



# ***New York State Testing Program***

## **Mathematics**

**Scoring Guide for Sample Test 2005**

**Grade 5**



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## Strand and Performance Indicator Map with Answer Key

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

## Strand and Performance Indicator Map with Answer Key

Grade 5, Book 2					
Question	Type	Points	Strand	Content Performance Indicator	Answer Key
27	Short Response	2	Number Sense and Operations	5.N.22	n/a
28	Extended Response	3	Statistics and Probability	5.S.2	n/a
29	Short Response	2	Measurement	5.M.3	n/a
30	Extended Response	3	Geometry	5.G.4	n/a
31	Short Response	2	Measurement	5.M.8	n/a
32	Extended Response	3	Number Sense and Operations	5.N.8	n/a
33	Short Response	2	Algebra	4.A.2	n/a
34	Extended Response	3	Number Sense and Operations	5.N.26	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"><li>• demonstrates a thorough understanding of the mathematical concepts and/or procedures embodied in the task</li><li>• indicates that the student has completed the task correctly, using mathematically sound procedures</li><li>• contains clear, complete explanations and/or adequate work when required</li></ul>
1 Point	<p>A one-point response is only partially correct.</p> <p>This response</p> <ul style="list-style-type: none"><li>• indicates that the student has demonstrated only a partial understanding of the mathematical concepts and/or procedures embodied in the task</li><li>• addresses some elements of the task correctly but may be incomplete or contain some procedural or conceptual flaws</li><li>• may contain an incorrect solution but applies a mathematically appropriate process</li><li>• may contain a correct numerical answer but required work is not provided</li></ul>
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"><li>• demonstrates a thorough understanding of the mathematical concepts and/or procedures embodied in the task</li><li>• indicates that the student has completed the task correctly, using mathematically sound procedures</li><li>• contains clear, complete explanations and/or adequate work when required</li></ul>
2 Points	<p>A two-point response is partially correct.</p> <p>This response</p> <ul style="list-style-type: none"><li>• demonstrates partial understanding of the mathematical concepts and/or procedures embodied in the task</li><li>• addresses most aspects of the task, using mathematically sound procedures</li><li>• may contain an incorrect solution but provides complete procedures, reasoning, and/or explanations</li><li>• may reflect some misunderstanding of the underlying mathematical concepts and/or procedures</li></ul>
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"><li>• demonstrates only a limited understanding of the mathematical concepts and/or procedures embodied in the task</li><li>• may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete</li><li>• exhibits multiple flaws related to a misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning</li><li>• reflects a lack of essential understanding of the underlying mathematical concepts</li><li>• may contain a correct numerical answer but required work is not provided</li></ul>
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>.

**27**

Sherise jogs three days each week. The table below shows how far she jogs each day.

**SHERISE'S JOGGING LOG**

Day	Distance (in miles)
1	$5\frac{3}{10}$
2	$4\frac{1}{10}$
3	$6\frac{3}{10}$

**Part A**

What is the total distance, in miles, that Sherise jogs each week?

**Show your work.**

**Answer** \_\_\_\_\_ miles

**Part B**

Each week, Reggie jogs  $3\frac{4}{10}$  fewer miles than Sherise. What is the total distance, in miles, that Reggie jogs?

**Show your work.**

**Answer** \_\_\_\_\_ miles

**QUESTION 27**

**STRAND 1: NUMBER SENSE AND OPERATIONS**

*Complete and Correct Response:*

**Part A**

$$\begin{array}{r} \bullet \quad 5\frac{3}{10} \\ \quad 4\frac{1}{10} \\ + \quad 6\frac{3}{10} \\ \hline 15\frac{7}{10} \end{array}$$

OR other valid response

**AND**

- $15\frac{7}{10}$  (miles), or 15.7 (miles)

**Part B**

$$\begin{array}{r} \bullet \quad 15 \frac{7}{10} \\ - \quad 3 \frac{4}{10} \\ \hline 12 \frac{3}{10} \end{array}$$

OR other valid response

**AND**

- $12 \frac{3}{10}$  (miles), or 12.3 (miles)

***Score Points:***

Apply 2-point holistic rubric.

**27**

Sherise jogs three days each week. The table below shows how far she jogs each day.

**SHERISE'S JOGGING LOG**

Day	Distance (in miles)
1	$5\frac{3}{10}$
2	$4\frac{1}{10}$
3	$6\frac{3}{10}$

**Part A**

What is the total distance, in miles, that Sherise jogs each week?

*Show your work.*

$$5\frac{3}{10} + 4\frac{1}{10} + 6\frac{3}{10} = 15\frac{7}{10}$$

Answer  $15\frac{7}{10}$  miles

**Part B**

Each week, Reggie jogs  $3\frac{4}{10}$  fewer miles than Sherise. What is the total distance, in miles, that Reggie jogs?

*Show your work.*

$$15\frac{7}{10} - 3\frac{4}{10} = 12\frac{3}{10}$$

Answer  $12\frac{3}{10}$  miles

This response is complete and correct.

**Score Point - 2**

**27**

Sherise jogs three days each week. The table below shows how far she jogs each day.

**SHERISE'S JOGGING LOG**

Day	Distance (in miles)
1	$5\frac{3}{10}$
2	$4\frac{1}{10}$
3	$6\frac{3}{10}$

**Part A**

What is the total distance, in miles, that Sherise jogs each week?

*Show your work.*

$$\begin{array}{r}
 5\frac{3}{10} \\
 + 4\frac{1}{10} \\
 + 6\frac{3}{10} \\
 \hline
 9\frac{7}{10} \\
 9\frac{7}{10}
 \end{array}$$

**Answer** \_\_\_\_\_ miles

**Part B**

Each week, Reggie jogs  $3\frac{4}{10}$  fewer miles than Sherise. What is the total distance, in miles, that Reggie jogs?

*Show your work.*

$$\begin{array}{r}
 9\frac{7}{10} \\
 - 3\frac{4}{10} \\
 \hline
 6\frac{3}{10}
 \end{array}$$

**Answer**  $6\frac{3}{10}$  /  $6\frac{3}{10}$  miles

This response contains an incorrect solution but applies a mathematically appropriate process. Addition is displayed in Part A and subtraction is displayed in Part B, demonstrating an understanding of the process required to solve the problem; however, the addition error in Part A leads to two incorrect answers.

**Score Point - 1**

**27**

Sherise jogs three days each week. The table below shows how far she jogs each day.

**SHERISE'S JOGGING LOG**

Day	Distance (in miles)
1	$5\frac{3}{10}$
2	$4\frac{1}{10}$
3	$6\frac{3}{10}$

**Part A**

What is the total distance, in miles, that Sherise jogs each week?

*Show your work.*

$$5\frac{3}{10} + 4\frac{1}{10} + 6\frac{3}{10} = 7\frac{7}{10}$$

Answer 7 $\frac{7}{10}$  miles

**Part B**

Each week, Reggie jogs  $3\frac{4}{10}$  fewer miles than Sherise. What is the total distance, in miles, that Reggie jogs?

*Show your work.*

$$3\frac{4}{10} - 7\frac{7}{10} = 3\frac{2}{10}$$

Answer 3 $\frac{2}{10}$  miles.

