



**PAWS  
Mathematics  
Grade 8**

**Released Items  
With Data**

**2010**

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**Chris, Kelly, and Pat were the first three students to finish an obstacle course.**

- **Chris finished in 5.8 minutes.**
- **Kelly finished in  $5\frac{5}{8}$  minutes.**
- **Pat finished in  $\frac{52}{9}$  minutes.**

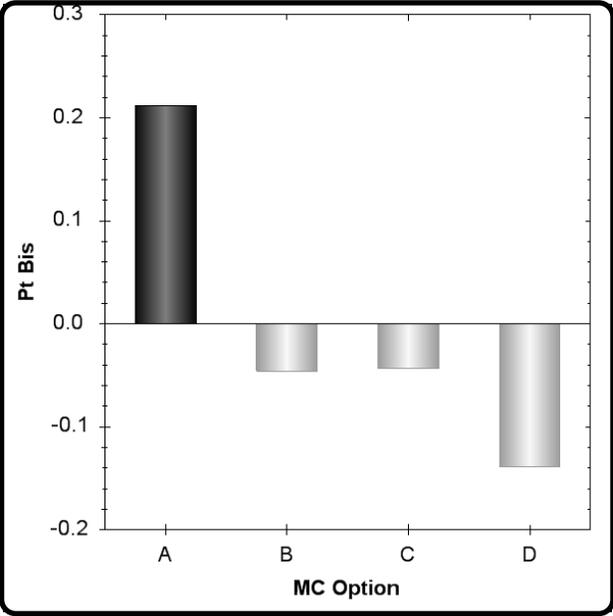
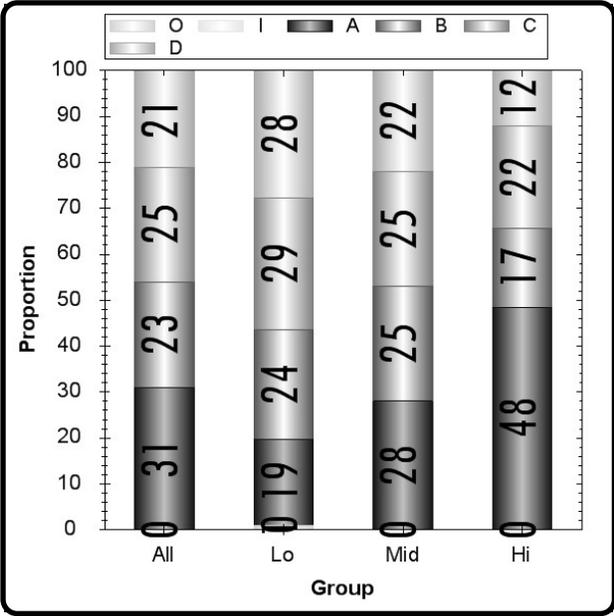
**Which list shows their finish times from least to greatest?**

- A.**  $5\frac{5}{8}$ ,  $\frac{52}{9}$ , 5.8
- B.**  $5\frac{5}{8}$ , 5.8,  $\frac{52}{9}$
- C.** 5.8,  $\frac{52}{9}$ ,  $5\frac{5}{8}$
- D.** 5.8,  $5\frac{5}{8}$ ,  $\frac{52}{9}$

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	A	6368	0.310	0.212

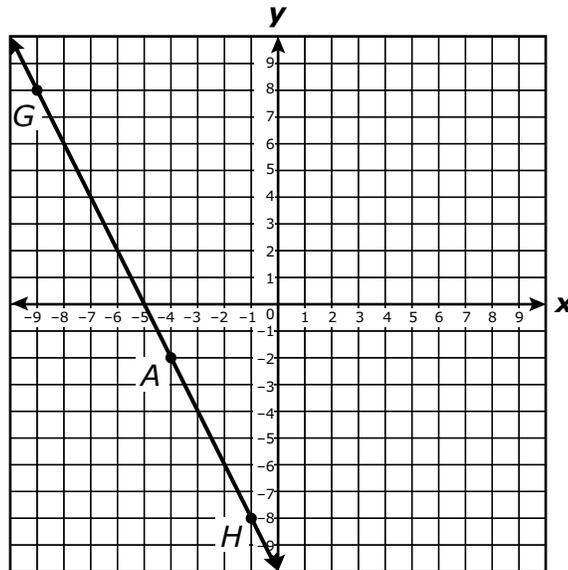
	A	B	C	D	Omit	Invalid
All	31	23	25	21	0	0
Low Scorers	19	24	29	28	1	0
Middle Scorers	28	25	25	22	0	0
High Scorers	48	17	22	12	0	0

MC Item Option Discriminations			
A	B	C	D
0.212	-0.046	-0.043	-0.139



Notes:

Point  $A$  lies on line  $GH$  as shown on the coordinate plane.



