



New York State Testing Program

Mathematics

Scoring Guide for Sample Test 2005

Grade 4

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Strand and Performance Indicator Map with Answer Key

Grade 4, Book 1					
Question	Type	Points	Strand	Content Performance Indicator	Answer Key
1	Multiple Choice	1	Number Sense and Operations	4.N.2	B
2	Multiple Choice	1	Measurement	4.M.2	G
3	Multiple Choice	1	Number Sense and Operations	4.N.4	D
4	Multiple Choice	1	Algebra	4.A.1	J
5	Multiple Choice	1	Number Sense and Operations	4.N.14	D
6	Multiple Choice	1	Measurement	4.M.8	F
7	Multiple Choice	1	Number Sense and Operations	4.N.21	B
8	Multiple Choice	1	Number Sense and Operations	4.N.3	H
9	Multiple Choice	1	Number Sense and Operations	4.N.20	B
10	Multiple Choice	1	Number Sense and Operations	4.N.14	F
11	Multiple Choice	1	Number Sense and Operations	4.N.18	C
12	Multiple Choice	1	Geometry	4.G.4	J
13	Multiple Choice	1	Number Sense and Operations	4.N.17	C
14	Multiple Choice	1	Geometry	4.G.3	H
15	Multiple Choice	1	Algebra	4.A.2	D
16	Multiple Choice	1	Number Sense and Operations	4.N.26	H
17	Multiple Choice	1	Number Sense and Operations	4.N.18	D
18	Multiple Choice	1	Number Sense and Operations	4.N.6	F
19	Multiple Choice	1	Number Sense and Operations	3.N.25	B
20	Multiple Choice	1	Statistics and Probability	4.S.5	H
21	Multiple Choice	1	Measurement	4.M.9	B
22	Multiple Choice	1	Algebra	4.A.5	J
23	Multiple Choice	1	Measurement	4.M.9	C
24	Multiple Choice	1	Measurement	4.M.1	G
25	Multiple Choice	1	Number Sense and Operations	3.N.15	A

Strand and Performance Indicator Map with Answer Key

Question	Type	Points	Strand	Content Performance Indicator	Answer Key
26	Multiple Choice	1	Statistics and Probability	4.S.5	J
27	Multiple Choice	1	Measurement	4.M.6	D
28	Multiple Choice	1	Geometry	3.G.2	G
29	Multiple Choice	1	Measurement	4.M.4	D
30	Multiple Choice	1	Number Sense and Operations	4.N.13	F
Grade 4, Book 2					
31	Short Response	2	Number Sense and Operations	4.N.14	n/a
32	Short Response	2	Number Sense and Operations	4.N.18	n/a
33	Short Response	2	Geometry	4.G.2	n/a
34	Short Response	2	Number Sense and Operations	4.N.21	n/a
35	Short Response	2	Algebra	4.A.1	n/a
36	Extended Response	3	Algebra	4.A.5	n/a
37	Short Response	2	Measurement	4.M.8	n/a
38	Short Response	2	Geometry	4.G.4	n/a
39	Extended Response	3	Statistics and Probability	4.S.3	n/a
Grade 4, Book 3					
40	Short Response	2	Number Sense and Operations	4.N.18	n/a
41	Short Response	2	Number Sense and Operations	4.N.20	n/a
42	Short Response	2	Algebra	4.A.4	n/a
43	Short Response	2	Measurement	7.M.3	n/a
44	Short Response	2	Number Sense and Operations	4.N.21	n/a
45	Extended Response	3	Geometry	4.G.3	n/a
46	Extended Response	3	Statistics and Probability	4.S.6	n/a
47	Short Response	2	Number Sense and Operations	4.N.21	n/a
48	Short Response	2	Statistics and Probability	4.S.6	n/a

2-Point Holistic Rubric

Score Points:

2 Points	<p>A two-point response is complete and correct.</p> <p>This response</p> <ul style="list-style-type: none">• demonstrates a thorough understanding of the mathematical concepts and/or procedures embodied in the task• indicates that the student has completed the task correctly, using mathematically sound procedures• contains clear, complete explanations and/or adequate work when required
1 Point	<p>A one-point response is only partially correct.</p> <p>This response</p> <ul style="list-style-type: none">• indicates that the student has demonstrated only a partial understanding of the mathematical concepts and/or procedures embodied in the task• addresses some elements of the task correctly but may be incomplete or contain some procedural or conceptual flaws• may contain an incorrect solution but applies a mathematically appropriate process• may contain a correct numerical answer but required work is not provided
0 Points	<p>A zero-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived at using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.</p>

Condition Code A

Condition Code A is applied whenever a student who is present for a test session leaves an entire open-ended item in that session blank (no response).

3-Point Holistic Rubric

Score Points:

3 Points	<p>A three-point response is complete and correct.</p> <p>This response</p> <ul style="list-style-type: none">• demonstrates a thorough understanding of the mathematical concepts and/or procedures embodied in the task• indicates that the student has completed the task correctly, using mathematically sound procedures• contains clear, complete explanations and/or adequate work when required
2 Points	<p>A two-point response is partially correct.</p> <p>This response</p> <ul style="list-style-type: none">• demonstrates partial understanding of the mathematical concepts and/or procedures embodied in the task• addresses most aspects of the task, using mathematically sound procedures• may contain an incorrect solution but provides complete procedures, reasoning, and/or explanations• may reflect some misunderstanding of the underlying mathematical concepts and/or procedures
1 Point	<p>A one-point response is incomplete and exhibits many flaws but is not completely incorrect.</p> <p>This response</p> <ul style="list-style-type: none">• demonstrates only a limited understanding of the mathematical concepts and/or procedures embodied in the task• may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete• exhibits multiple flaws related to a misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning• reflects a lack of essential understanding of the underlying mathematical concepts• may contain a correct numerical answer but required work is not provided
0 Points	<p>A zero-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived at using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.</p>

Scoring Policies for Mathematics

1. If the question does **not** specifically direct students to show their work, teachers may **not** score any work that the student shows.
2. If the student does the work in other than a designated “Show your work” area, that work may still be scored.
3. If the question requires students to show their work, and the student shows appropriate work and clearly identifies a correct answer but fails to write that answer in the answer blank, the student should still receive full credit.
4. If the question requires students to show their work, and a student shows appropriate work and arrives at the correct answer but writes an incorrect answer in the answer blank, the student may **not** receive full credit.
5. If the student provides one legible response (and one response only), teachers should score the response, even if it has been crossed out.
6. If the student has written more than one response but has crossed some out, teachers should score only the response that has not been crossed out.
7. For questions in which students use a trial-and-error (guess-and-check) process, evidence of three rounds of trial-and-error must be present for the student to receive credit for the process. Trial-and-error items are **not** subject to Scoring Policy #6, since crossing out is part of the trial-and-error process.
8. If a response shows repeated occurrences of the same conceptual error within a question, the student should not be penalized more than once.
9. In questions that provide ruled lines for the students to write an explanation of their work, mathematical work shown elsewhere on the page may be considered and scored if, and only if, the student explicitly points to the work as part of the answer.
10. Responses containing a conceptual error may **not** receive more than fifty percent of the maximum score.
11. In all questions that provide a response space for one numerical answer and require work to be shown, if the correct numerical answer is provided but no work is shown, the score is 1.
12. In all questions that provide response spaces for two numerical answers and require work to be shown for both parts, if one correct numerical answer is provided but no work is shown in either part, the score is 0. If two correct numerical answers are provided but no work is shown in either part, the score is 1.
13. In all 3-point questions that provide response spaces for two numerical answers and require work to be shown in one part, if two correct numerical answers are provided but no work is shown, the score is 2.

Content-Specific Scoring Clarifications for Mathematics Tests

1. All necessary signs of operation should be present for work to be considered mathematically complete and correct. If signs of operation in the work shown are missing and it is absolutely clear and apparent in the student's work which operation is being used, and all other work required is correct, the student should receive full credit.
2. In questions that require students to provide bar graphs, touching bars are acceptable only at Grades 3 and 4.
3. If the question asks the student to provide an expression and the student provides an equation, this is an acceptable response at Grades 3 and 4 only.

For additional clarification, see the web site <http://www.emsc.nysed.gov/ciai/mst/instructrec.htm>.

31

The table below shows the number of books in four school libraries.

LIBRARY BOOKS

School	Number of Books
Lakeview	2,265
King	1,304
Penntown	1,746
Rogers	4,355

What is the total number of books in all four school libraries?

Show your work.

Answer _____ books

QUESTION 31

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $2,265 + 1,304 + 1,746 + 4,355 = 9,670$

OR other valid response

AND

- 9,670 (books)

Score Points:

Apply 2-point holistic rubric.

31

The table below shows the number of books in four school libraries.

LIBRARY BOOKS

School	Number of Books
Lakeview	2,265
King	1,304
Penntown	1,746
Rogers	4,355

What is the total number of books in all four school libraries?

Show your work.

$$\begin{array}{r} 112 \\ 2,265 \\ 1,304 \\ 1,746 \\ +4,355 \\ \hline 9,670 \end{array}$$

Answer 9,670 books

This response is complete and correct.

Score Point - 2

31The table below shows the number of books in four school libraries.**LIBRARY BOOKS**

School	Number of Books
Lakeview	2,265
King	1,304
Penntown	1,746
Rogers	4,355

What is the total number of books in all four school libraries?*Show your work.*

$$\begin{array}{r}
 4,355 \\
 +2,265 \\
 \hline
 6,620 \\
 +3,060 \\
 \hline
 9,680 \text{ books}
 \end{array}$$

$$\begin{array}{r}
 1,756 \\
 -1,304 \\
 \hline
 3,060
 \end{array}$$

Answer 9,680 books

This response is only partially correct. It applies the correct mathematical process, but contains a transcription error with one of the addends.

Score Point - 1

31 The table below shows the number of books in four school libraries.

LIBRARY BOOKS

School	Number of Books
Lakeview	2,265
King	1,304
Penntown	1,746
Rogers	4,355

What is the total number of books in all four school libraries?

Show your work.

$$\begin{array}{r} 4 \\ 2 \\ 1 \\ + 1 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 7 \\ 3 \\ 3 \\ + 2 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 6 \\ 5 \\ 5 \\ 5 \\ + 1 \\ \hline 20 \end{array}$$

Answer 8,151,520 books

This response is incorrect.