This response is incorrect. Although some procedures have been set up correctly, holistically it is not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

**Score Point - 0**

Juanita sold school concert tickets from 1:00 P.M. to 5:00 P.M. The table below shows the total number of tickets she had sold at the beginning of each hour.

**SALES CHART**

Time	Tickets Sold
1:00	0
2:00	27
3:00	34
4:00	45
5:00	60



**28**

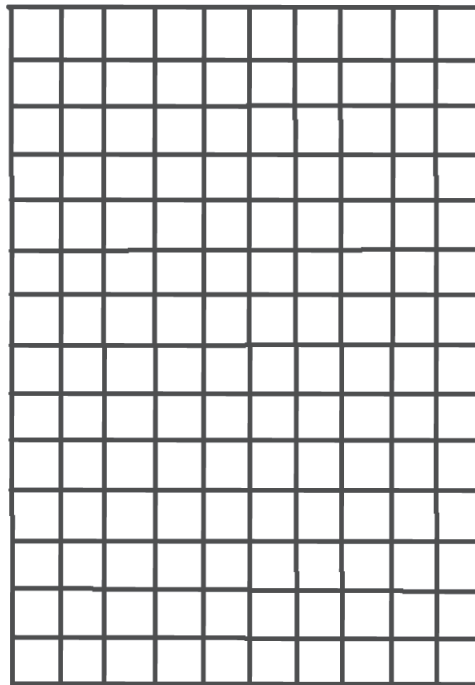
Use the data from the table to make a line graph showing the total ticket sales for each hour.

Be sure to

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

**SALES CHART**

Time	Tickets Sold
1:00	0
2:00	27
3:00	34
4:00	45
5:00	60



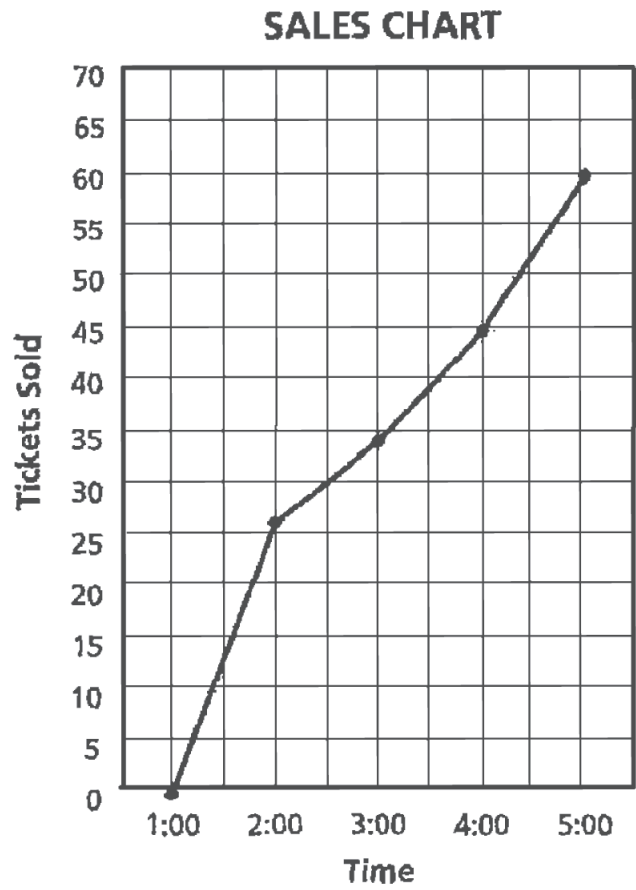
Between which two hours were the most tickets sold?

**Answer** \_\_\_\_\_

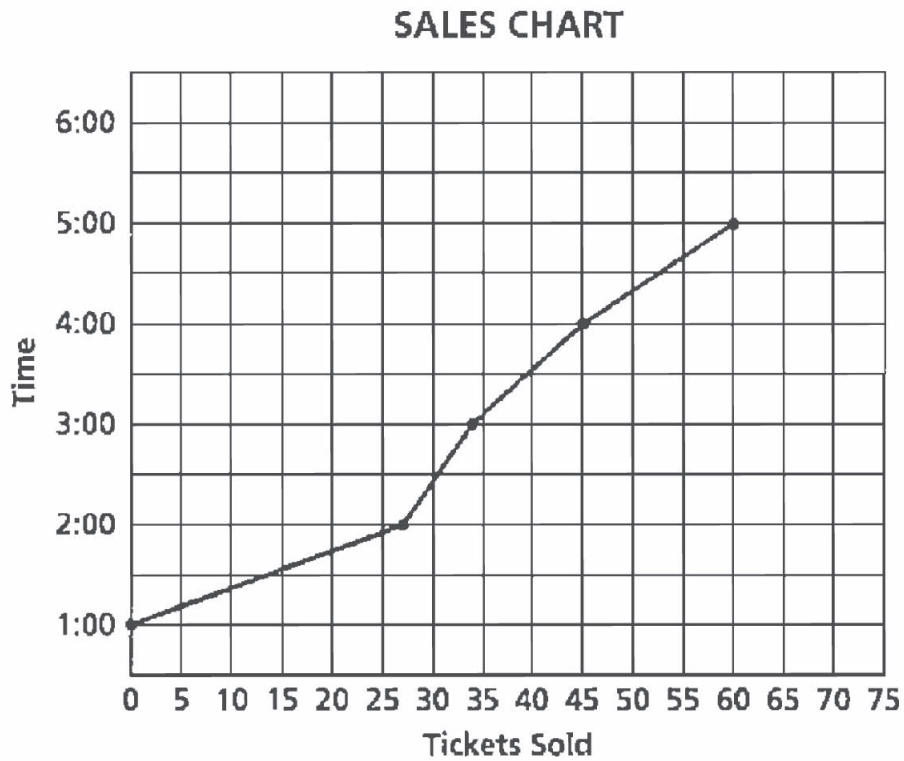
**QUESTION 28**

**STRAND 5: STATISTICS AND PROBABILITY**

*Complete and Correct Response:*



OR



OR other valid response

**AND**

- 1:00 and 2:00

***Score Points:***

Apply 3-point holistic rubric.

28

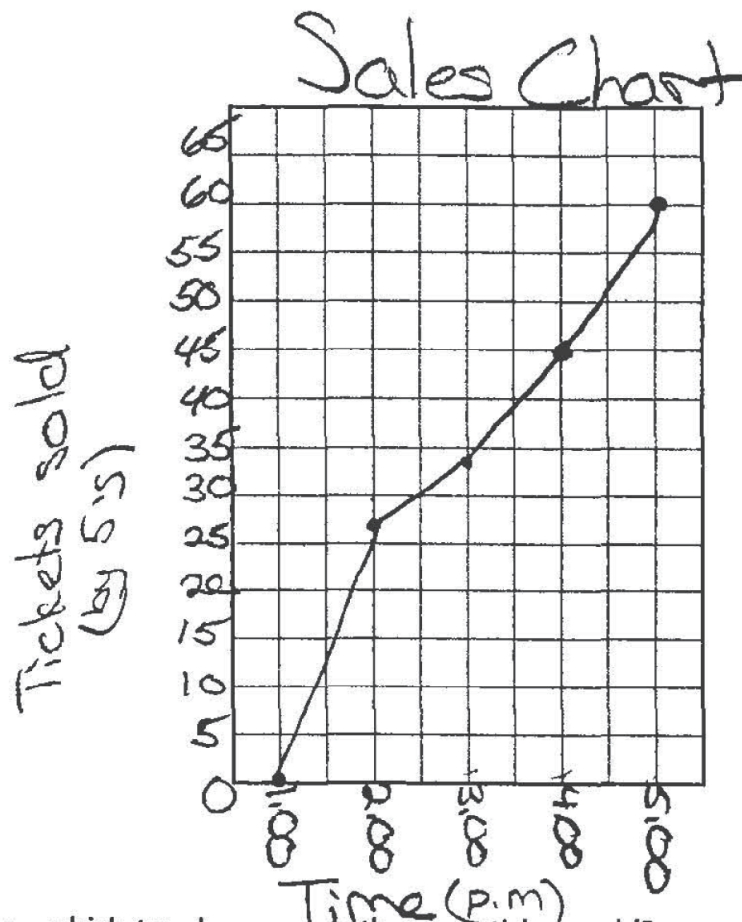
Use the data from the table to make a line graph showing the total ticket sales for each hour.

