright © **2012** 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.

10000008478

00 Which of the following numbers is equivalent to the expression shown below?

$$-(-12)(-10) - (-132)$$

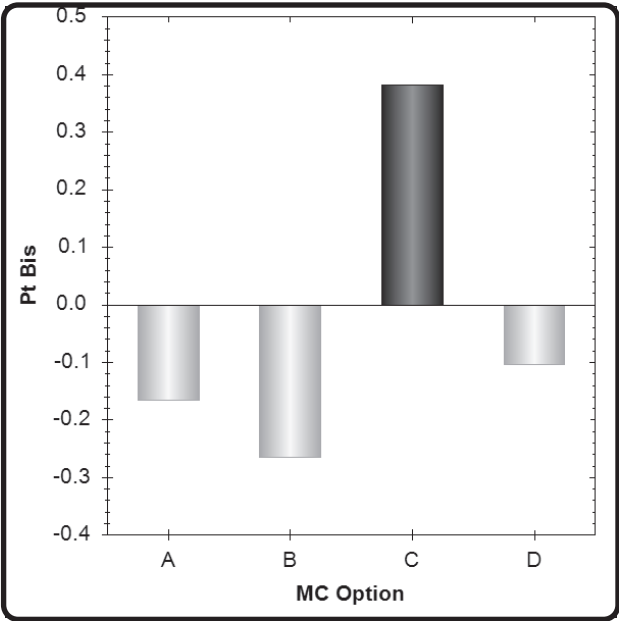
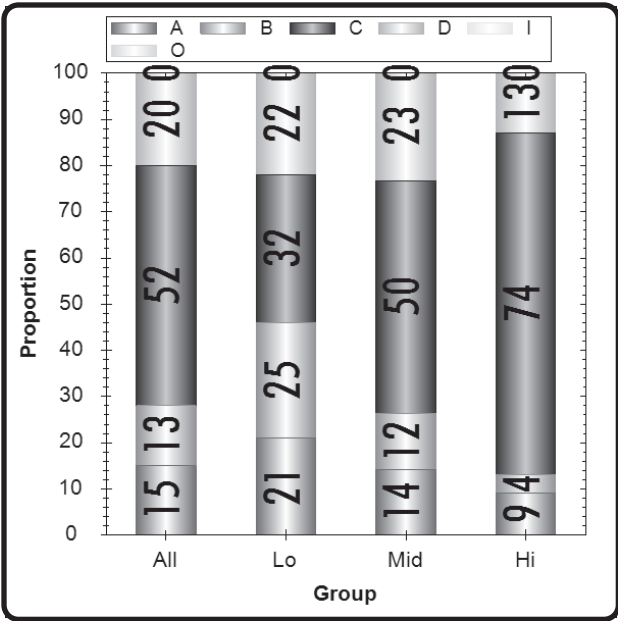
- Ⓐ -134
- Ⓑ -110
- Ⓒ 12
- Ⓓ 254

Grade 8	Math	CID 10000008478
Item # 8	OP11	8N,3,b

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	C	6306	0.522	0.382

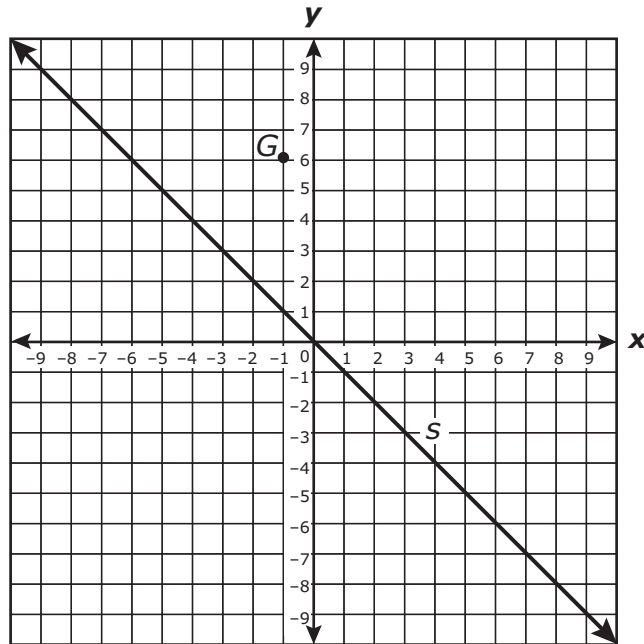
	A	B	C	D	Inv	Omit
All	15	13	52	20	0	0
Low Scorers	21	25	32	22	0	0
Middle Scorers	14	12	50	23	0	0
High Scorers	9	4	74	13	0	0