Score Point - 0

32

Ronald's apartment building has 17 apartments on each floor. There are 6 floors in the building. What is the total number of apartments in Ronald's apartment building?

Show your work.

Answer _____ apartments

QUESTION 32

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $17 \times 6 = 102$
OR other valid response

AND

- 102 (apartments)

Score Points:

Apply 2-point holistic rubric.

32

Ronald's apartment building has 17 apartments on each floor. There are 6 floors in the building. What is the total number of apartments in Ronald's apartment building?

Show your work.

$$\begin{array}{r} 17 \\ \times 6 \\ \hline 102 \end{array}$$

Answer 102 apartments

This response is complete and correct.

Score Point - 2

32

Ronald's apartment building has 17 apartments on each floor. There are 6 floors in the building. What is the total number of apartments in Ronald's apartment building?

Show your work.

$$\begin{array}{r} 4 \\ 17 \\ +17 \\ +17 \\ +17 \\ +17 \\ +17 \\ \hline 109 \end{array}$$

Answer 109 apartments

This response is only partially correct. The process of adding 17 six times is a correct way to address the task; however, the solution is incorrect.

Score Point - 1

32

Ronald's apartment building has 17 apartments on each floor. There are 6 floors in the building. What is the total number of apartments in Ronald's apartment building?

Show your work.

$$\begin{array}{r} 117 \\ + 6 \\ \hline 23 \end{array}$$

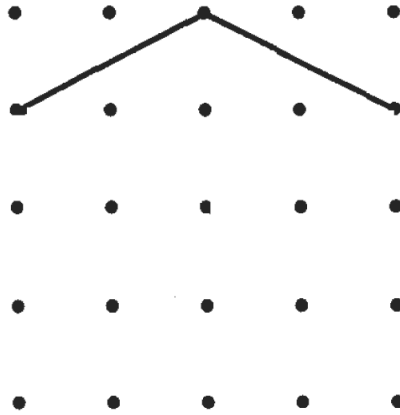
Answer 23 apartments

This response is completely incorrect. The addition of 17 and 6 is an inappropriate process and does not demonstrate even a limited understanding of the task.

Score Point - 0

33

Jason wants to draw a pentagon on the diagram below. He has drawn 2 line segments so far.



Part A

Draw the rest of Jason's pentagon on the diagram.

Part B

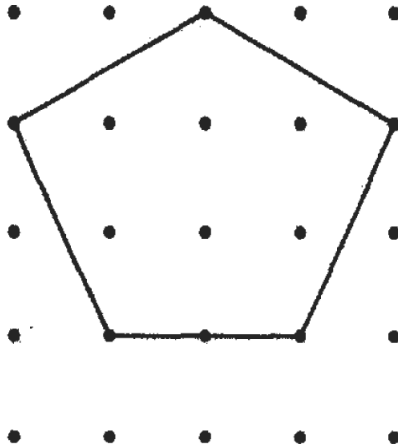
How many sides does a pentagon have?

Answer _____ sides

QUESTION 33

STRAND 3: GEOMETRY

Complete and Correct Response:



OR other valid response

AND

- 5 (sides)

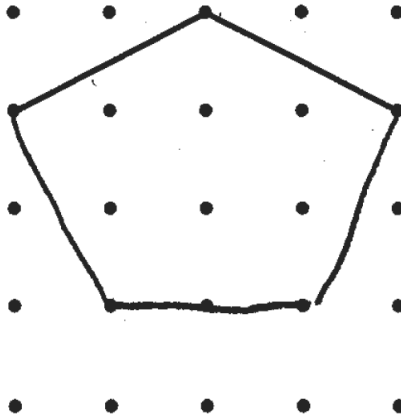
OR other valid response

Score Points:

Apply 2-point holistic rubric.

33

Jason wants to draw a pentagon on the diagram below. He has drawn 2 line segments so far.



Part A

Draw the rest of Jason's pentagon on the diagram.

Part B

How many sides does a pentagon have?

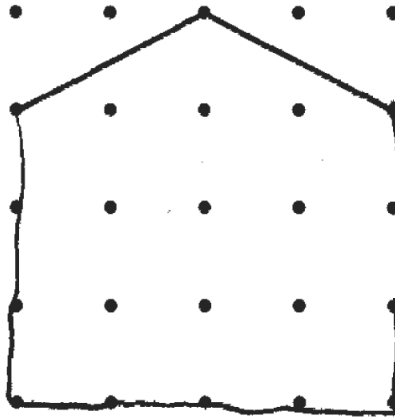
Answer 5 sides

This response is complete and correct.

Score Point - 2

33

Jason wants to draw a pentagon on the diagram below. He has drawn 2 line segments so far.



Part A

Draw the rest of Jason's pentagon on the diagram.

Part B

How many sides does a pentagon have?

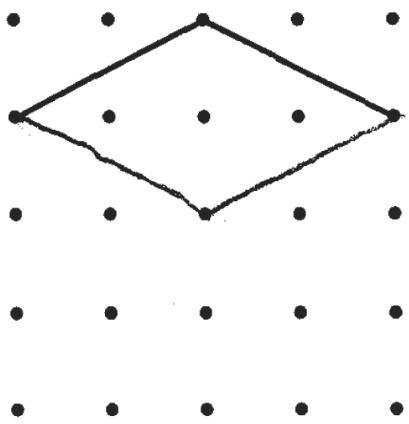
Answer 5 sides

This response is only partially correct. Part A is correct; however Part B is incorrect.

Score Point - 1

33

Jason wants to draw a pentagon on the diagram below. He has drawn 2 line segments so far.



Part A

Draw the rest of Jason's pentagon on the diagram.

Part B

How many sides does a pentagon have?

Answer 4 sides

This response is completely incorrect. The pentagon is incorrectly drawn and the number of sides is incorrect.

Score Point - 0

34

Mr. Harrington bought some boxes of oranges at the market. He bought a total of 72 oranges. There were 6 oranges in each box. How many boxes of oranges did Mr. Harrington buy?

Show your work.

Answer _____ boxes

QUESTION 34

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $72 \div 6 = 12$
OR other valid process

AND

- 12 (boxes)

Score Points:

Apply 2-point holistic rubric.

34

Mr. Harrington bought some boxes of oranges at the market. He bought a total of 72 oranges. There were 6 oranges in each box. How many boxes of oranges did Mr. Harrington buy?

Show your work.

$$\begin{array}{r} 12 \\ 6 \overline{) 72} \\ \underline{-60} \\ 12 \\ \underline{-12} \\ 0 \end{array}$$

$$\begin{array}{r} 12 \\ \times 6 \\ \hline 72 \end{array}$$

Answer 12 boxes

This response is complete and correct.

Score Point - 2

34

Mr. Harrington bought some boxes of oranges at the market. He bought a total of 72 oranges. There were 6 oranges in each box. How many boxes of oranges did Mr. Harrington buy?

Show your work.

$$\begin{array}{r} 12 \\ 6 \overline{) 72} \\ \underline{6} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

Answer 11 boxes

This response is only partially correct. It contains the mathematically appropriate process, but arrives at an incorrect solution.

Score Point - 1

34

Mr. Harrington bought some boxes of oranges at the market. He bought a total of 72 oranges. There were 6 oranges in each box. How many boxes of oranges did Mr. Harrington buy?

Show your work.

$$\begin{array}{r} 1 \\ 72 \\ \times 6 \\ \hline 432 \end{array}$$

Answer 432 boxes

This response is completely incorrect.

Score Point - 0

35

Jane and Kwan each have music CDs. Kwan has 12 more CDs than Jane.

Part A

Write a number sentence to show that Kwan has 12 more CDs than Jane. Let J be the number of CDs Jane has. Let K be the number of CDs Kwan has.

Number Sentence _____

Part B

If Jane has 7 CDs, how many CDs does Kwan have?

Show your work.

Answer _____ CDs

QUESTION 35

STRAND 2: ALGEBRA

Complete and Correct Response:

Part A

- $J + 12 = K$

OR

- $K - 12 = J$

OR

- $K - J = 12$

OR other valid response

AND

Part B

- $7 + 12 = 19$

OR other valid response

AND

- 19 (CDs)

Score Points:

Apply 2-point holistic rubric.

35Jane and Kwan each have music CDs. Kwan has 12 more CDs than Jane.**Part A**Write a number sentence to show that Kwan has 12 more CDs than Jane. Let J be the number of CDs Jane has. Let K be the number of CDs Kwan has.**Number Sentence** $J + 12 = K$ **Part B**

If Jane has 7 CDs, how many CDs does Kwan have?

Show your work.

$$\begin{array}{r} 12 \\ + 7 \\ \hline 19 \end{array}$$

Answer 19 CDs

$$\begin{array}{r} 19 \\ - 12 \\ \hline 07 \end{array}$$

This response is complete and correct.

Score Point - 2

35

Jane and Kwan each have music CDs. Kwan has 12 more CDs than Jane.

Part A

Write a number sentence to show that Kwan has 12 more CDs than Jane. Let J be the number of CDs Jane has. Let K be the number of CDs Kwan has.

Number Sentence $K - J$

Part B

If Jane has 7 CDs, how many CDs does Kwan have?

Show your work.

$$\begin{array}{r} 7 \\ +12 \\ \hline 19 \end{array}$$

Answer 19 CDs

This response is only partially correct. The work in Part B shows the sound mathematical procedure, resulting in the correct answer. However, the number 'sentence' written in Part A is incomplete.

Score Point - 1

35

Jane and Kwan each have music CDs. Kwan has 12 more CDs than Jane.

Part A

Write a number sentence to show that Kwan has 12 more CDs than Jane. Let J be the number of CDs Jane has. Let K be the number of CDs Kwan has.

Number Sentence $12 + J = K$

Part B

If Jane has 7 CDs, how many CDs does Kwan have?

Show your work.

Jane has 7
and Kwan has
12 more than
Jane

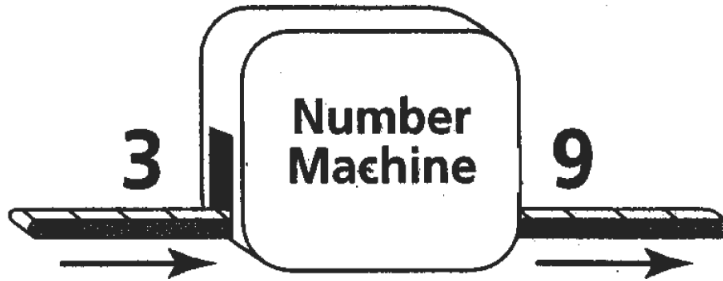
Answer 18 CDs

This response is incorrect and is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point - 0

36

The number machine below follows a rule for all numbers that go into it.