Be sure to

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

SALES CHART

Time	Tickets Sold
1:00	0
2:00	27
3:00	34
4:00	45
5:00	60



Between which two hours were the most tickets sold?

Answer Between 1+2.

This response demonstrates a thorough understanding of the mathematical concepts embodied in the task. The graph begins at 1:00; therefore, the space before 1:00 does not need to be consistent with the spaces between the other numbers on the x-axis.

Score Point - 3

**28**

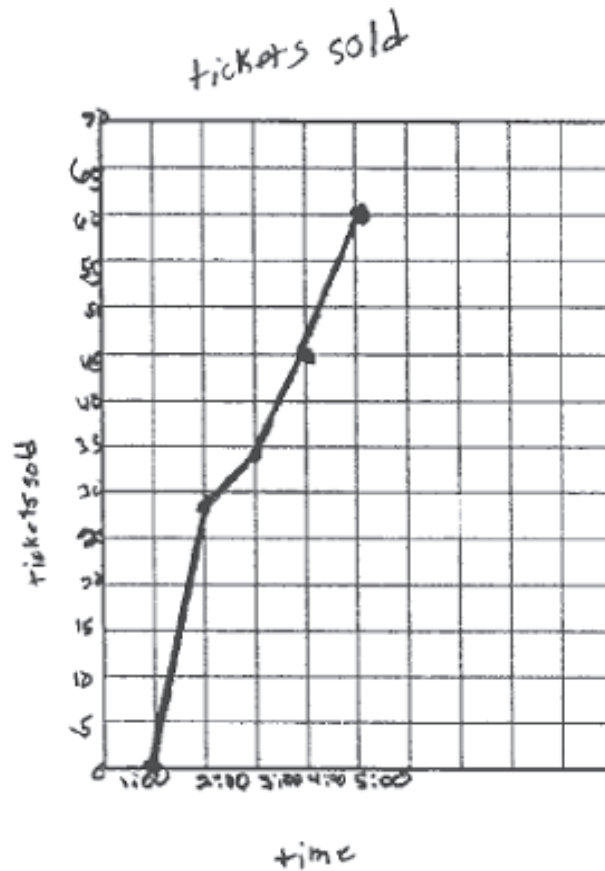
Use the data from the table to make a line graph showing the total ticket sales for each hour.

Be sure to

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

**SALES CHART**

Time	Tickets Sold
1:00	0
2:00	27
3:00	34
4:00	45
5:00	60



Between which two hours were the most tickets sold?

*Answer* 5:00, 4:00

This response demonstrates a partial understanding of the mathematical concepts embodied in the task. The graph is complete and correct; however, incorrect times are given on the answer line.

**Score Point - 2**

28

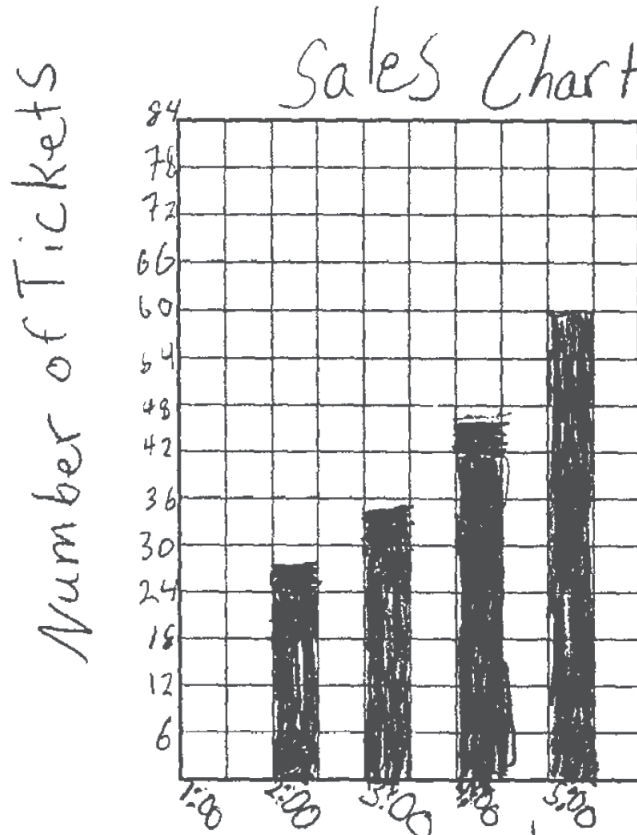
Use the data from the table to make a line graph showing the total ticket sales for each hour.

Be sure to

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

SALES CHART

Time	Tickets Sold
1:00	0
2:00	27
3:00	34
4:00	45
5:00	60



The Hours Tickets were Sold

Between which two hours were the most tickets sold?

Answer Between 1:00 P.M. and 2:00 P.M.

This response demonstrates a limited understanding of the mathematical concepts embodied in the task. The answer, "Between 1:00 p.m. and 2:00 p.m." is a correct response. However, a complete bar graph and not a line graph is drawn, indicating a conceptual error.

**Score Point - 1**

**28**

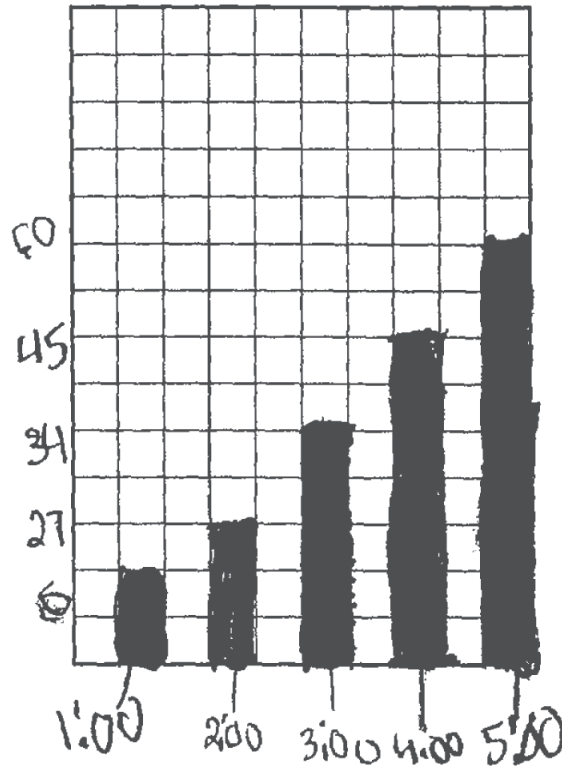
Use the data from the table to make a line graph showing the total ticket sales for each hour.