A	B	C	D
-0.166	-0.265	0.382	-0.104



Notes:

00 Point G and line s are shown on the coordinate grid.



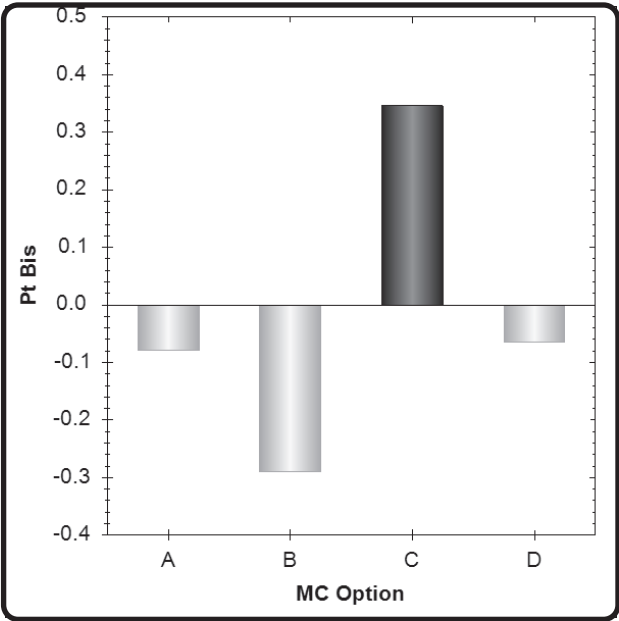
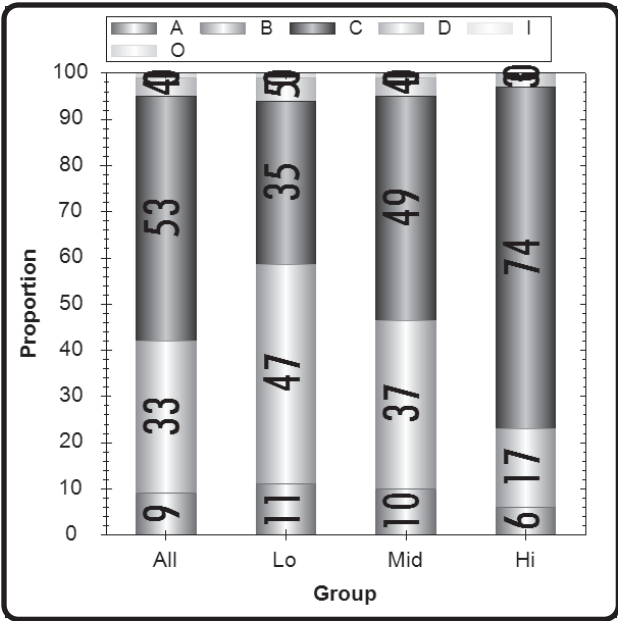
If point G is reflected across line s , what are the coordinates of point G' ?

- (A) $(-7, 2)$
- (B) $(-6, -1)$
- (C) $(-6, 1)$
- (D) $(-5, 0)$

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	C	6306	0.534	0.346

	A	B	C	D	Inv	Omit
All	9	33	53	4	0	1
Low Scorers	11	47	35	5	0	1
Middle Scorers	10	37	49	4	0	1
High Scorers	6	17	74	3	0	0

MC Item Option Discriminations			
A	B	C	D
-0.079	-0.290	0.346	-0.065



Notes:

3377068

00 Kaitlin is going to wrap her brother's birthday present in a box that is shaped like a right rectangular prism. The box is 7.5 inches long, 3 inches wide, and 5 inches high. What is the smallest amount of wrapping paper in square inches that Kaitlin will need to cover the box?