Complete the number machine table below by writing the two missing numbers.

**NUMBER
MACHINE TABLE**

IN	OUT
3	9
5	15
6	18
8	
	27

On the lines below, write the rule used to change **IN numbers** to **OUT numbers** in this number machine.

QUESTION 36

STRAND 2: ALGEBRA

Complete and Correct Response:

**NUMBER
MACHINE**

In	Out
3	9
5	15
6	18
8	24
9	27

AND

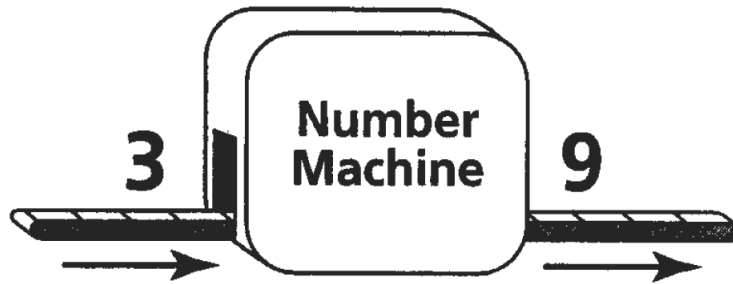
- Multiply the IN numbers by 3.
OR other valid response

Score Points:

Apply 3-point holistic rubric.

36

The number machine below follows a rule for all numbers that go into it.



Complete the number machine table below by writing the two missing numbers.

**NUMBER
MACHINE TABLE**

IN	OUT
3	9
5	15
6	18
8	24
9	27

$$\begin{array}{r} 9 \\ 3 \overline{) 27} \\ \underline{27} \\ 0 \end{array}$$

On the lines below, write the rule used to change IN numbers to OUT numbers in this number machine.

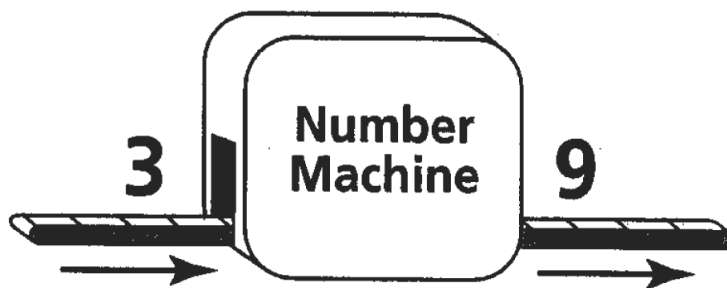
You multiply by three to find what comes out and you divide by three to find what went in.

This response is complete and correct. The rule given to change IN numbers to OUT numbers is clear and complete. Although not required, the rule for how to change OUT numbers to IN numbers is also provided.

Score Point - 3

36

The number machine below follows a rule for all numbers that go into it.



Complete the number machine table below by writing the two missing numbers.

**NUMBER
MACHINE TABLE**

IN	OUT
3	9
5	15
6	18
8	16
9	27

On the lines below, write the rule used to change IN numbers to OUT numbers in this number machine.

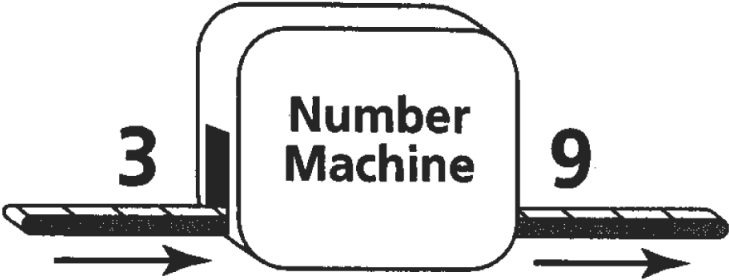
The Rule used to change in numbers to out numbers was 3 times the in numbers equalled the out numbers.

This response is partially correct. The rule given to change IN numbers to OUT numbers is complete and correct. The number 9 entered on the number machine table's IN column is also correct. However, the 16 entered on the table's OUT column is incorrect.

Score Point - 2

36

The number machine below follows a rule for all numbers that go into it.



Complete the number machine table below by writing the two missing numbers.

**NUMBER
MACHINE TABLE**

IN	OUT
3	9
5	15
6	18
8	24
9	27

On the lines below, write the rule used to change IN numbers to OUT numbers in this number machine.

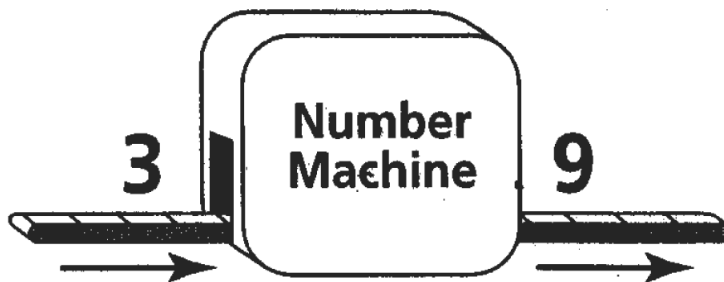
The rule is to Count by three's.
from number to number

This response is incomplete and exhibits flaws but is not completely incorrect. The numbers entered on the number machine table (9 and 24) are both correct. However, the rule given to describe how to change IN numbers to OUT numbers is incomplete.

Score Point - 1

36

The number machine below follows a rule for all numbers that go into it.



Complete the number machine table below by writing the two missing numbers.

**NUMBER
MACHINE TABLE**

IN	OUT
3	9
5	15
6	18
8	7
5	27

On the lines below, write the rule used to change **IN** numbers to **OUT** numbers in this number machine.

Count by 3's until you get to
9.

This response is incorrect and is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point - 0

37

Last Saturday, John went to the movies. He had \$10.00. He paid \$5.00 for his movie ticket and \$3.25 for popcorn. How much money did John have left?

Show your work.

Answer \$ _____

QUESTION 37

STRAND 4: MEASUREMENT

Complete and Correct Response:

- $$\begin{array}{r} \$5.00 \\ + \$3.25 \\ \hline \$8.25 \end{array}$$

$$\begin{array}{r} \$10.00 \\ - \$8.25 \\ \hline \$1.75 \end{array}$$

OR other valid response

AND

- (\$) 1.75

Score Points:

Apply 2-point holistic rubric.

37

Last Saturday, John went to the movies. He had \$10.00. He paid \$5.00 for his movie ticket and \$3.25 for popcorn. How much money did John have left?

Show your work.

$$\begin{array}{r} \$5.00 \\ + 3.25 \\ \hline \$8.25 \end{array}$$
$$\begin{array}{r} \$10.00 \\ - 8.25 \\ \hline \$1.75 \end{array}$$

Answer \$ 1.75 left

This response is complete and correct.

Score Point - 2

37

Last Saturday, John went to the movies. He had \$10.00. He paid \$5.00 for his movie ticket and \$3.25 for popcorn. How much money did John have left?

Show your work.

$$\begin{array}{r} 10.00 \\ - 5.00 \\ \hline 05.00 \\ - 3.25 \\ \hline 2.75 \end{array}$$

Answer \$ 2.75

This response is only partially correct. The correct process is shown but the solution is incorrect.

Score Point - 1

37

Last Saturday, John went to the movies. He had \$10.00. He paid \$5.00 for his movie ticket and \$3.25 for popcorn. How much money did John have left?

Show your work.

I subtracted the 3 numbers
and dat how I got my
answer

Answer \$ 2.75

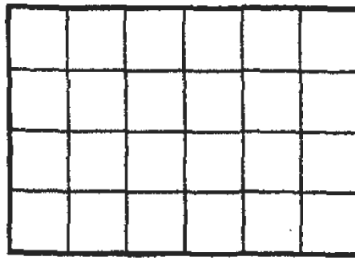
This response is completely incorrect. No work is shown and the solution is incorrect.

Score Point - 0

38

A diagram of Mr. Taylor's patio is shown below.

MR. TAYLOR'S PATIO



KEY



= 1 square meter

Part A

What is the area, in square meters, of the patio?

Answer _____ square meters

Part B

What is the perimeter, in meters, of the patio?

Show your work.

Answer _____ meters

QUESTION 38

STRAND 3: GEOMETRY

Complete and Correct Response:

- 24 (square meters)

AND

- $6 + 4 + 6 + 4 = 20$

OR other valid response

AND

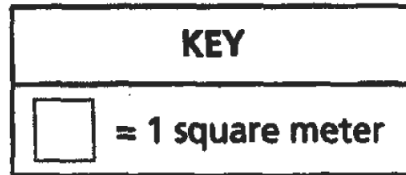
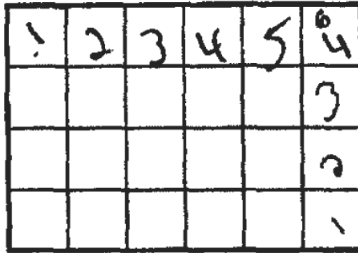
- 20 (meters)

Score Points:

Apply 2-point holistic rubric.

38

A diagram of Mr. Taylor's patio is shown below.

MR. TAYLOR'S PATIO**Part A**

$A = L \times W$

$4 \times 6 = 24$

What is the area, in square meters, of the patio?

Answer 24 square meters**Part B**

What is the perimeter, in meters, of the patio?

Show your work.

$$\begin{array}{r} 4 \\ +4 \\ \hline 8 \end{array} \quad \begin{array}{r} 6 \\ +6 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ +8 \\ \hline 20 \end{array}$$

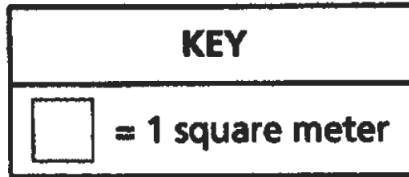
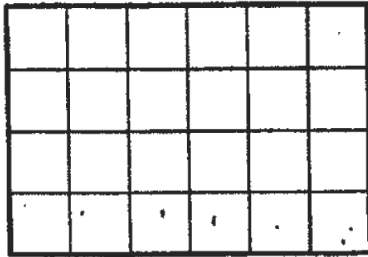
Answer 20 meters

This response is complete and correct.