Be sure to

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

**SALES CHART**

Time	Tickets Sold
1:00	0
2:00	27
3:00	34
4:00	45
5:00	60



Between which two hours were the most tickets sold?

**Answer** 4:00

This response is completely incorrect.

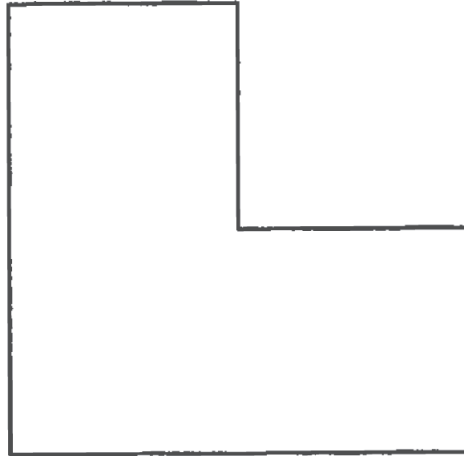
**Score Point - 0**

29



Use your ruler to help you solve this problem.

Measure the sides of the shape below to the nearest centimeter. Label the length of each side.



What is the perimeter of the shape?

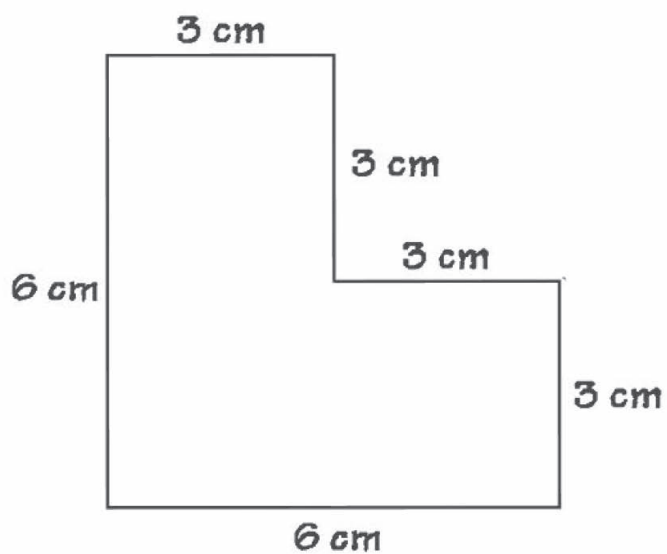
**Answer** \_\_\_\_\_ centimeters



**QUESTION 29**

**STRAND 4: MEASUREMENT**

*Complete and Correct Response:*



OR other valid response

**AND**

- 24 (centimeters)

**Score Points:**

Apply 2-point holistic rubric.

29

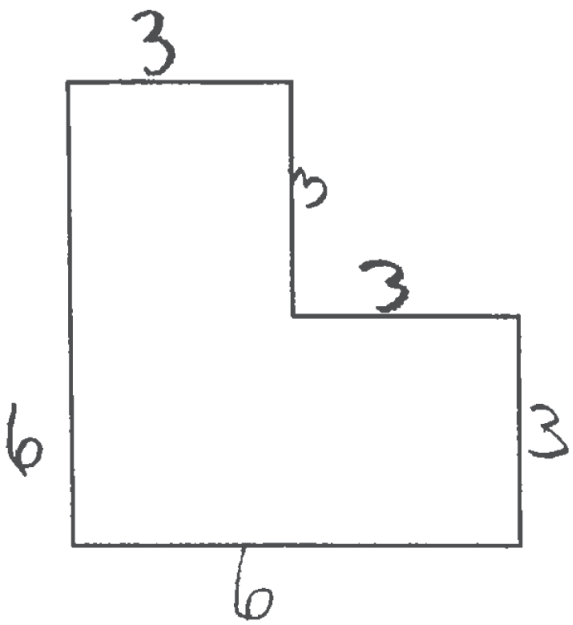


Use your ruler to help you solve this problem.

Measure the sides of the shape below to the nearest centimeter. Label the length of each side.

$$\begin{array}{r}
 \text{cm} \\
 \hline
 + 12 \\
 \hline
 24
 \end{array}
 \quad
 \begin{array}{r}
 6 \\
 + 6 \\
 \hline
 12
 \end{array}$$
  

$$\begin{array}{r}
 12 \\
 + 12 \\
 \hline
 24
 \end{array}$$



What is the perimeter of the shape?

Answer 24 centimeters

This response is complete and correct.

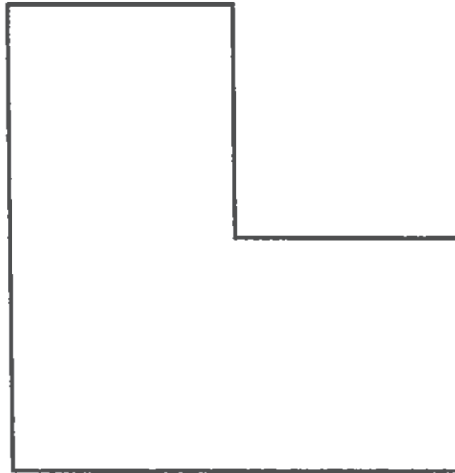
Score Point - 2

29



Use your ruler to help you solve this problem.

Measure the sides of the shape below to the nearest centimeter. Label the length of each side.



What is the perimeter of the shape?

*Answer* 24 centimeters

This response is partially correct. The shape's sides are not labeled, but the correct perimeter is given.

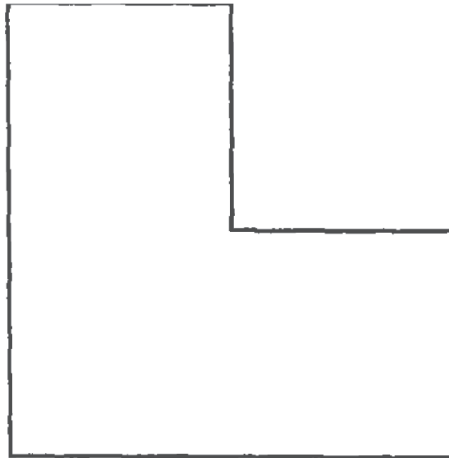
**Score Point - 1**

29



Use your ruler to help you solve this problem.

Measure the sides of the shape below to the nearest centimeter. Label the length of each side.



What is the perimeter of the shape?

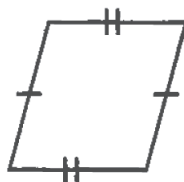
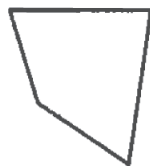
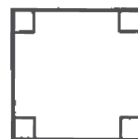
*Answer* 4 centimeters

This response is completely incorrect.

**Score Point - 0**

**30**

Some of the quadrilaterals below have parallel sides.

**A****B****C****D****E****F****Part A**

Which quadrilaterals have 2 pairs of parallel sides?

**Answer** \_\_\_\_\_

**Part B**

What is the name for the set of quadrilaterals with 2 pairs of parallel sides?

**Answer** \_\_\_\_\_

**Part C**

What is the name for the set of quadrilaterals with 2 pairs of right angles?