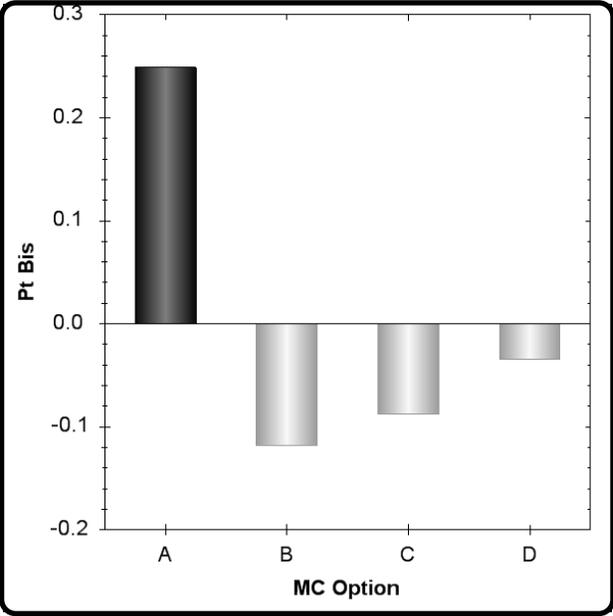
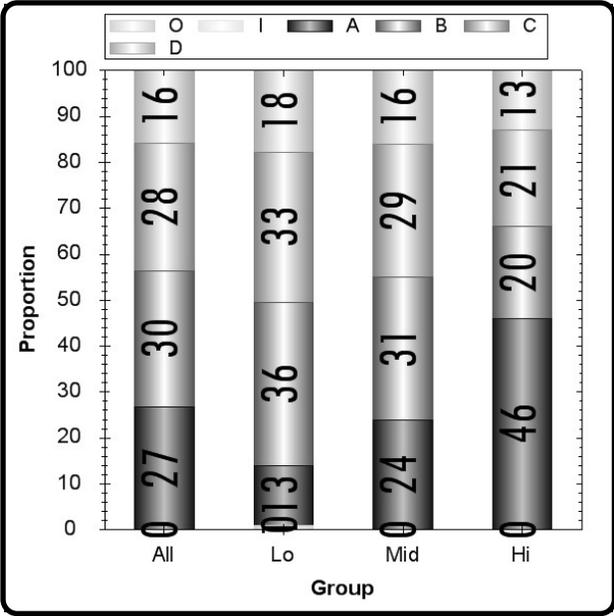
Which of the following best represents the coordinates of a point on a line perpendicular to line  $GH$  at point  $A$ ?

- A.  $(6, 3)$
- B.  $(3, 6)$
- C.  $(6, 5)$
- D.  $(5, 6)$

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	A	6368	0.270	0.249

	A	B	C	D	Omit	Invalid
All	27	30	28	16	0	0
Low Scorers	13	36	33	18	1	0
Middle Scorers	24	31	29	16	0	0
High Scorers	46	20	21	13	0	0

MC Item Option Discriminations			
A	B	C	D
0.249	-0.118	-0.088	-0.034



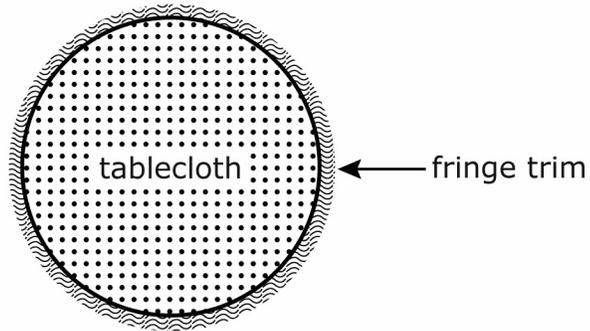
Notes:

Option B is more popular than key A. Check option discrimination.

