PSSA and Keystone Exams
Summer 2023 Workshops

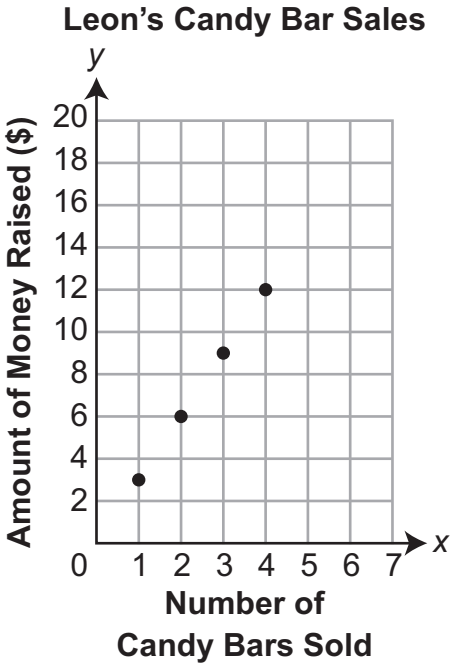
PSSA, Grade 5 Math

Leon's Candy Bar Sales

Handscoring
Anchor Set

PSSA Math: Leon's Candy Bar Sales (Grade 5); Anchor Set

1. Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(_____ , _____)

1. ***Continued.*** Please refer to the previous page for task explanation.

C. Explain why it is **not** possible for any of the points on the graph to have a *y*-coordinate of 77.

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

Leon's Candy Bar Sales
Grade 5 Math

Assessment Anchor this item will be reported under:

M05.C-G.1 Graph points on the coordinate plane to solve real-world and mathematical problems.

Specific Anchor Descriptor addressed by this item:

M05.C-G.1.1 Identify parts of a coordinate grid and describe or interpret points given an ordered pair.

M05.A-T.2.1 Use whole numbers and decimals to compute accurately (straight computation or word problems).

M05.D-M.2.1 Organize, display, and answer questions based on data.

Scoring Guide:

Score	In this item, the student –
4	Demonstrates a thorough understanding of how to graph points on the coordinate plane to solve real-world and mathematical problems by correctly solving problems and clearly explaining procedures.
3	Demonstrates a general understanding of how to graph points on the coordinate plane to solve real-world and mathematical problems by correctly solving problems and clearly explaining procedures with only minor errors or omissions.
2	Demonstrates a partial understanding of how to graph points on the coordinate plane to solve real-world and mathematical problems by correctly performing a significant portion of the required task.
1	Demonstrates minimal understanding of how to graph points on the coordinate plane to solve real-world and mathematical problems.
0	The response has no correct answer and insufficient evidence to demonstrate any understanding of the mathematical concepts and procedures as required by the task. Response may show only information copied from the question.

Top Scoring Student Response And Training Notes:

Score	Description
4	Student earns 4 points.
3	Student earns 3.0 – 3.5 points.
2	Student earns 2.0 – 2.5 points.
1	Student earns 0.5 - 1.5 points. OR Student demonstrates minimal understanding of how to graph points on the coordinate plane to solve real-world and mathematical problems.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.

A.

What?	Why?
x-axis **OR** *x* **OR** horizontal	

(1 score point)

1 point for correct answer

B.

What?	Why?
(6, 18)	

(1 score point)

1 point for correct answer

C.

What?	Why?
	Sample Explanation: Since Leon raises $3 for each candy bar he sells, the amount of money he raises must be a multiple of $3. However, $77 is not a multiple of $3, so none of the points on the graph will have 77 as a *y*-coordinate. **OR equivalent**

(1 score point)

1 point for correct and complete explanation

OR ½ point for correct but incomplete explanation

D.

What?	Why?
200 (candy bars)	**Sample Work:** 2.5× 240 = 600 600 ÷ 3 = 200 **OR** **Sample Explanation:** I multiplied his total from last year ($240) by 2.5 to find his goal for this year ($600). To reach this goal, Leon would need to sell 600 ÷ 3 = 200 candy bars. **OR equivalent**

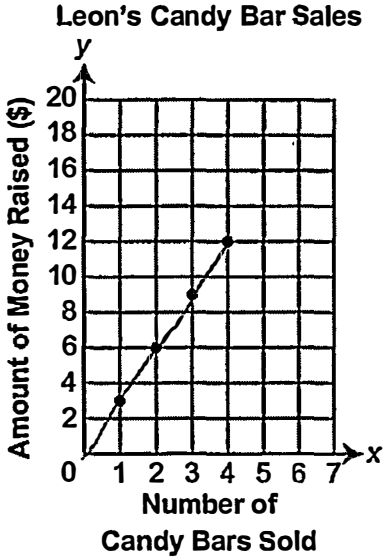
(1 score point)

½ point for correct answer

½ point for correct and complete support

MATHEMATICS SECTION 2

51. Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

The X axis

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 18)

51. ***Continued.*** **Please refer to the previous page for task explanation.**

C. Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.