**Answer** \_\_\_\_\_

**QUESTION 30**

**STRAND 3: GEOMETRY**

***Complete and Correct Response:***

**Part A**

- A, B, F

**Part B**

- parallelograms

**Part C**

- rectangles

***Score Points:***

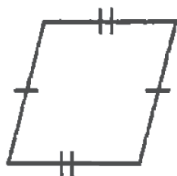
Apply 3-point holistic rubric.

**30**

Some of the quadrilaterals below have parallel sides.



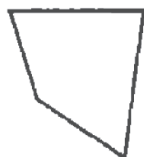
A



B



C



D



E



F

**Part A**

Which quadrilaterals have 2 pairs of parallel sides?

Answer A, B, and F

**Part B**

What is the name for the set of quadrilaterals with 2 pairs of parallel sides?

Answer parallelogram

**Part C**

What is the name for the set of quadrilaterals with 2 pairs of right angles?

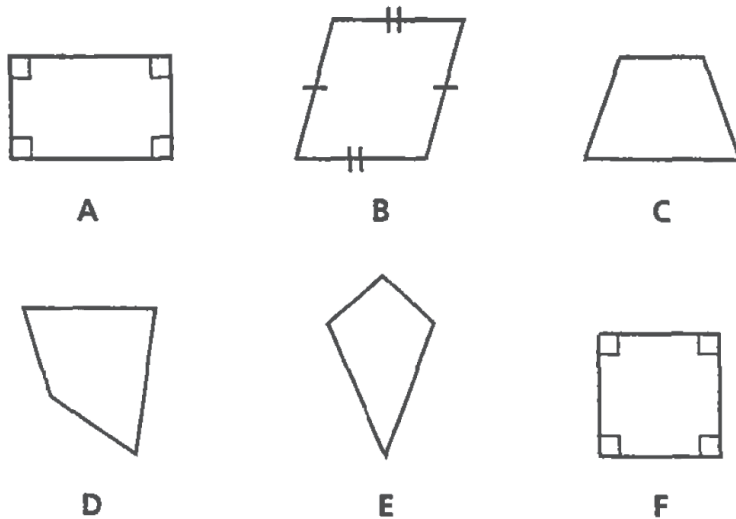
Answer rectangle

All three responses are complete and correct.

**Score Point - 3**

**30**

Some of the quadrilaterals below have parallel sides.

**Part A**

Which quadrilaterals have 2 pairs of parallel sides?

Answer F, A, B

**Part B**

What is the name for the set of quadrilaterals with 2 pairs of parallel sides?

Answer Parallelogram

**Part C**

What is the name for the set of quadrilaterals with 2 pairs of right angles?

Answer Right Polygon

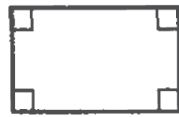
This response demonstrates a partial understanding of the mathematical concepts embodied in the task. The responses in Part A and Part B are correct; however, Part C is incorrect.

**Score Point - 2**

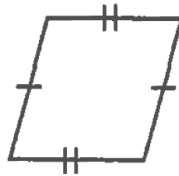


30

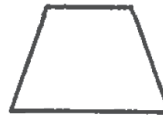
Some of the quadrilaterals below have parallel sides.



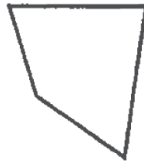
A



B



C



D



E



F

**Part A**

Which quadrilaterals have 2 pairs of parallel sides?

Answer F, A

**Part B**

What is the name for the set of quadrilaterals with 2 pairs of parallel sides?

Answer Parallelograms

**Part C**

What is the name for the set of quadrilaterals with 2 pairs of right angles?

Answer quadrilaterals

This response demonstrates only a partial understanding of the mathematical concepts embodied in the task. Although the answer to Part B is correct, the response to Part A is incomplete, and Part C is incorrect.

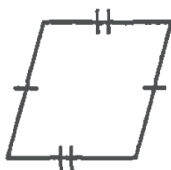
**Score Point - 1**

30

Some of the quadrilaterals below have parallel sides.



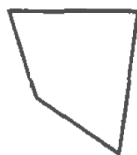
A



B



C



D



E



F

**Part A**

Which quadrilaterals have 2 pairs of parallel sides?

Answer B, A, F, C, E

**Part B**

What is the name for the set of quadrilaterals with 2 pairs of parallel sides?

Answer rhombus

**Part C**

What is the name for the set of quadrilaterals with 2 pairs of right angles?

Answer Square

This response is completely incorrect. Incorrect answers are provided for all three parts.

**Score Point - 0**

**31**



Use your protractor to help you solve this problem.

In the space below, draw an angle that measures  $50^\circ$ .

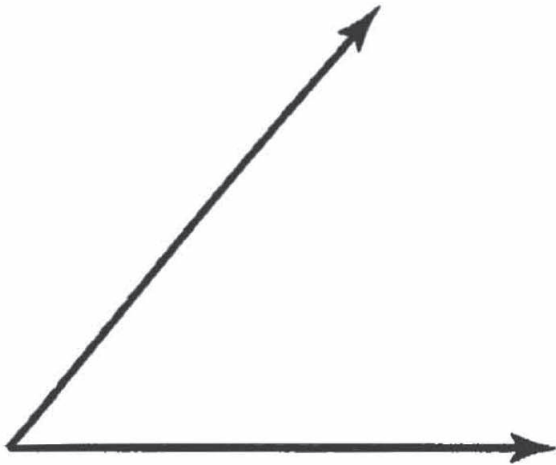
What type of angle did you draw?

**Answer** \_\_\_\_\_

**QUESTION 31**

**STRAND 4: MEASUREMENT**

***Complete and Correct Response:***



OR other valid response (range of angles drawn + or - 5° to the angle above)

**AND**

- acute

***Score Points:***

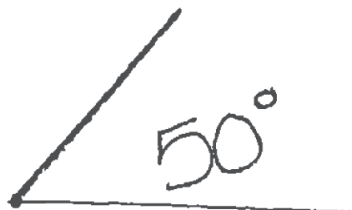
Apply 2-point holistic rubric.

31



Use your protractor to help you solve this problem.

In the space below, draw an angle that measures  $50^\circ$ .



What type of angle did you draw?

Answer Acute angle

This response is complete and correct.

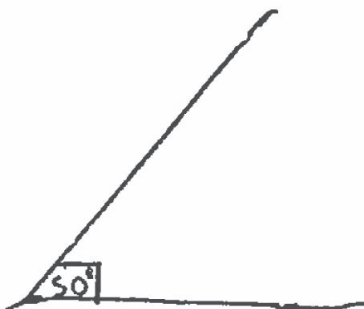
**Score Point - 2**

31



Use your protractor to help you solve this problem.

In the space below, draw an angle that measures  $50^\circ$ .



What type of angle did you draw?

Answer Right angle

This response demonstrates a partial understanding of the mathematical concepts embodied in the task. The angle is drawn correctly but it is incorrectly identified as a right angle.

**Score Point - 1**

31



Use your protractor to help you solve this problem.

In the space below, draw an angle that measures  $50^\circ$ .



What type of angle did you draw?