Score Point - 2

38

A diagram of Mr. Taylor's patio is shown below.

MR. TAYLOR'S PATIO**Part A**

What is the area, in square meters, of the patio?

Answer 24 square meters

Part B

What is the perimeter, in meters, of the patio?

Show your work.

$$\begin{array}{r} 6 \\ \times 4 \\ \hline 24 \end{array}$$

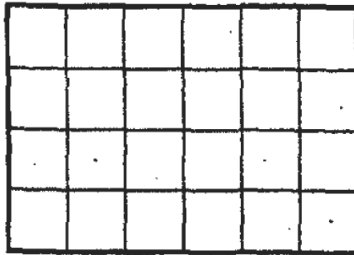
Answer 24 meters

This response demonstrates only partial understanding of the mathematical concepts embodied in the task. The correct answer for area, 24, is given, but the work and answer for perimeter are incorrect.

Score Point - 1

38

A diagram of Mr. Taylor's patio is shown below.

MR. TAYLOR'S PATIO**KEY**

= 1 square meter

Part A

What is the area, in square meters, of the patio?

Answer 36 square meters

$$\begin{array}{r} 32 \\ \times 8 \\ \hline 256 \end{array}$$

Part B

What is the perimeter, in meters, of the patio?

Show your work.

$$\begin{array}{r} 24 \\ \times 24 \\ \hline 576 \end{array}$$

Answer 56 meters

This response is completely incorrect.

Score Point - 0

39

The table below shows the type and number of pets Kyle's classmates have.

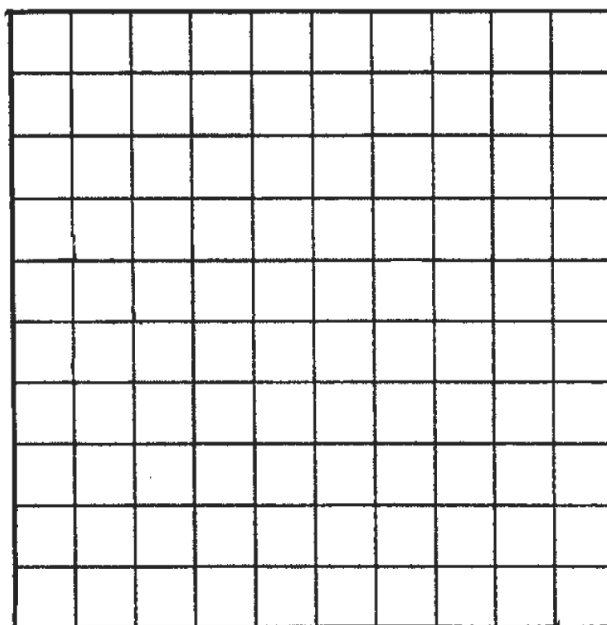
PETS

Type of Pet	Number of Pets
Dog	6
Cat	4
Fish	5

On the grid below, make a bar graph to show the type and number of pets Kyle's classmates have.

Be sure to:

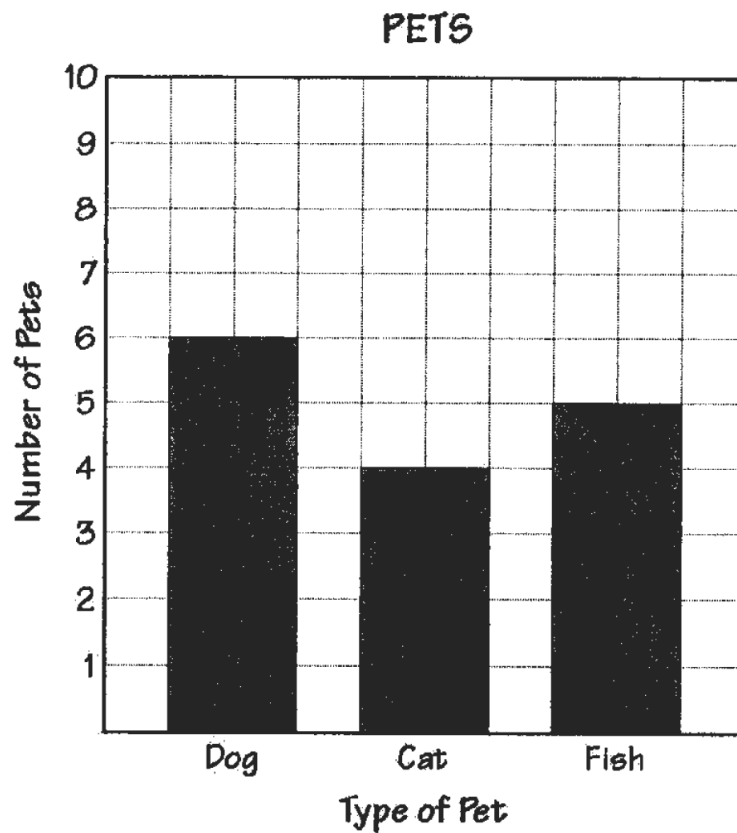
- title the graph
- label both axes
- graph all the data
- provide a scale for the graph



QUESTION 39

STRAND 5: STATISTICS AND PROBABILITY

Complete and Correct Response:



OR other valid bar graph

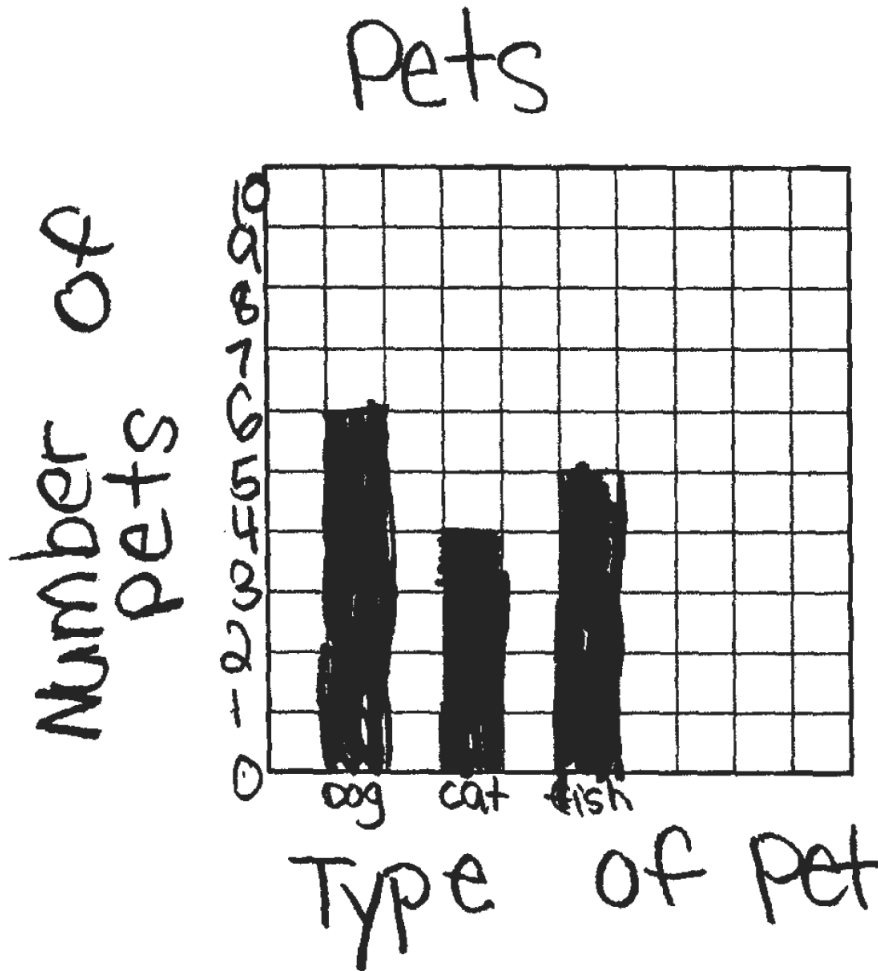
Score Points:

Apply 3-point holistic rubric.

On the grid below, make a bar graph to show the type and number of pets Kyle's classmates have.

Be sure to:

- title the graph
- label both axes
- graph all the data
- provide a scale for the graph



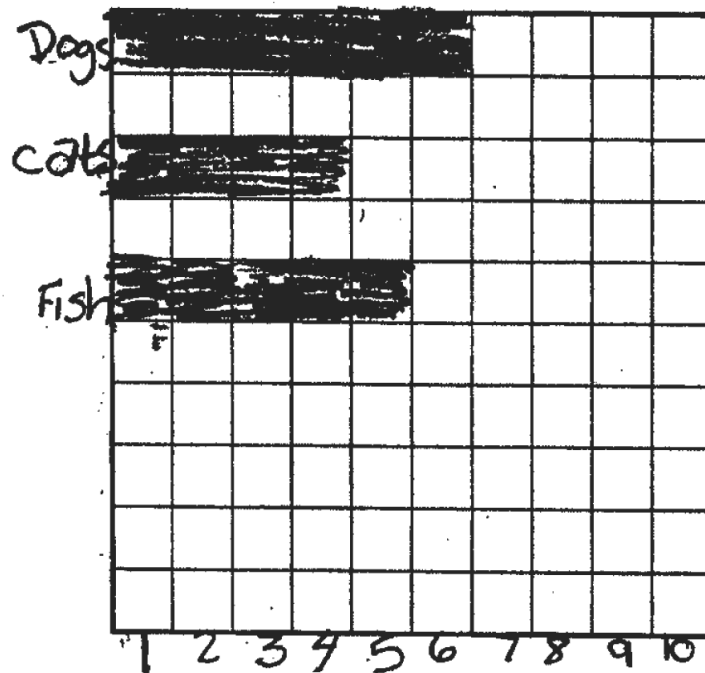
This response is complete and correct.

Score Point - 3

On the grid below, make a bar graph to show the type and number of pets Kyle's classmates have.