77 is not divisible by 3 so you can't sell any candy bars for $3 and get to 77.

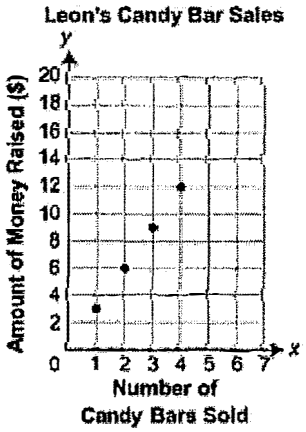
Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the fewest candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

240.0
x 2.5
$600

His goal is 240 x 2.5 which is 600. Since each candy bar is $3, all you have to do is 600 ÷ 3. The lowest amount of candy bars Leon could sell to reach his goal is 200.

Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

The x – axis

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(
6
18
)

C. Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.

Because for every candy bar sold Leon makes 3 dollars and 3 is not a factor of 77

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

First we have to figure out his goal this year: $240 \div 2 = 120$ then
$240 \times 2 = 480$ now $480 + 120 = 600$ dollars.
Leon would have to sell at the least 200 candy bars because
$200\ candy\ bars \times \$3 per\ bar = \$600\ total$

MATHEMATICS SECTION 2

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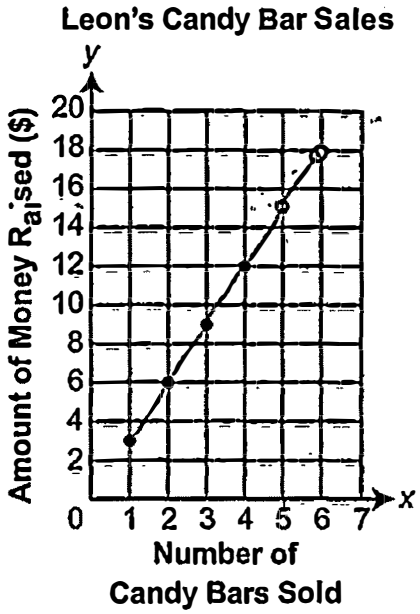


The pattern continues.

A. Which axis represents the number of candy bars sold?

The X-axis

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 18)

51. ***Continued.*** **Please refer to the previous page for task explanation.**

C. **Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.**

It is not possible for any of the points on the graph to have a y-coordinate of 77 because 77 is not a multiple of three, and each candy bar is sold for $3.00 each.

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. **What is the fewest candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.**

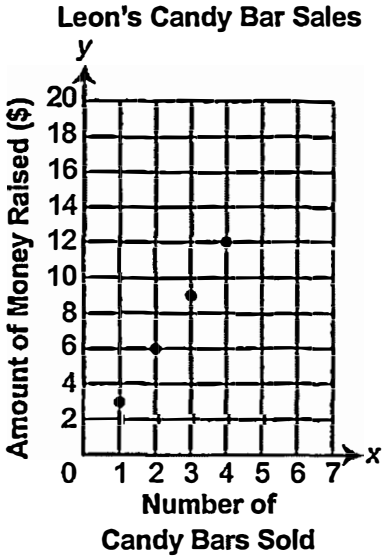
$240
× 2.5
$600

200 candy bars

200
3 | 600

MATHEMATICS SECTION 2

51. Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

the x axis

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 18)

51. ***Continued.*** **Please refer to the previous page for task explanation.**

C. Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.

It's not possible for any point on the grid to have a y coordinate of 77 because 77 is not a multiple of 3.

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the fewest candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

240 x 2.5 = 600 ÷ 3 = 200

MATHEMATICS SECTION 2

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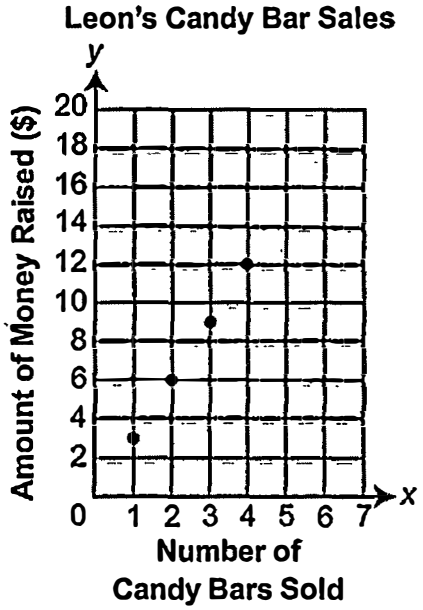


The pattern continues.