Answer A 50 degree angle

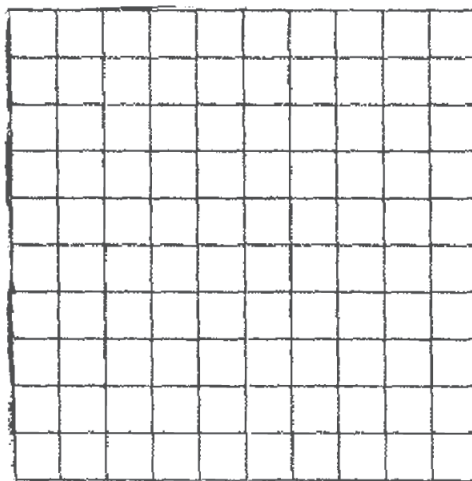
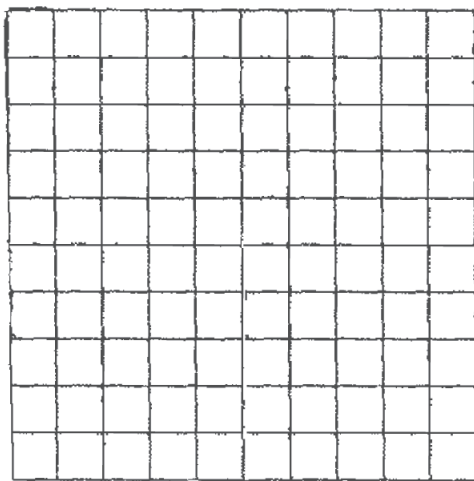
This response is completely incorrect.

**Score Point - 0**

**Part A**

On the grids below, shade the correct number of squares to represent the decimal 1.47.

Each grid = 1 whole

**Part B**

On the line below, write the following decimals in order from least to greatest.

1.74

1.47

1.7

**Answer** \_\_\_\_\_

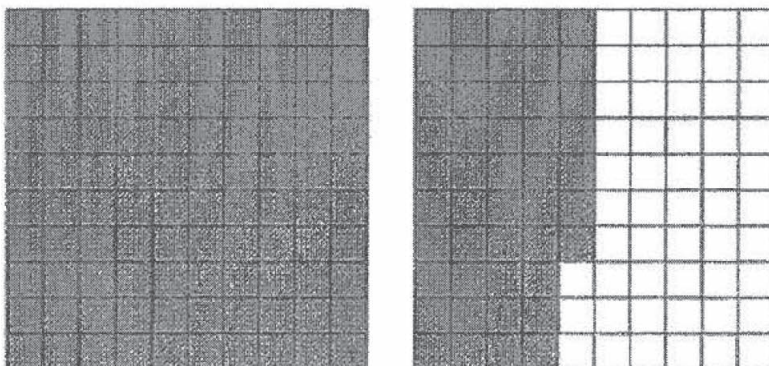


QUESTION 32

STRAND 1: NUMBER SENSE AND OPERATIONS

*Complete and Correct Response:*

Part A



OR other valid response

Part B

- 1.47, 1.7, 1.74

OR other valid response

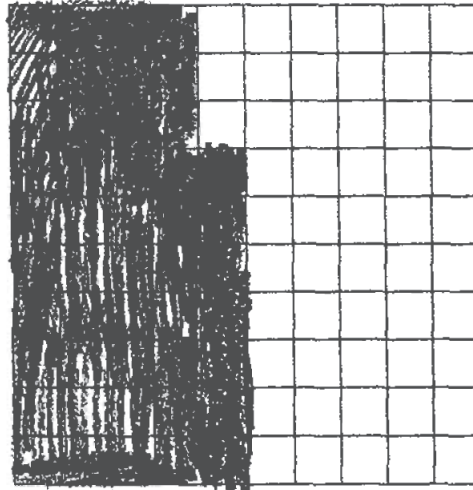
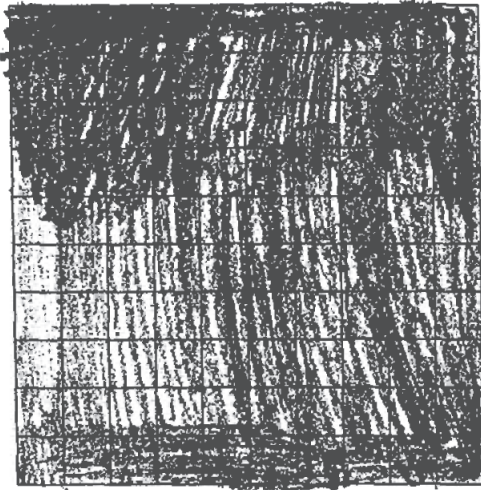
*Score Points:*

Apply 3-point holistic rubric.

**Part A**

On the grids below, shade the correct number of squares to represent the decimal 1.47.

Each grid = 1 whole

**Part B**

On the line below, write the following decimals in order from least to greatest.

1.74

1.47

1.7

Answer 1.47, 1.7, 1.74

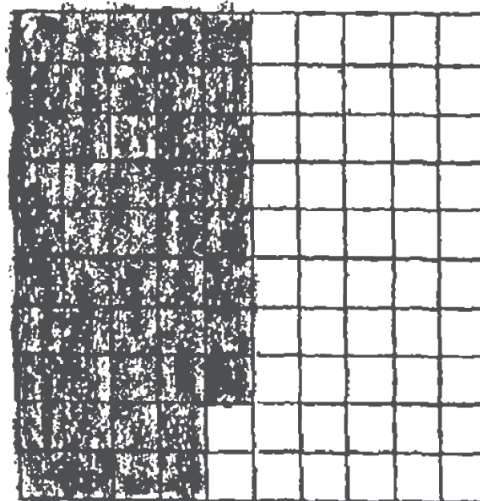
Parts A and B are complete and correct.

**Score Point - 3**

**Part A**

On the grids below, shade the correct number of squares to represent the decimal 1.47.

Each grid = 1 whole

**Part B**

On the line below, write the following decimals in order from least to greatest.

1.74

1.47

1.7

Answer 1.47, 1.7, 1.74

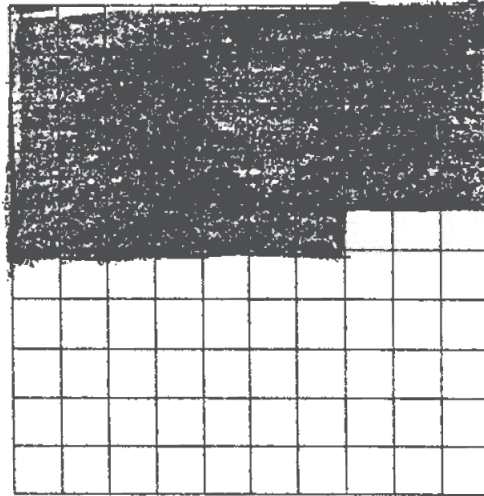
This response demonstrates a partial understanding of the mathematical concepts embodied in the task. The incorrect number of squares is shaded in Part A; however, the decimals are placed in the correct order in Part B.

**Score Point - 2**

**Part A**

On the grids below, shade the correct number of squares to represent the decimal 1.47.

Each grid = 1 whole

**Part B**

On the line below, write the following decimals in order from least to greatest.