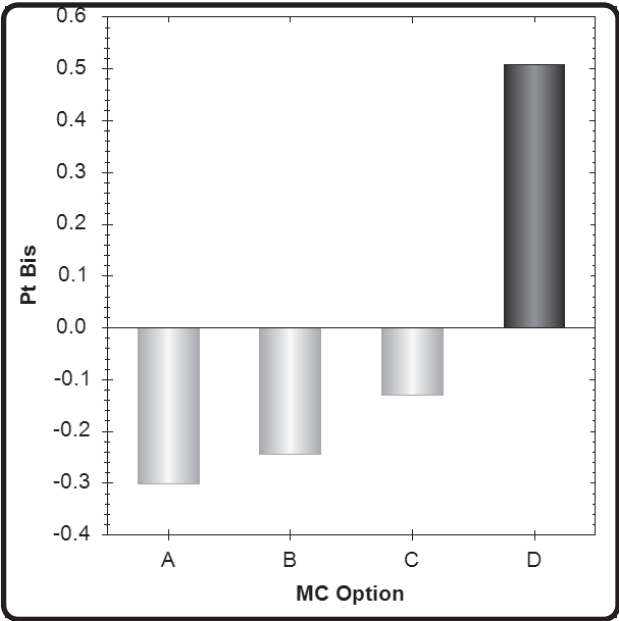
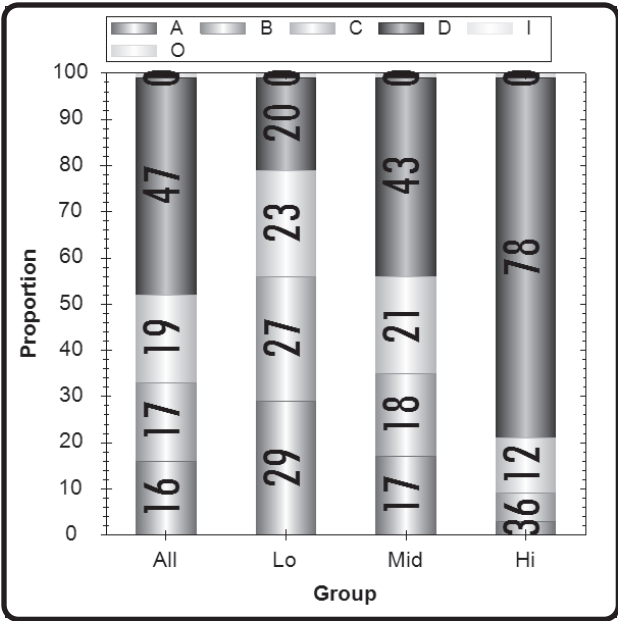
- Ⓐ 30 sq in.
- Ⓑ 45 sq in.
- Ⓒ 75 sq in.
- Ⓓ 150 sq in.

Grade 8 Item # 13	Math OP11	CID 3377068 8M,2,b
----------------------	--------------	-----------------------

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	D	6306	0.477	0.509

	A	B	C	D	Inv	Omit
All	16	17	19	47	0	1
Low Scorers	29	27	23	20	0	1
Middle Scorers	17	18	21	43	0	1
High Scorers	3	6	12	78	0	1

MC Item Option Discriminations			
A	B	C	D
-0.302	-0.244	-0.129	0.509



Notes:

00 Justin can use the following expression to find the value of y .

Three times x less twelve

Which table shows ordered pairs that could have used this expression to determine the values of y ?