A. Which axis represents the number of candy bars sold?

The axis that represents the number of candy bars sold is the x-axis.

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 18)

51. ***Continued.*** Please refer to the previous page for task explanation.

C. Explain why it is **not** possible for any of the points on the graph to have a *y*-coordinate of 77.

It isn't possible for any of the points on the graph to have 77 on the y-coordinate because the graph doesn't reach nigh enough to that also because it is an odd number, the patteren goes by twos and twos are even.

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

$240 × 2.5 = 600

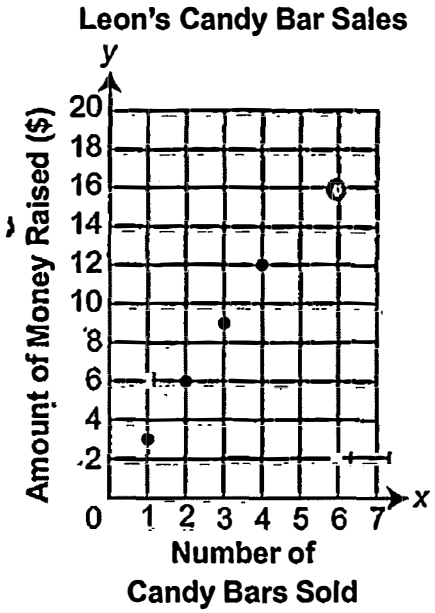
200
3|600
-6
00
-0
0
-0

200 candy bars

so the fewest he needs to sell is 200 candy bars.

MATHEMATICS SECTION 2

51. Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

THE "X" AXIS

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 16)

MATHEMATICS SECTION 2

51. ***Continued.*** Please refer to the previous page for task explanation.

C. Explain why it is **not** possible for any of the points on the graph to have a *y*-coordinate of 77.

Because it's "NOT" a multiple of 3

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

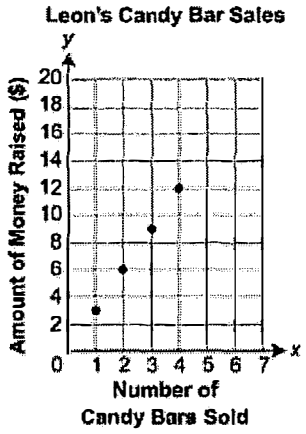
D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

240 x 2.5 = 600

600 ÷ 3 = 200

He only needs to sell 200 candy bars!

Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

The x axis represents the candy bars sold.

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6 , 18)

C. Explain why it is not possible for any of the points on the graph to have a y-coordinate of 77.

To have a y coordinate of 77, you would have to multiply by a decimal. Since Leon charges $3.00 a candy bar, that's not where the decimal would come from unless he started charging something odd, or he would have to start selling halves of candy bars.

2511 1000

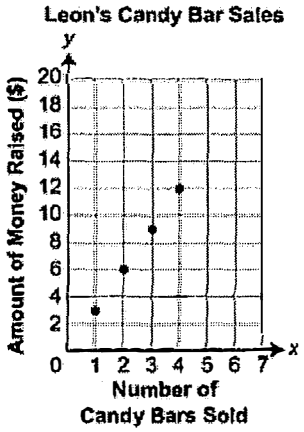
Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the fewest candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

$240 \times 2.5 = \$600 \div 6 = 100$

197 1000

Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

Axis x is # of candy sold

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6 , 17)

C. Explain why it is **not** possible for any of the points on the graph to have a *y*-coordinate of 77.

It cannot go to y cordinate 77 because the graph only shows up to 20.

69 / 1000

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

Leon will need 200 candy bars to sell to reach his goal of 600$. By my work to find that answer I multiplied 240 x 2.5 to = 600$ and every bar sold is 3$ so 600 ÷ 3 = 200 candy bars.