1.74

1.47

1.7

Answer 1.7, 1.74, 1.47

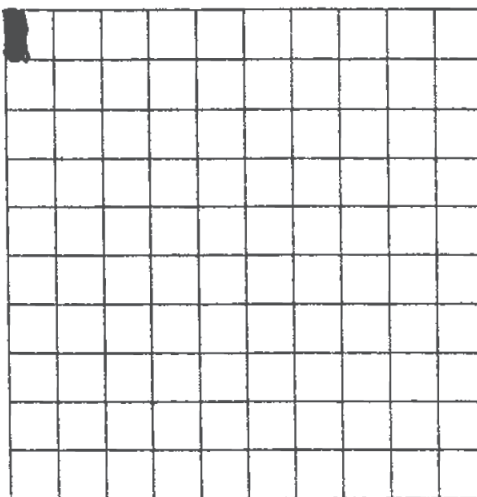
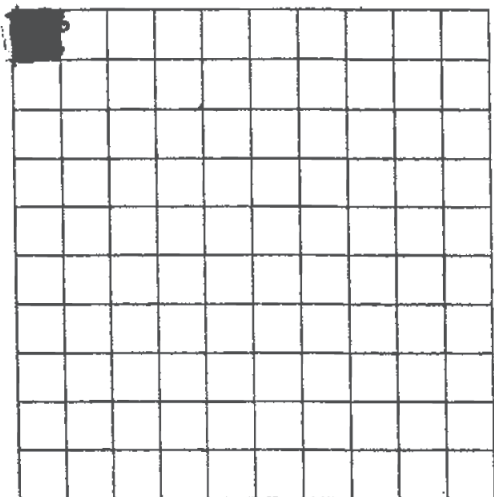
This response demonstrates a limited understanding of the mathematical concepts embodied in the task. The shading in Part A is correct while the order of the decimals in Part B is incorrect.

**Score Point - 1**

**Part A**

On the grids below, shade the correct number of squares to represent the decimal 1.47.

Each grid = 1 whole



**Part B**

On the line below, write the following decimals in order from least to greatest.

1.74

1.47

1.7

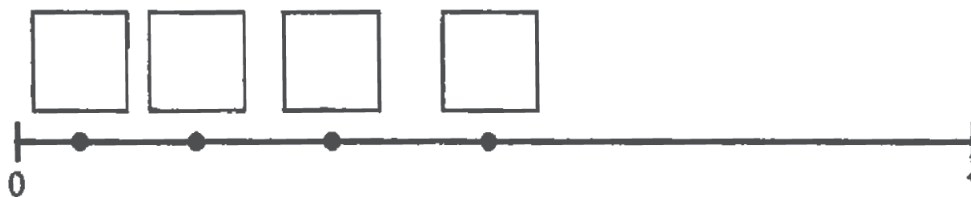
Answer 1.7, 1.47, 1.74

This response is completely incorrect.

**Score Point - 0**

**33**

The points on the number line below show the positions of four fractions.



Fill in each box on the number line with the correct fraction below.

$$\frac{1}{2} \quad \frac{1}{10} \quad \frac{1}{5} \quad \frac{1}{3}$$

On the lines below, explain how you decided where to place the fractions.

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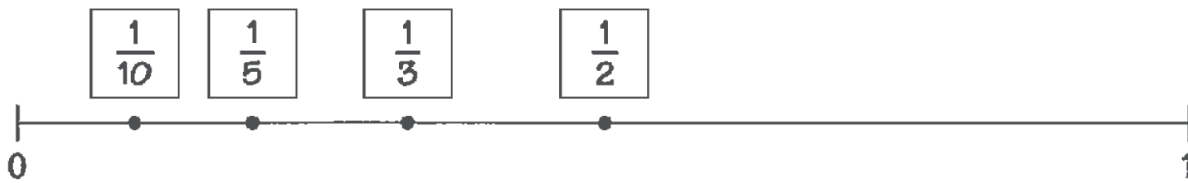
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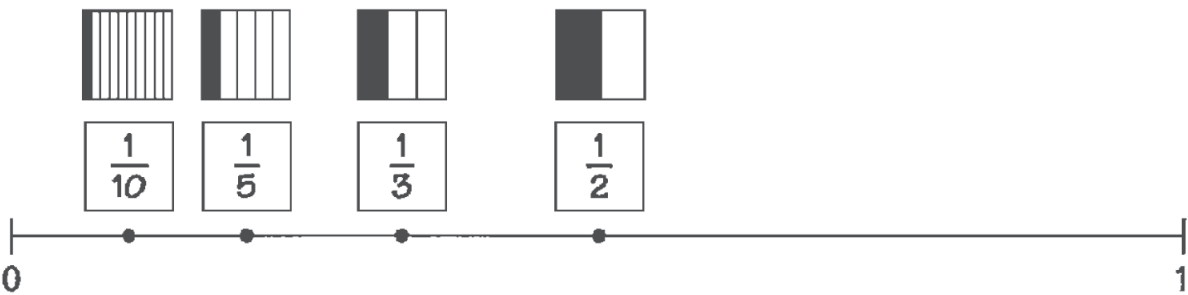
QUESTION 33

STRAND 2: ALGEBRA

Complete and Correct Response:



OR



AND

- I found the least common denominator, which turned out to be 30. Then I compared the fractions from least to greatest.

$$\frac{1}{2} = \frac{15}{30}, \quad \frac{1}{10} = \frac{3}{30}, \quad \frac{1}{5} = \frac{6}{30}, \quad \frac{1}{3} = \frac{10}{30}$$

$$\text{so } \frac{1}{10} < \frac{1}{5} < \frac{1}{3} < \frac{1}{2}$$

OR

I looked at the numerators, and they were all the same. I put the fractions in order by denominators with the largest denominator first.

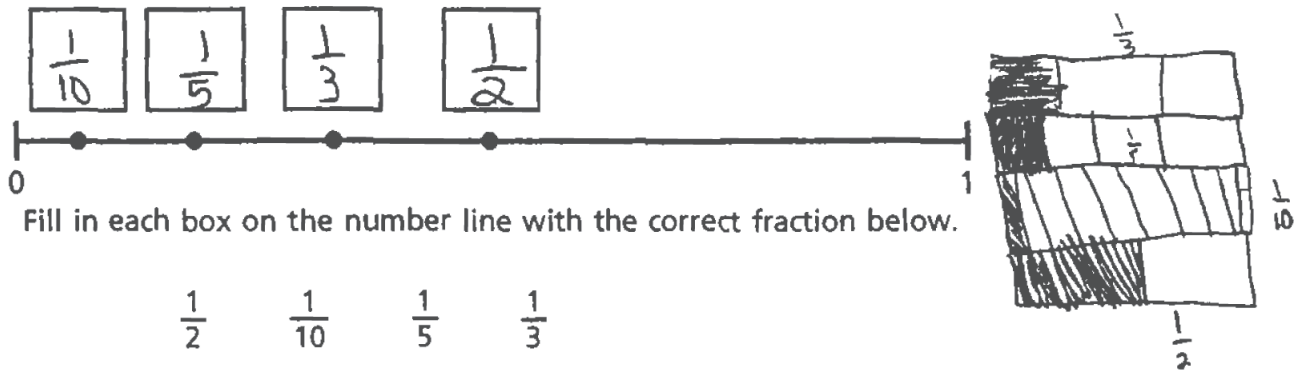
OR other valid response

**Score Points:**

Apply 2-point holistic rubric.