Ⓐ

x	y
1	9
2	6
4	0

Ⓒ

x	y
1	33
2	30
4	24

Ⓑ

x	y
1	-9
2	-6
4	0

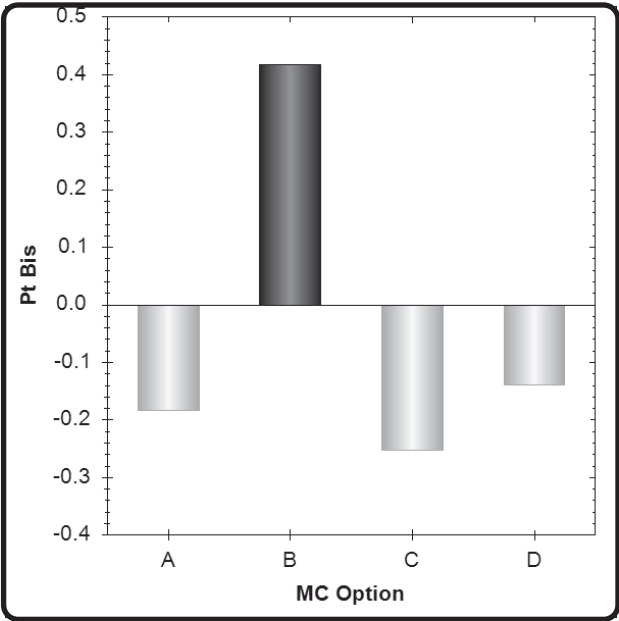
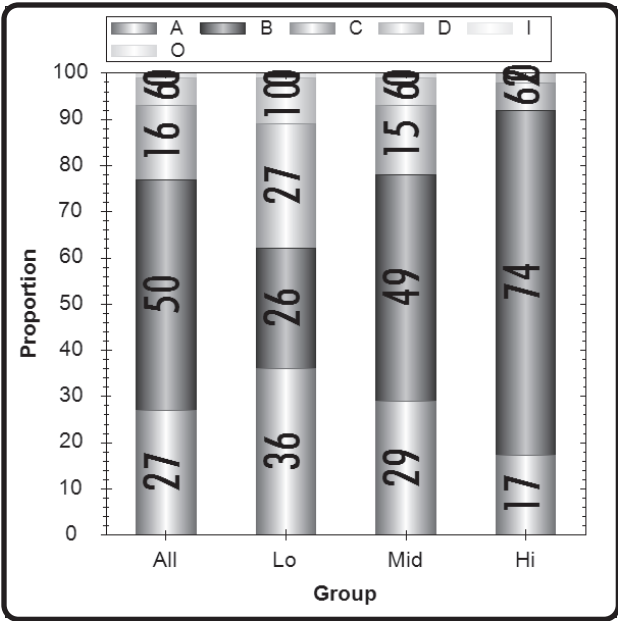
Ⓓ

x	y
1	-33
2	-30
4	-24

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	B	6306	0.501	0.418

	A	B	C	D	Inv	Omit
All	27	50	16	6	0	1
Low Scorers	36	26	27	10	0	1
Middle Scorers	29	49	15	6	0	1
High Scorers	17	74	6	2	0	0

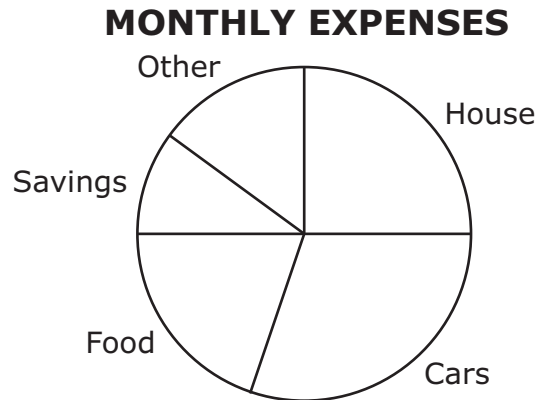
MC Item Option Discriminations			
A	B	C	D
-0.184	0.418	-0.253	-0.139



Notes:

00

The Blake family spends \$4,000 each month on expenses. The portion of monthly expenses spent in each category is shown in the circle graph.