Be sure to:

- title the graph
- label both axes
- graph all the data
- provide a scale for the graph



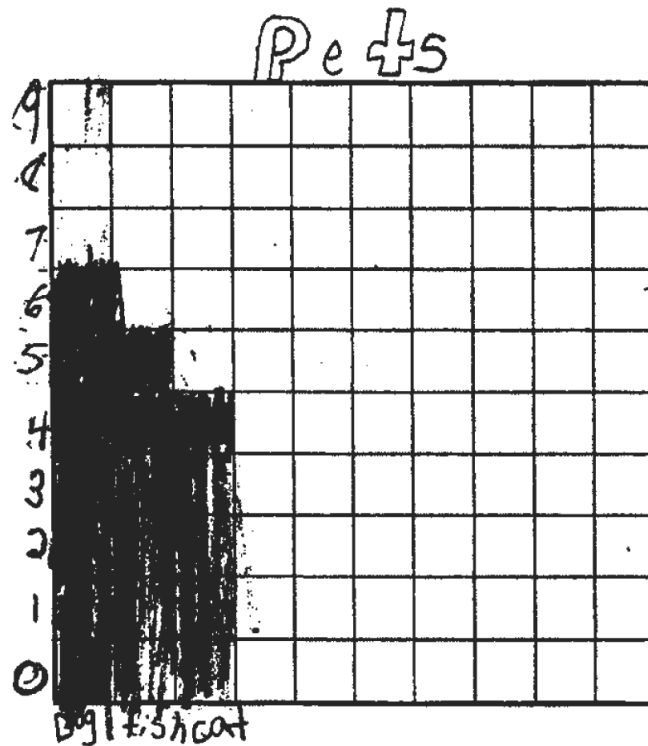
This response is partially correct. The scale is appropriate to the task and the bars are accurate. A title and axes labels are missing.

Score Point - 2

On the grid below, make a bar graph to show the type and number of pets Kyle's classmates have.

Be sure to:

- title the graph
- label both axes
- graph all the data
- provide a scale for the graph



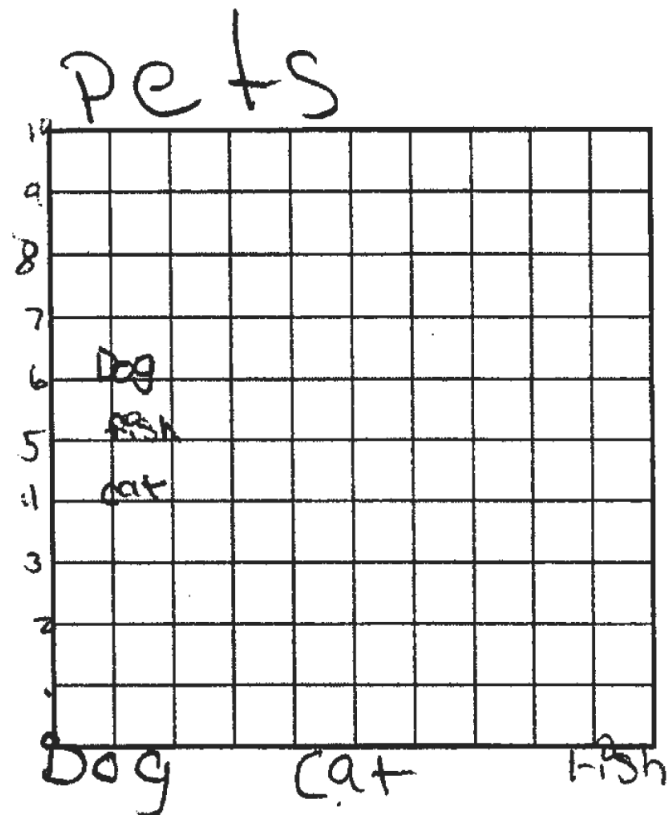
This response is incomplete and exhibits many flaws, but is not completely incorrect. While the bars are labeled, both axes are not. In addition, the scale is flawed, as "0" appears to have been given special representation on the vertical axis. A limited understanding of bar graphs is shown.

Score Point - 1

On the grid below, make a bar graph to show the type and number of pets Kyle's classmates have.

Be sure to:

- title the graph
- label both axes
- graph all the data
- provide a scale for the graph



This response is not correct. Bar labels and a scale are present, but holistically are not sufficient to demonstrate even a limited understanding of bar graphs.

Score Point - 0

40

Kevin read 8 books last month. Each book had 32 pages. What is the total number of pages Kevin read?

Show your work.

Answer _____ pages

QUESTION 40

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $8 \times 32 = 256$
OR other valid response

AND

- 256 (pages)

Score Points:

Apply 2-point holistic rubric.

40

Kevin read 8 books last month. Each book had 32 pages. What is the total number of pages Kevin read?

Show your work.

$$\begin{array}{r} 32 \\ \times 8 \\ \hline 256 \end{array}$$

Answer 256 pages

This response is complete and correct.

Score Point - 2

40

Kevin read 8 books last month. Each book had 32 pages. What is the total number of pages Kevin read?

Show your work.

$$\begin{array}{r} 32 \\ \times 8 \\ \hline 296 \end{array}$$

or

$$\begin{array}{r} 32 \\ 32 \\ 32 \\ 32 \\ + 32 \\ 32 \\ 32 \\ 32 \\ \hline 296 \end{array}$$

Answer 296 pages

This response is only partially correct. The appropriate processes are shown but the solution is incorrect.

Score Point - 1

40

Kevin read 8 books last month. Each book had 32 pages. What is the total number of pages Kevin read?

Show your work.

SB 328

$$\begin{array}{r} 32 \\ + 8 \\ \hline 40 \end{array}$$

Answer 40 pages

This response is completely incorrect.

Score Point - 0

41

Ms. Sanders is taking a 300-mile bicycle trip. Each day she rides her bike 30 miles. How many days does it take Ms. Sanders to finish the trip?

Show your work.

Answer _____ days

QUESTION 41

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $300 \div 30 = 10$
OR other valid response

AND

- 10 (days)

Score Points:

Apply 2-point holistic rubric.

41

Ms. Sanders is taking a 300-mile bicycle trip. Each day she rides her bike 30 miles. How many days does it take Ms. Sanders to finish the trip?

Show your work.

$$\begin{array}{r} 10 \\ 30 \overline{)300} \\ \underline{-300} \\ 0 \end{array}$$

Answer 10 days

This response is complete and correct.

Score Point - 2

41

Ms. Sanders is taking a 300-mile bicycle trip. Each day she rides her bike 30 miles. How many days does it take Ms. Sanders to finish the trip?

Show your work.

$$\begin{array}{r} 111 \\ 30 \overline{) 300} \\ \underline{-30} \\ 00 \\ \underline{-30} \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

Answer 111 days

This response is only partially correct. The work shows the mathematically sound procedure of dividing the total miles of the trip by the daily miles. However, the answer given is incorrect.

Score Point - 1

41

Ms. Sanders is taking a 300-mile bicycle trip. Each day she rides her bike 30 miles. How many days does it take Ms. Sanders to finish the trip?

Show your work.

$$\begin{array}{r} 30 \\ \times 30 \\ \hline 60 \end{array}$$

$$\begin{array}{r} 30 \\ \times 40 \\ \hline 120 \end{array}$$

$$\begin{array}{r} 30 \\ \times 50 \\ \hline 150 \end{array}$$

$$\begin{array}{r} 30 \\ \times 70 \\ \hline 210 \end{array}$$

Answer 29 days

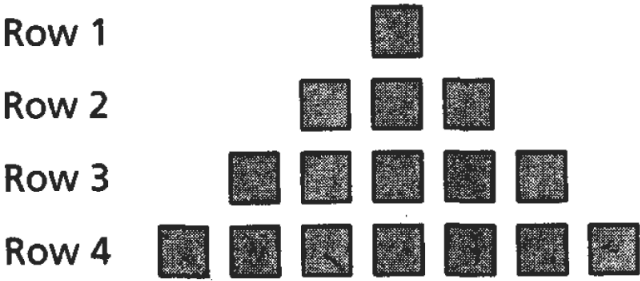
$$\begin{array}{r} 290 \\ \hline 0 \end{array}$$

This response is completely incorrect. Although the number 30 is used in the work shown, many irrelevant numbers are also used. Holistically, the response is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point - 0

42

Nora is making a pattern with squares. The drawing below shows the first 4 rows of her pattern.



If Nora continues the pattern, how many squares will be in Row 6?

Answer _____ squares

On the lines below, explain how you found your answer.

QUESTION 42

STRAND 2: ALGEBRA

Complete and Correct Response:

- 11 (squares)

AND

- After the first row, each row has 2 more squares than the row above it. Row 4 has 7 squares, so Row 5 will have 9 squares and Row 6 will have 11 squares.

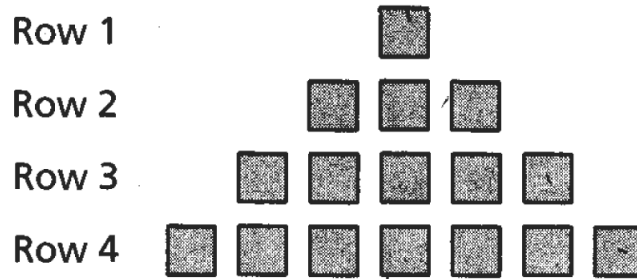
OR other valid response

Score Points:

Apply 2-point holistic rubric.

42

Nora is making a pattern with squares. The drawing below shows the first 4 rows of her pattern.



If Nora continues the pattern, how many squares will be in Row 6?

Answer 11 squares

On the lines below, explain how you found your answer.

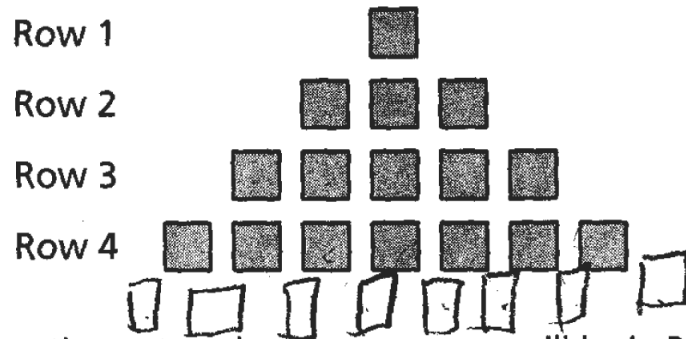
It's all odd # so the
1st row started with 1. Second row
3, third row 5 fourth
row 7 fifth row 9 Then
the last row is 11

This response is complete and correct.

Score Point - 2

42

Nora is making a pattern with squares. The drawing below shows the first 4 rows of her pattern.