Option C is more popular than key A. Check option discrimination.

Jamie bought a tablecloth for her circular table. She then sewed a fringe trim along the entire edge, as shown in the picture below.

**Jamie's Tablecloth**



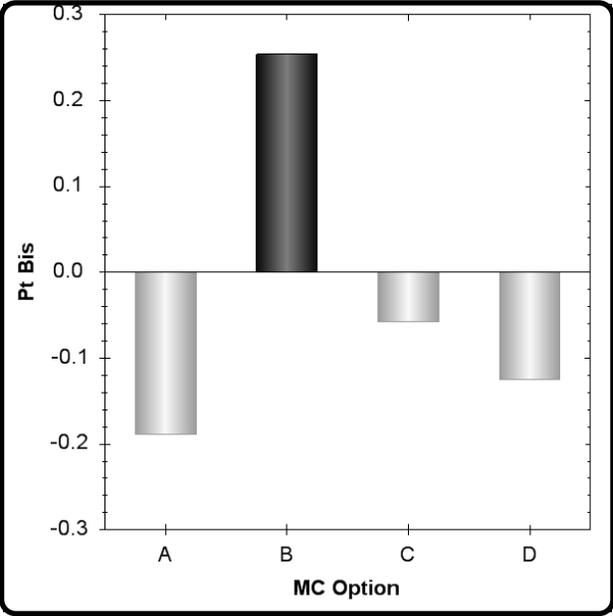
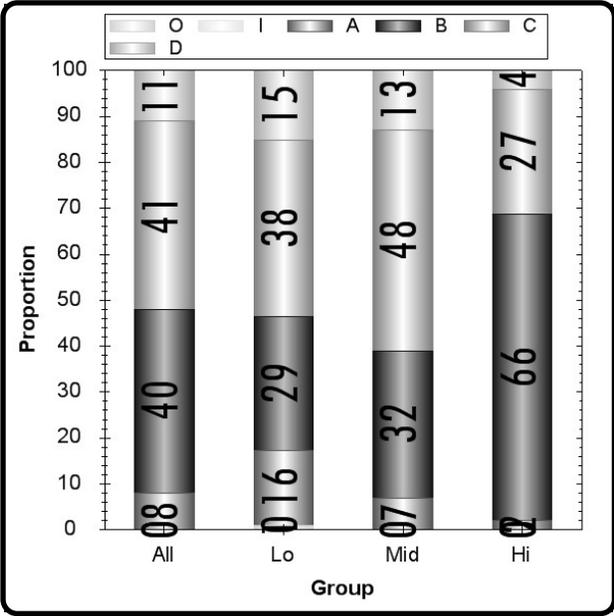
If Jamie sewed a total of 16 feet of fringe trim along the entire edge of the tablecloth, which of these is closest to the radius in feet of the tablecloth? (Use  $\pi \approx 3.14$ )

- A. 1.9 ft
- B. 2.5 ft
- C. 5.1 ft
- D. 6.4 ft

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	B	6368	0.400	0.254

	A	B	C	D	Omit	Invalid
All	8	40	41	11	0	0
Low Scorers	16	29	38	15	1	0
Middle Scorers	7	32	48	13	0	0
High Scorers	2	66	27	4	0	0

MC Item Option Discriminations			
A	B	C	D
-0.189	0.254	-0.058	-0.125



Notes:  
Option C is more popular than key B. Check option discrimination.

The chart below shows the winning speeds for the past 5 years at a dragster racetrack.