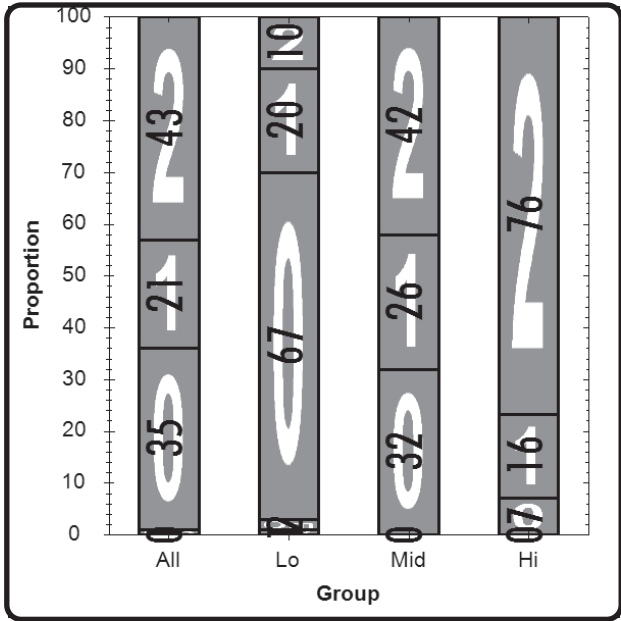
Based upon information in the circle graph, estimate the amount in dollars the Blake family spends on cars. Write your answer in the space provided. Show your work or explain how you estimated your answer.

Amount Spent on Cars: _____ dollars

Grade 8 Item # 70	Math OP11	CID 10000273025 8D,1,b
----------------------	--------------	---------------------------

Type Short Response	Max Points 2	N Count 6306	Item Mean 1.066	Discrimination 0.618
------------------------	-----------------	-----------------	--------------------	-------------------------

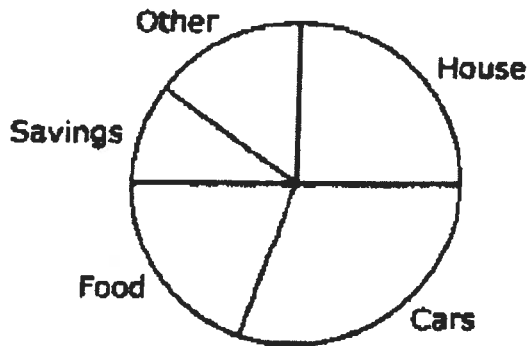
	0	1	2	Inv	Omit
All	35	21	43	0	1
Low Scorers	67	20	10	1	2
Middle Scorers	32	26	42	0	0
High Scorers	7	16	76	0	0



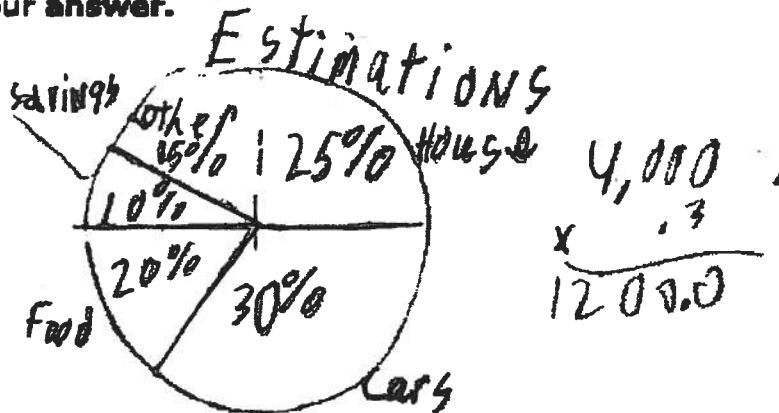
Notes:

- 7 The Blake family spends \$4,000 each month on household expenses. The portion of monthly expenses spent in each category is shown in the circle graph.