If Nora continues the pattern, how many squares will be in Row 6?

Answer 9 squares

On the lines below, explain how you found your answer.

I found the answer by odd numbers because in all the rows they go by 1, 3, 5, 7 and 9.

This response is only partially correct. The explanation is correct. However, the process is incomplete and the answer is incorrect.

Score Point - 1

42

Nora is making a pattern with squares. The drawing below shows the first 4 rows of her pattern.

Row 1



Row 2



Row 3



Row 4

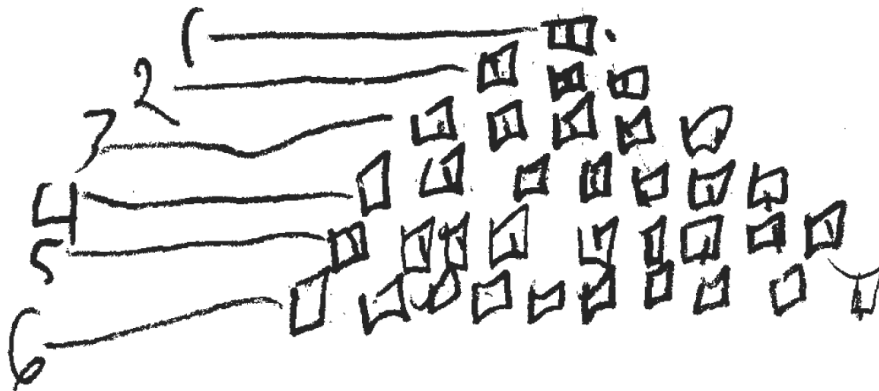


If Nora continues the pattern, how many squares will be in Row 6?

Answer 34 squares.

On the lines below, explain how you found your answer.

I draw a picture to get the answer.



This response is incorrect. Only ten squares are drawn for Row 6 as part of the explanation provided. An incorrect answer is given and there is no explanation for the source of that answer.

Score Point - 0

43

Ronisha participated in a track and field event at her school. In the long jump, she jumped 48 inches. How many feet did Ronisha jump?

Show your work.

Answer _____ feet

QUESTION 43

STRAND 4: MEASUREMENT

Complete and Correct Response:

- $48 \div 12 = 4$
OR other valid response

AND

- 4 (feet)

Score Points:

Apply 2-point holistic rubric.

43

Ronisha participated in a track and field event at her school. In the long jump, she jumped 48 inches. How many feet did Ronisha jump?

Show your work.

$$\begin{array}{r} 4 \\ 12 \overline{) 48} \\ \underline{48} \\ 0 \end{array}$$

Answer 4 feet

This response is complete and correct.

Score Point - 2

43

Ronisha participated in a track and field event at her school. In the long jump, she jumped 48 inches. How many feet did Ronisha jump?

Show your work.

Answer 4 feet

This response is only partially correct. It contains the correct numerical answer but the required work is not provided.

Score Point - 1

43

Ronisha participated in a track and field event at her school. In the long jump, she jumped 48 inches. How many feet did Ronisha jump?

Show your work.

$$\begin{array}{r} 48 \\ -25 \\ \hline 23 \end{array}$$

Answer 23 feet

This response is completely incorrect and does not demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point - 0

44

Gail has 35 tomato seeds and 4 flower pots. She plants 8 tomato seeds in each flower pot. How many tomato seeds does Gail have left over?

Show your work.

Answer _____ seeds

QUESTION 44

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $35 \div 4 = 8 \text{ R } 3$
OR other valid response

AND

- 3 (seeds)

Score Points:

Apply 2-point holistic rubric.

44

Gail has 35 tomato seeds and 4 flower pots. She plants 8 tomato seeds in each flower pot. How many tomato seeds does Gail have left over?

Show your work.

$$\begin{array}{r} 8 \text{ tomato seeds} \\ \times 4 \text{ flower pots} \\ \hline 32 \text{ flower seeds} \end{array}$$

$$\begin{array}{r} 35 \text{ tomato seeds} \\ - 32 \text{ tomato seeds} \\ \hline 03 \end{array}$$

Answer 3 seeds

This response is complete and correct.

Score Point - 2

44

Gail has 35 tomato seeds and 4 flower pots. She plants 8 tomato seeds in each flower pot. How many tomato seeds does Gail have left over?

Show your work.

$$\begin{array}{r} 8R1 \\ 4 \overline{) 35} \\ \underline{-34} \\ 01 \end{array}$$

Answer 1 seeds

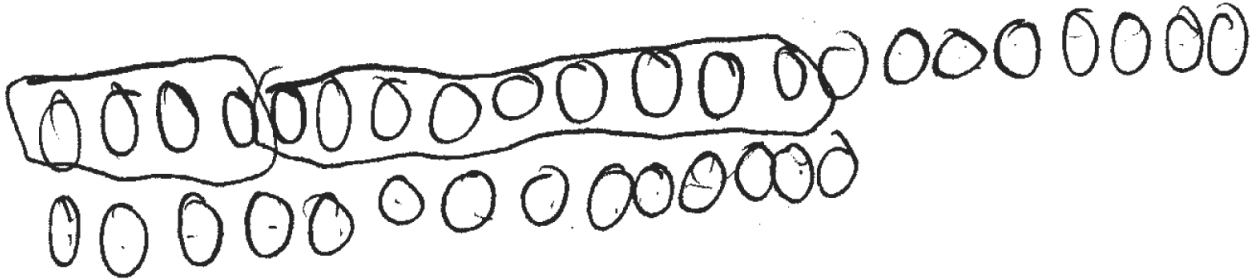
This response is only partially correct. The mathematical process is correct. However, the answer given is incorrect.

Score Point - 1

44

Gail has 35 tomato seeds and 4 flower pots. She plants 8 tomato seeds in each flower pot. How many tomato seeds does Gail have left over?

Show your work.



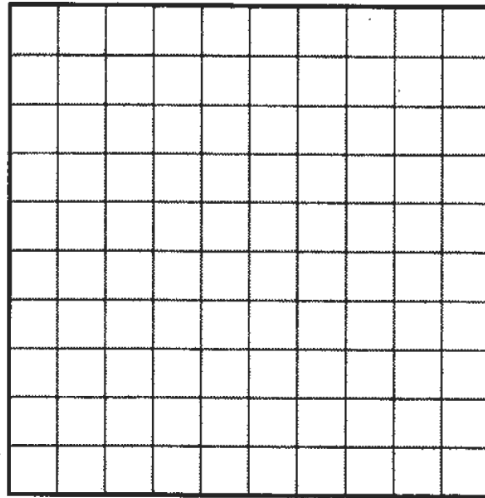
Answer 27 seeds

This response is completely incorrect.

Score Point - 0

45

On the grid below, draw a rectangle that has a length of 7 units and a width of 5 units.



What is the perimeter of the rectangle you drew?

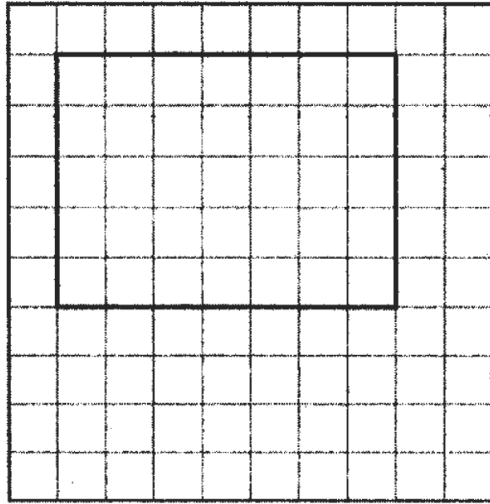
Show your work.

Answer _____ units

QUESTION 45

STRAND 3: GEOMETRY

Complete and Correct Response:



OR other valid drawing

AND

- $7 + 7 + 5 + 5 = 24$

OR other valid response

AND

- 24 (units)

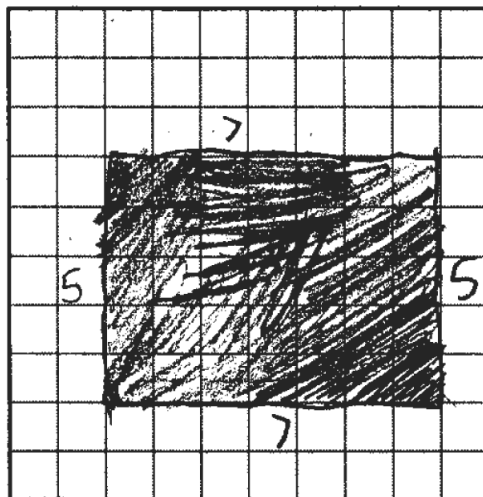
OR other valid response

Score Points:

Apply 3-point holistic rubric.

45

On the grid below, draw a rectangle that has a length of 7 units and a width of 5 units.



What is the perimeter of the rectangle you drew?

Show your work.

$$\begin{array}{r} 7 \\ 7 \\ 5 \\ + 5 \\ \hline 24 \end{array}$$

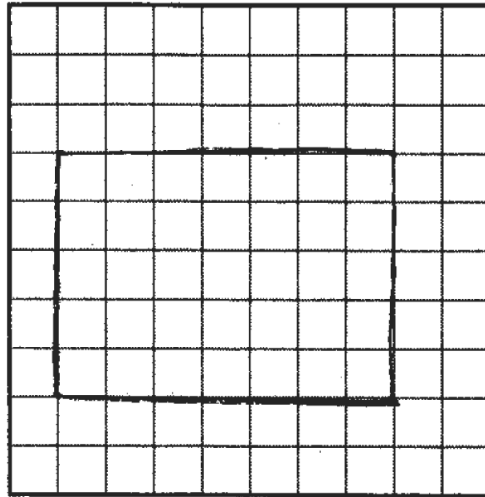
Answer 24 units

This response is complete and correct.

Score Point - 3

45

On the grid below, draw a rectangle that has a length of 7 units and a width of 5 units.



What is the perimeter of the rectangle you drew?

Show your work.