**Winning Speeds at a  
Dragster Racetrack**

<b>Year</b>	<b>Speed (mph)</b>
1	291
2	303
3	283
4	291
5	300

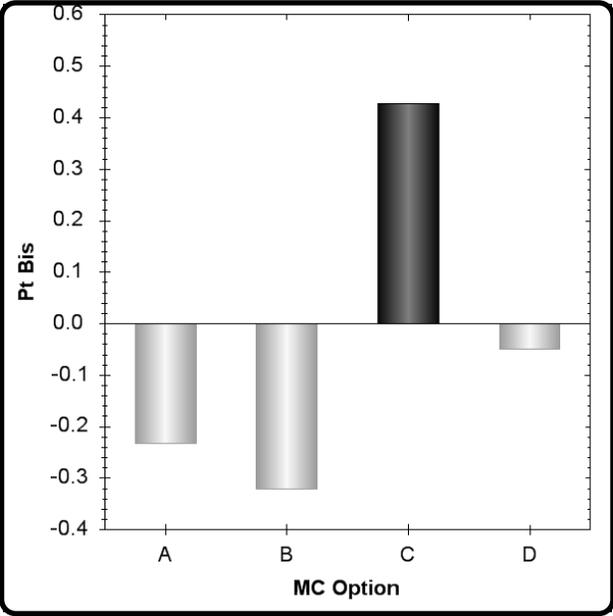
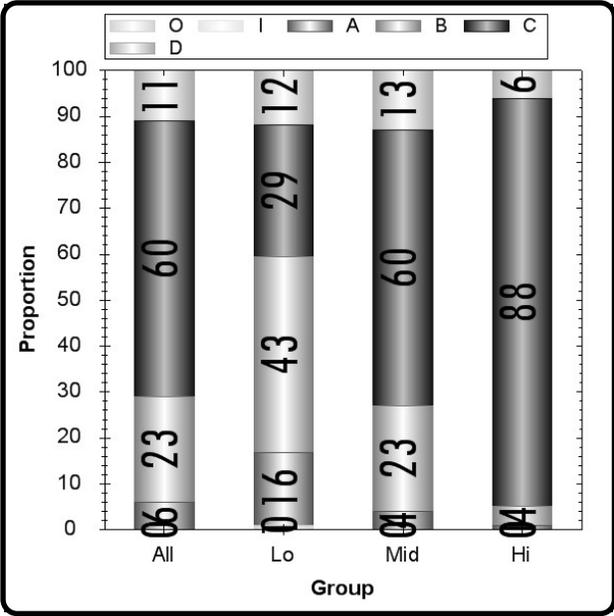
**What is the range of the speeds listed in the chart?**

- A.** 303
- B.** 291
- C.** 20
- D.** 9

Type	Max Points	Correct Answer	N Count	Item Mean	Discrimination
Multiple Choice	1	C	6368	0.600	0.428

	A	B	C	D	Omit	Invalid
All	6	23	60	11	0	0
Low Scorers	16	43	29	12	1	0
Middle Scorers	4	23	60	13	0	0
High Scorers	1	4	88	6	0	0

MC Item Option Discriminations			
A	B	C	D
-0.233	-0.321	0.428	-0.050



Notes:

**Janet is planning to purchase a membership at a local health club. The health club charges each member a one-time enrollment fee of \$50 plus a monthly fee of \$19.**

**Part A. In the space below, write an equation that Janet could use to calculate  $c$ , the total charge for joining the health club and being a member for  $m$  months.**

**Equation:** \_\_\_\_\_

**Part B. Janet has saved \$225 to purchase a membership at the health club. After paying the enrollment fee, what is the number of membership months Janet can purchase using her savings? Write your answer in the space below. Show or explain how you got your answer.**

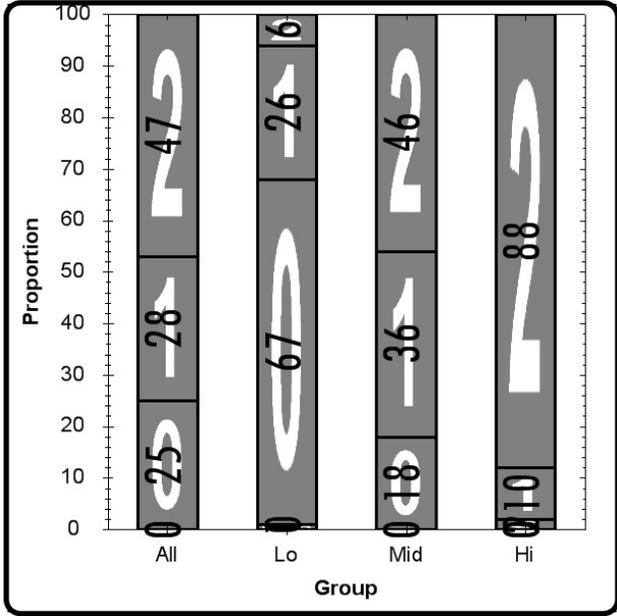
**Number of Months:** \_\_\_\_\_

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Type	Max Points	N Count	Item Mean	Discrimination
SR	2	6215	1.218	0.629