MONTHLY EXPENSES



Based upon information in the circle graph, estimate the amount in dollars the Blake family spends on cars. Write your answer in the space provided. Show your work or explain how you estimated your answer.



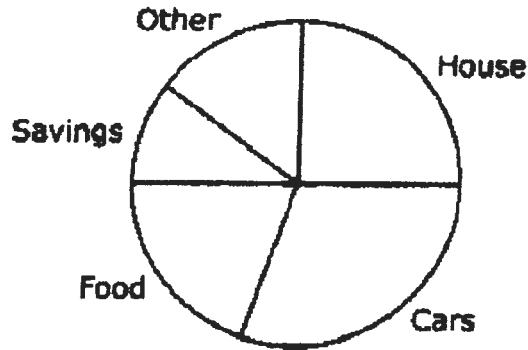
Amount Spent on Cars: *about \$1200* dollars

00032263379807201004

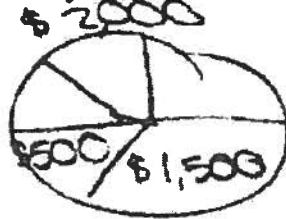
Score point 2 The response is complete. The student estimates the size of each portion of pie graph and labels the car portion 30%. The student multiplies 4000 x .3 to arrive at 1200.0. Finally, the student states his final answer (about \$1200).

- 7 The Blake family spends \$4,000 each month on household expenses. The portion of monthly expenses spent in each category is shown in the circle graph.

MONTHLY EXPENSES



Based upon information in the circle graph, estimate the amount in dollars the Blake family spends on cars. Write your answer in the space provided. Show your work or explain how you estimated your answer.



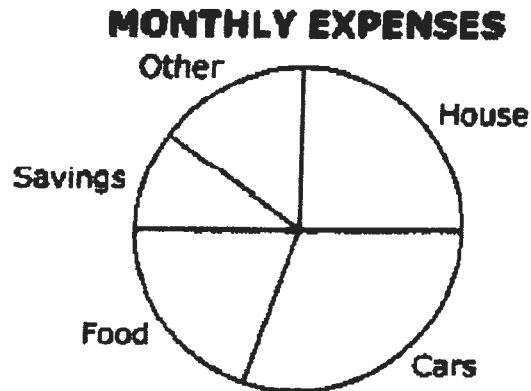
Amount Spent on Cars: 1,500 dollars

I got that because one side would be \$2,000 all together. So the other side had to be \$2,000 too. I got \$1,500 because they spend more on cars than food.

00031331159813201004

Score point 1 The response is inaccurate. The student redraws the circle and assigns a value of \$2,000 to the top half (one side would be \$2,000 all together). The student then reasons the other side had to be \$2,000 too. The student then assigns \$500 to the food portion and \$1,500 to the car portion because they spend more on cars than food. The student receives partial credit for the reasoning shown, but the estimate of 1,500 is too large.

- 7 The Blake family spends \$4,000 each month on household expenses. The portion of monthly expenses spent in each category is shown in the circle graph.



Based upon information in the circle graph, estimate the amount in dollars the Blake family spends on cars. Write your answer in the space provided. Show your work or explain how you estimated your answer.

<u>Food</u> \$ 300	<u>Savings</u> \$ 2000	<u>Other</u> \$ 100	<u>CARS</u> \$ 1000	<u>House</u> \$ 600
		4000		$\begin{array}{r} 2000 \\ 1000 \\ + 600 \\ \hline 3600 \\ 100 \end{array}$

Amount Spent on Cars: \$ 1000 dollars

Since the total amount spent is \$4,000 I guessed \$1000 for the cars.

00043419718201201004

Score point 0 The student shows little understanding of how to achieve the task. The student assigns dollar values to each of the portions of the pie graph, but the values are not consistent with the proportions of the graph. The final value of \$1000 does not show evidence of reasoning based on making inferences about the graph.