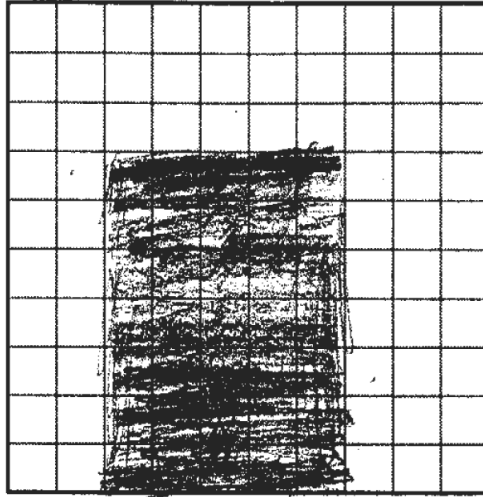
Answer 24 units

This response is partially correct and addresses most aspects of the task. The figure is drawn correctly and the answer is correct. However, no work is shown.

Score Point - 2

45

On the grid below, draw a rectangle that has a length of 7 units and a width of 5 units.



What is the perimeter of the rectangle you drew?

Show your work.

$$P = l + w$$
$$P = 7 + 5$$
$$P = 12$$

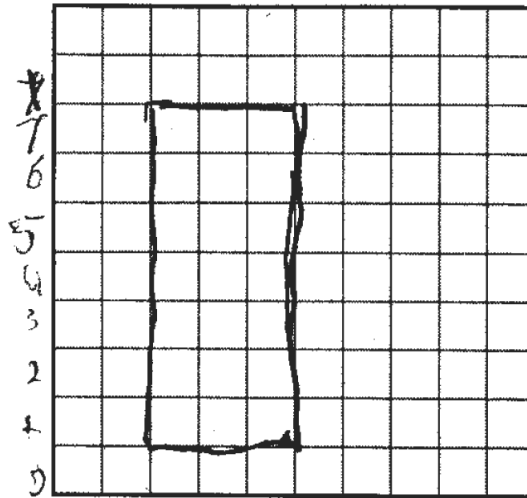
Answer 12 units

This response demonstrates only a limited understanding of the mathematical concepts embodied in the task. The rectangle drawn is accurate; however, the work shown and the perimeter given are incorrect.

Score Point - 1

45

On the grid below, draw a rectangle that has a length of 7 units and a width of 5 units.



What is the perimeter of the rectangle you drew?

Show your work.

I drew the rectangle
on the grid and
det how I got my
Answer

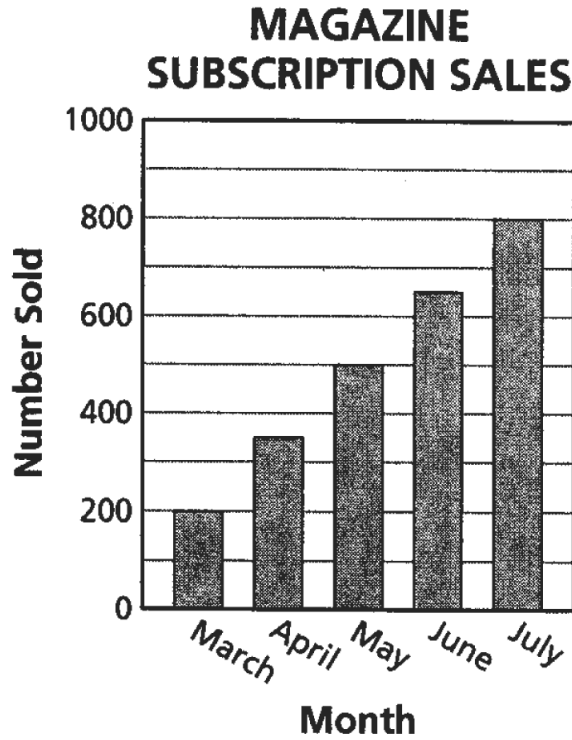
Answer 7 units

This response is completely incorrect. The figure drawn is incorrect. The answer and required work are incorrect.

Score Point - 0

46

The bar graph below shows the number of magazine subscriptions sold by a popular magazine company each month for 5 months.



Part A

How many more magazine subscriptions were sold in May than in April?

Show your work.

Answer _____ subscriptions

Part B

If this pattern continues, about how many magazine subscriptions will be sold in November?

Show your work.

Answer _____ subscriptions

QUESTION 46

STRAND 5: STATISTICS AND PROBABILITY

Complete and Correct Response:

Part A

- $500 - 350 = 150$
OR other valid response

AND

- 150 (subscriptions)

AND

Part B

- $800 + 150 + 150 + 150 + 150 = 1,400$
OR other valid response

AND

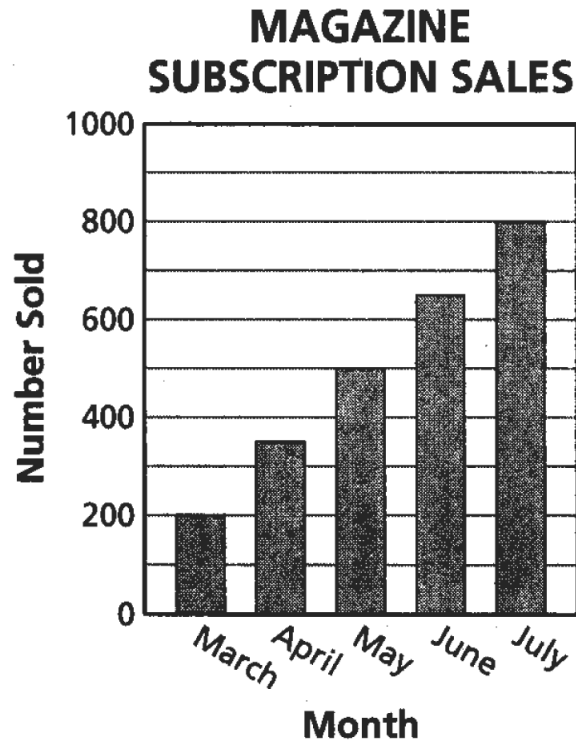
- 1,400 (subscriptions)

Score Points:

Apply 3-point holistic rubric.

46

The bar graph below shows the number of magazine subscriptions sold by a popular magazine company each month for 5 months.

**Part A**

How many more magazine subscriptions were sold in May than in April?

Show your work.

$$\begin{array}{r} 500 \\ -350 \\ \hline 150 \end{array}$$

Answer 150 subscriptions

Part B

If this pattern continues, about how many magazine subscriptions will be sold in November?

Show your work.

$$\begin{array}{r} 800 \\ + 150 \\ \hline 950 \\ + 150 \\ \hline 1100 \\ + 150 \\ \hline 1250 \\ + 150 \\ \hline 1400 \end{array}$$

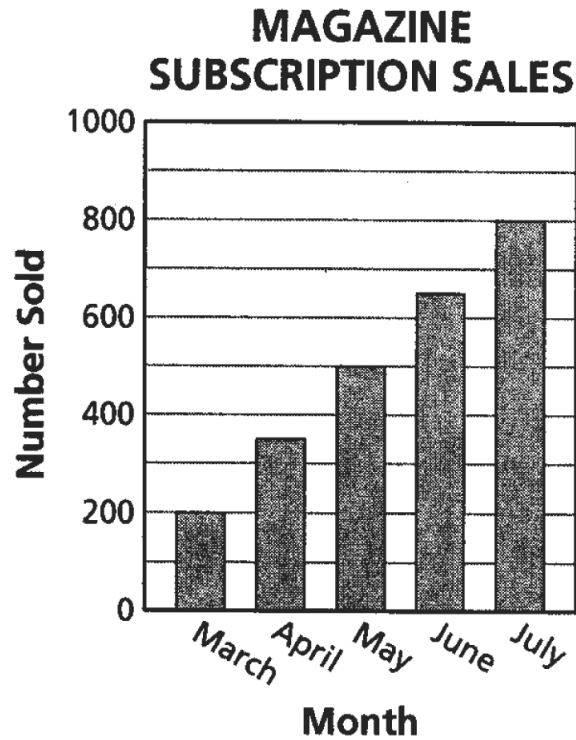
Answer 1400 subscriptions

This response is complete and correct.

Score Point - 3

46

The bar graph below shows the number of magazine subscriptions sold by a popular magazine company each month for 5 months.

**Part A**

How many more magazine subscriptions were sold in May than in April?

Show your work.

$$\begin{array}{r} 350 \\ + 150 \\ \hline 500 \text{ subscriptions} \end{array}$$

Answer 150 subscriptions

Part B

If this pattern continues, about how many magazine subscriptions will be sold in November?

Show your work.

$$\begin{array}{r} 2 \\ \times 150 \\ \hline 150 \text{ subscriptions} \end{array}$$
$$\begin{array}{r} 800 \\ + 150 \\ \hline 1550 \text{ subscriptions} \end{array}$$

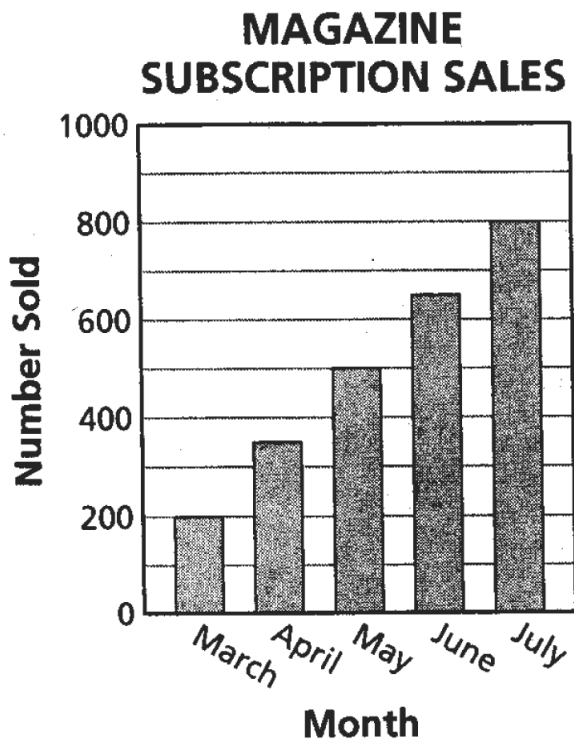
Answer 1,550 subscriptions

This response is partially correct. The mathematical process and answer in Part A are correct. However, Part B contains a flaw of multiplying by 5 instead of 4, resulting in an incorrect answer.

Score Point - 2

46

The bar graph below shows the number of magazine subscriptions sold by a popular magazine company each month for 5 months.

**Part A**

How many more magazine subscriptions were sold in May than in April?