	0	1	2	Omit	Invalid
All	25	28	47	0	0
Low Scorers	67	26	6	1	0
Middle Scorers	18	36	46	0	0
High Scorers	2	10	88	0	0



Notes:

White students may perform better on this item as compared to Am. Indian students. (C)

Non SPED students may perform better on this item as compared to SPED students. (B)

Non LEP students may perform better on this item as compared to LEP students. (B)

- 3 Janet is planning to purchase a membership at a local health club. The health club charges each member a one-time enrollment fee of \$50 plus a monthly fee of \$19.**

**Part A. In the space below, write an equation that Janet could use to calculate  $c$ , the total charge for joining the health club and being a member for  $m$  months.**

Equation:  $50 + 19m = c$

**Part B. Janet has saved \$225 to purchase a membership at the health club. After paying the enrollment fee, what is the number of membership months Janet can purchase using her savings? Write your answer in the space below. Show or explain how you got your answer.**

$$\begin{array}{r} 225 \\ - 50 \\ \hline 175 \end{array}$$

$$175/19 = 9.2105$$

Number of Months: 9

She has \$225. After the \$50 fee, she has \$175. At \$19 per month,

Janet can purchase 9 months at the Health Club.

**Score 2** The student writes a correct equation  $50 + 19m = c$  in part A. The part B response is complete and accurate. After subtracting the enrollment fee, the student divides by the monthly fee to arrive at the answer,  $175/19 = 9.2105$ . The student correctly rounds the answer to 9 and follows with a clear explanation (She has \$225. After the \$50 fee, she has \$175. At \$19 per month, Janet can purchase 9 months at the Health Club).

3

Janet is planning to purchase a membership at a local health club. The health club charges each member a one-time enrollment fee of \$50 plus a monthly fee of \$19.

**Part A.** In the space below, write an equation that Janet could use to calculate  $c$ , the total charge for joining the health club and being a member for  $m$  months.

Equation:  $CM = 50 + 19$

**Part B.** Janet has saved \$225 to purchase a membership at the health club. After paying the enrollment fee, what is the number of membership months Janet can purchase using her savings? Write your answer in the space below. Show or explain how you got your answer.

$$\begin{array}{r} 225 \\ - 50 \\ \hline 175 \end{array} \qquad \begin{array}{r} 9.21 \\ 19 \overline{)175} \end{array}$$

Number of Months: 9

what I did is I took the \$50 fee and subtracted it from \$225 and came up with \$175 then divided 19 from 175 and got 9.

**Score Point 1** The response in part A contains an incorrect equation,  $CM = 50 * 19$ , but the response in part B contains an accurate solution ( $175 / 19 = 9.21$ ). The explanation given (*I took the \$50 fee and subtracted it from \$225 and came up with \$175 then divided 19 from 175 and got 9*) and the rounding of the final answer are reasonable. The phrase "divided 19 from 175" is a minor error that does not detract.

Booklet: 10132101661

- 3 Janet is planning to purchase a membership at a local health club. The health club charges each member a one-time enrollment fee of \$50 plus a monthly fee of \$19.

Part A. In the space below, write an equation that Janet could use to calculate  $c$ , the total charge for joining the health club and being a member for  $m$  months.

Equation:  $19 + 50 = 69$

Part B. Janet has saved \$225 to purchase a membership at the health club. After paying the enrollment fee, what is the number of membership months Janet can purchase using her savings? Write your answer in the space below. Show or explain how you got your answer.

Number of Months:  $4\frac{1}{2}$  months.  
I timesed 50 x 4 and got  
200 and then I divided 50 in to half and got 25

**Score Point 0** The response in part A contains an incorrect equation,  $19 + 50 = 69$ . The response in part B ( $4\frac{1}{2}$  months) is inaccurate. The student's explanation is inadequate to support any accurate solution, as the \$50 is a one time charge, and so should not be multiplied by 4.