181 / 1000

MATHEMATICS SECTION 2

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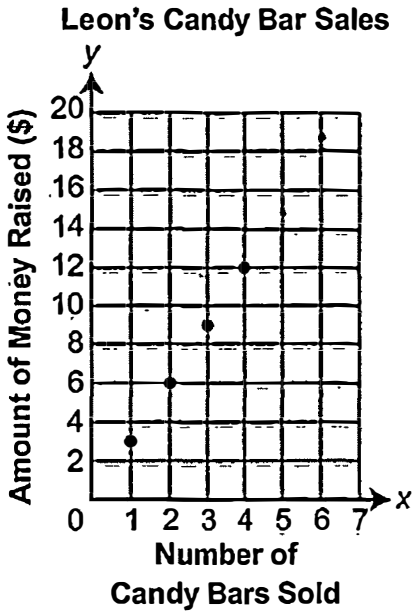


The pattern continues.

A. Which axis represents the number of candy bars sold?

(5, 12)

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6 , 19)

51. ***Continued.*** Please refer to the previous page for task explanation.

C. Explain why it is **not** possible for any of the points on the graph to have a *y*-coordinate of 77.

Its not possible because there is a remainder when you divide 77 ÷ 3 so it wouldn't be possible

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

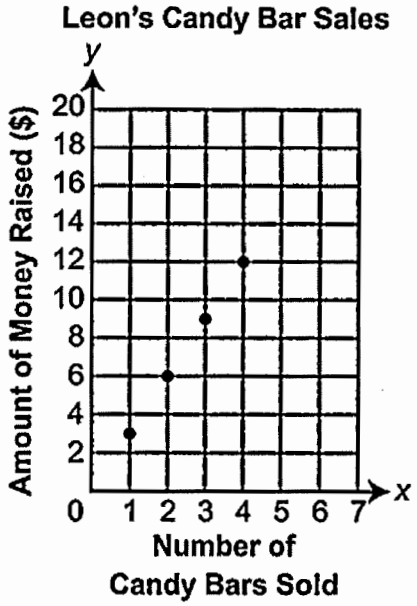
D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

$240
× 2.5
600
÷ 3
200

The fewest candy bars he needs are 200 candy bars.

MATHEMATICS SECTION 2

51. Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

the x axis

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(3 , 0)

51. ***Continued.*** **Please refer to the previous page for task explanation.**

C. Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.

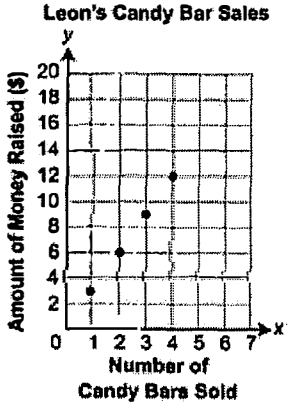
because the y axis only goes up to 20.

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the fewest candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

10 because 240 + 10 = 250 or 2.5

Leon is selling candy bars for a school fundraiser. He raises $3.00 for each candy bar he sells. The graph shown below represents the total amount of money, in dollars, Leon has raised based on the number of candy bars he has sold.



The pattern continues.

A. Which axis represents the number of candy bars sold?

4,12

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 16)

C. Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.

It is not possible for any of the points on the graph to have a y-coordinate of 77 because on the y-coordinate there isn't even a number 77 on it.

146 / 1000

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the **fewest** candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

The fewset candy bars he needs to sell to reach his goal of 600 for this year would be around 100.

98 / 1000

MATHEMATICS SECTION 2

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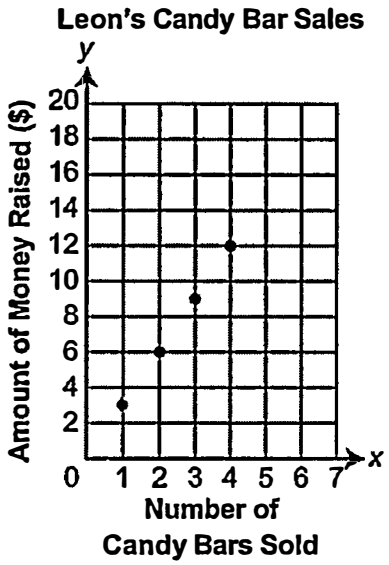

The pattern continues.

A. Which axis represents the number of candy bars sold?

3

B. Write the ordered pair that represents the amount of money Leon raises for selling 6 candy bars.

(6, 12)

51. ***Continued.*** **Please refer to the previous page for task explanation.**

C. Explain why it is not possible for any of the points on the graph to have a *y*-coordinate of 77.

Because we dont need the Y Coordnate of 77.

Last year, Leon raised a total of $240 from his candy bar sales. This year, his goal is to raise at least 2.5 times that amount.

D. What is the fewest candy bars Leon needs to sell to reach his goal for this year? Show or explain all your work.

$$\begin{array}{r} 240 \\ -\ 2.5 \\ \hline 225 \end{array}$$