Show your work.

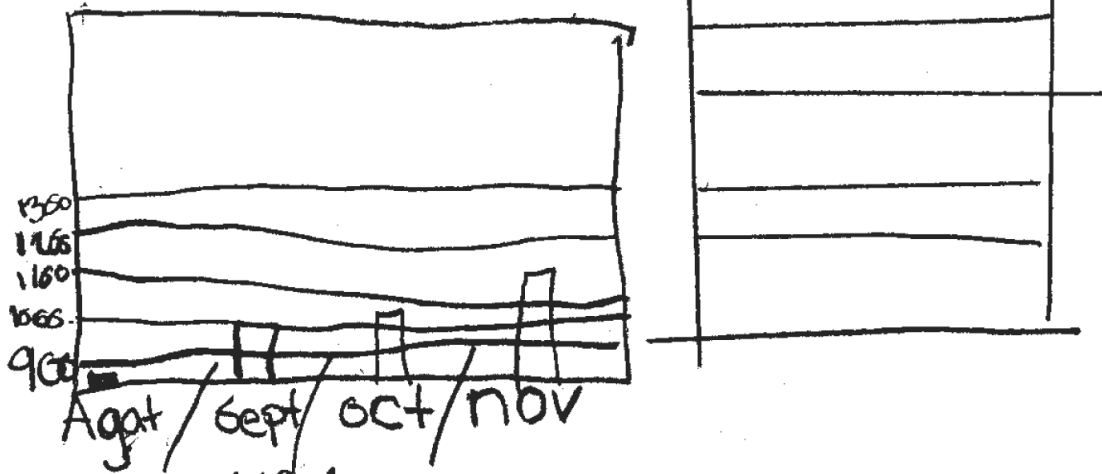
$$\begin{array}{r} 410 \\ - 300 \\ \hline 110 \end{array}$$

Answer 150 subscriptions

Part B

If this pattern continues, about how many magazine subscriptions will be sold in November?

Show your work.



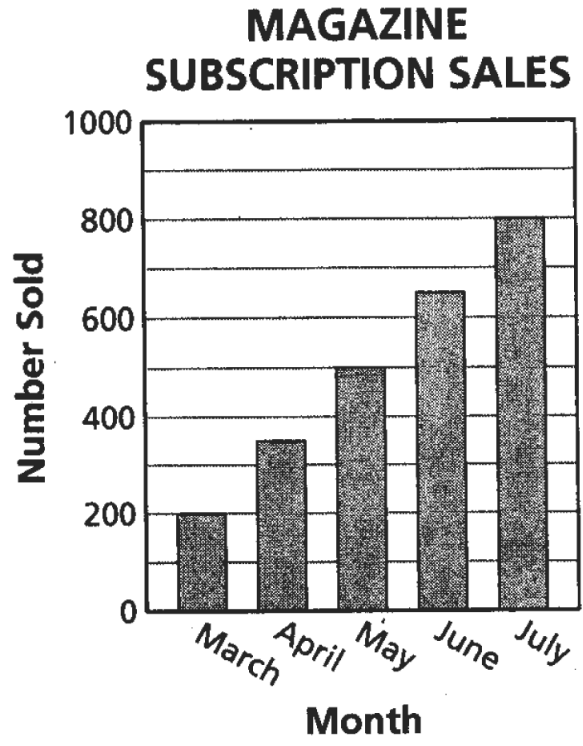
Answer 1100 subscriptions

This response is incomplete and exhibits many flaws but is not completely incorrect. The mathematical process and answer shown in the work in Part A are correct. However, the answer written on the answer blank is incorrect.

Score Point - 1

46

The bar graph below shows the number of magazine subscriptions sold by a popular magazine company each month for 5 months.



Part A

How many more magazine subscriptions were sold in May than in April?

Show your work.

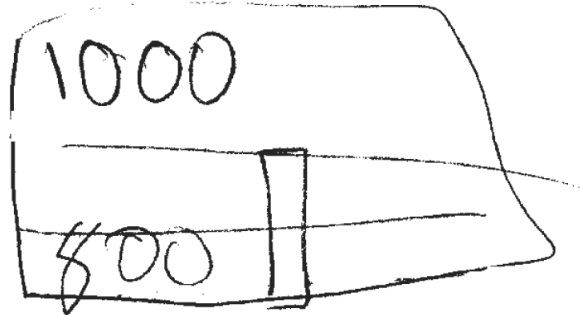
$$\begin{array}{r} 600 \\ - 100 \\ \hline 500 \end{array}$$

Answer 500 subscriptions

Part B

If this pattern continues, about how many magazine subscriptions will be sold in November?

Show your work.



Answer 900 subscriptions

This response is incorrect and is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point - 0

47

Marie invites 9 friends to a party. She buys a total of 63 stickers to give to her friends. If each friend gets the same number of stickers, and none are left over, how many stickers does Marie give to each friend?

Show your work.

Answer _____ stickers

QUESTION 47

STRAND 1: NUMBER SENSE AND OPERATIONS

Complete and Correct Response:

- $63 \div 9 = 7$

OR other valid response

AND

- 7 (stickers)

Score Points:

Apply 2-point holistic rubric.

47

Marie invites 9 friends to a party. She buys a total of 63 stickers to give to her friends. If each friend gets the same number of stickers, and none are left over, how many stickers does Marie give to each friend?

Show your work.

$$63 \div 9 = 7 \text{ stickers}$$

Answer 7 stickers

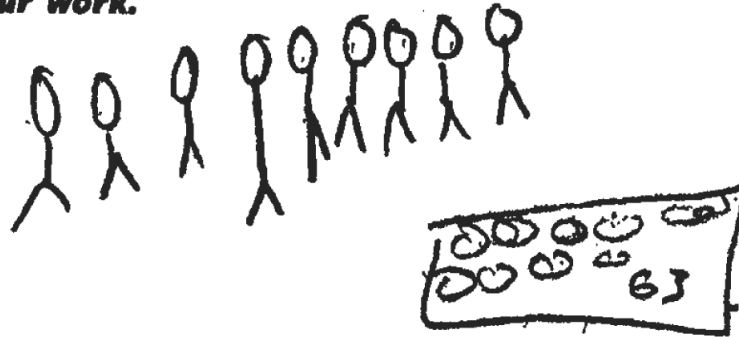
This response is complete and correct.

Score Point - 2

47

Marie invites 9 friends to a party. She buys a total of 63 stickers to give to her friends. If each friend gets the same number of stickers, and none are left over, how many stickers does Marie give to each friend?

Show your work.



Answer 7 stickers

This response is only partially correct. It contains the correct solution but does not provide the necessary work.

Score Point - 1

47

Marie invites 9 friends to a party. She buys a total of 63 stickers to give to her friends. If each friend gets the same number of stickers, and none are left over, how many stickers does Marie give to each friend?

Show your work.

$$\begin{array}{r} 5 \\ \overline{)63} \\ - 9 \\ \hline 54 \end{array}$$

Answer 54 stickers






This response is incorrect and is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task. The operation is not appropriate for this task.


Score Point - 0

48

Ms. Landry is planning a party for her class. The students are voting for their favorite types of muffins to have at the party. Each student votes for 2 types of muffins. The results are shown in the pictograph below.

FAVORITE MUFFIN TYPES

Type of Muffin	Number of Votes
Orange	
Blueberry	
Banana Nut	
Chocolate Chip	
Oatmeal Raisin	

KEY
 = 5 votes

What is the total number of students who voted in Ms. Landry's class?

Show your work.

Answer _____ students

QUESTION 48

STRAND 5: STATISTICS AND PROBABILITY

Complete and Correct Response:

- $10 \times 5 = 50$
 $50 \div 2 = 25$

OR other valid response

AND

- 25 (students)






Score Points:


Apply 2-point holistic rubric.

48

Ms. Landry is planning a party for her class. The students are voting for their favorite types of muffins to have at the party. Each student votes for 2 types of muffins. The results are shown in the pictograph below.

FAVORITE MUFFIN TYPES

Type of Muffin	Number of Votes
Orange	
Blueberry	
Banana Nut	
Chocolate Chip	
Oatmeal Raisin	

KEY
 = 5 votes

What is the total number of students who voted in Ms. Landry's class?

Show your work.

$$\begin{array}{r}
 25 = \text{Orange} \\
 15 = \text{Blueberry} \\
 10 = \text{Banana Nut} \\
 15 = \text{Chocolate Chip} \\
 5 = \text{Oatmeal Raisin} \\
 \hline
 50
 \end{array}$$

$$\begin{array}{r}
 25 \\
 2 \overline{) 50} \\
 \underline{40} \\
 10 \\
 \underline{10} \\
 0
 \end{array}$$

Answer 25 students






This response is complete and correct.


Score Point - 2

48

Ms. Landry is planning a party for her class. The students are voting for their favorite types of muffins to have at the party. Each student votes for 2 types of muffins. The results are shown in the pictograph below.

FAVORITE MUFFIN TYPES

Type of Muffin	Number of Votes
Orange	
Blueberry	
Banana Nut	
Chocolate Chip	
Oatmeal Raisin	

KEY
 = 5 votes

What is the total number of students who voted in Ms. Landry's class?

Show your work.

$$\begin{array}{r} 10 \\ \times 5 \\ \hline 50 \end{array}$$

Answer 50 students






This response is only partially correct. The total number of votes is correctly determined using the pictograph and its key. However, the total votes are not divided by two to get the number of students who voted and therefore, the answer given is incorrect.


Score Point - 1

48

Ms. Landry is planning a party for her class. The students are voting for their favorite types of muffins to have at the party. Each student votes for 2 types of muffins. The results are shown in the pictograph below.

FAVORITE MUFFIN TYPES

Type of Muffin	Number of Votes
Orange	
Blueberry	
Banana Nut	
Chocolate Chip	
Oatmeal Raisin	

KEY
 = 5 votes

What is the total number of students who voted in Ms. Landry's class?

Show your work.

$$\begin{array}{r}
 O. \quad 1 \\
 B. \quad 3 \\
 B.N. \quad 2 \\
 C.C. \quad 3 \\
 O.R. \quad 1 \\
 \hline
 10
 \end{array}$$

Answer 10 students

This response is completely incorrect. Ignoring the key and adding the number of single muffins from the pictograph is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task. The answer given is also incorrect.

Score Point - 0



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