**33**

The points on the number line below show the positions of four fractions.



On the lines below, explain how you decided where to place the fractions.

I made bars and shaded them in and saw what was the biggest shaded fraction.

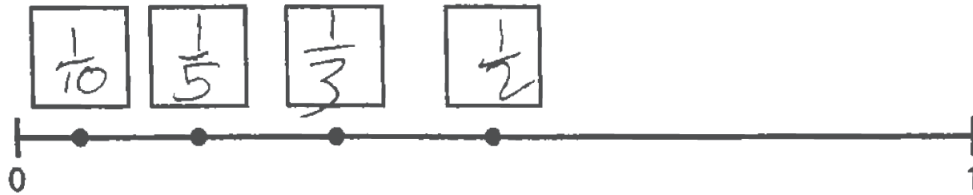
I knew that  $\frac{1}{10}$  would come first cause its the smallest. I also knew that  $\frac{1}{2}$  would come last cause its the biggest.

This response is complete and correct. Note that the work shown does not influence the scoring of the response, as showing work is not required.

**Score Point - 2**



The points on the number line below show the positions of four fractions.



Fill in each box on the number line with the correct fraction below.

$$\frac{1}{2} \quad \frac{1}{10} \quad \frac{1}{5} \quad \frac{1}{3}$$

On the lines below, explain how you decided where to place the fractions.

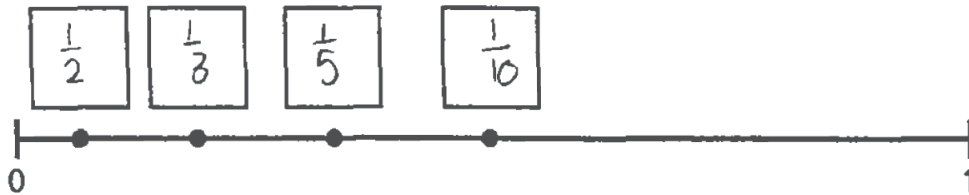
the bigger denominator the smaller the  
 piece, the smaller the numerator  
 the bigger the piece.

This response demonstrates a partial understanding of the mathematical procedures embodied in the question. The fractions are placed correctly on the number line; however, the explanation is only partially correct. The explanation correctly states "the bigger the denominator the smaller the piece," but incorrect information is also provided in the statement, "the smaller the numerator the bigger the piece."

**Score Point - 1**

**33**

The points on the number line below show the positions of four fractions.



Fill in each box on the number line with the correct fraction below.

$\frac{1}{2}$      $\frac{1}{10}$      $\frac{1}{5}$      $\frac{1}{3}$

On the lines below, explain how you decided where to place the fractions.

I place the fractions in the correct order from greatest  
to least

This response is incorrect. Listing the fractions in "order from greatest to least" is an incorrect strategy for placing the fractions on the number line.

**Score Point - 0**

**34**

Last Saturday, three students picked apples at an orchard. The table below shows the total number of baskets of apples each student picked.

**BASKETS OF APPLES**

Student	Number of Baskets
Marie	4.25
Sarah	3.75
Lance	5.5

**Part A**

About how many total baskets of apples did the students pick?

*Estimate* \_\_\_\_\_ baskets

On the lines below, explain how you estimated the total number of baskets.

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**Part B**

Each of Lance's baskets contained 19 apples. About how many total apples did Lance pick?

*Estimate* \_\_\_\_\_ apples

**QUESTION 34**

**STRAND 1: NUMBER SENSE AND OPERATIONS**

***Complete and Correct Response:***

**Part A**

- 14 (baskets)

OR other valid response (NOTE: Students may round up and/or down for their initial estimations.)

**AND**

- I rounded each decimal to the nearest whole number. For example, 4.25 rounds down to 4, 3.75 rounds up to 4, and 5.5 rounds up to 6. Then I added to find the total number of baskets ( $4 + 4 + 6 = 14$ ).

OR other valid response

**Part B**

- $5.5 \times 20 = 110$   
110 (apples)

OR

$$6 \times 19 = 114$$

114 (apples)

OR

$$6 \times 20 = 120$$

120 (apples)

OR other valid response

***Score Points:***

Apply 3-point holistic rubric.

**34**

Last Saturday, three students picked apples at an orchard. The table below shows the total number of baskets of apples each student picked.

**BASKETS OF APPLES**

Student	Number of Baskets
Marie	4.25 →
Sarah	3.75 →
Lance	5.5 →

$$\begin{array}{r}
 4.25 \\
 + 3.75 \\
 \hline
 8.00 \\
 + 5.50 \\
 \hline
 13.50 \rightarrow
 \end{array}$$
  

$$\begin{array}{r}
 4.00 \\
 + 4.00 \\
 + 6.00 \\
 \hline
 14.00
 \end{array}$$

OR

**Part A**

About how many total baskets of apples did the students pick?

Estimate 14.00 baskets

On the lines below, explain how you estimated the total number of baskets.

First I rounded 4.25 → 4.00,  
 3.75 → 4.00 and 5.5 → 6.00. Then I  
 added 4.00, 4.00 and 6.00 and got  
 my answer.  
 (14.00)

**Part B**

Each of Lance's baskets contained 19 apples. About how many total apples did Lance pick?

Estimate 114 apples

This response is complete and correct.

**Score Point - 3**

**34**

Last Saturday, three students picked apples at an orchard. The table below shows the total number of baskets of apples each student picked.

### BASKETS OF APPLES

Student	Number of Baskets
Marie	4.25
Sarah	3.75
Lance	5.5

#### Part A

About how many total baskets of apples did the students pick?

Estimate 14 baskets

On the lines below, explain how you estimated the total number of baskets.

I added all the baskets and got 13.50 and that was close to 14 so it is 14 baskets.

#### Part B

Each of Lance's baskets contained 19 apples. About how many total apples did Lance pick?

Estimate 114 apples

This response demonstrates a partial understanding of the mathematical procedures embodied in the task. Both correct numerical answers are provided; however, the explanation in Part A reflects some misunderstanding of the estimation process. Rounding is used at the end of the addition process, which is not acceptable for estimation.

**Score Point - 2**

**34**

Last Saturday, three students picked apples at an orchard. The table below shows the total number of baskets of apples each student picked.

**BASKETS OF APPLES**

Student	Number of Baskets
Marie	4.25
Sarah	3.75
Lance	5.5

**Part A**

About how many total baskets of apples did the students pick?

Estimate 6.0, 4.00, 4.00 baskets

On the lines below, explain how you estimated the total number of baskets.

I remembered in class that in math class that when you estimate 50 or higher goes to the next whole number and if it's lower than 50 you go back to the same whole number.

**Part B**

Each of Lance's baskets contained 19 apples. About how many total apples did Lance pick?

Estimate 6 apples

This response is incomplete. In Part A, the response correctly rounds each given number. However, the total is not provided and Part B is incorrect.

**Score Point - 1**

34

Last Saturday, three students picked apples at an orchard. The table below shows the total number of baskets of apples each student picked.

**BASKETS OF APPLES**

Student	Number of Baskets
Marie	4.25
Sarah	3.75
Lance	5.5

$$\begin{array}{r}
 4.25 \\
 3.75 \\
 + 5.5 \\
 \hline
 12.40
 \end{array}$$

**Part A**

About how many total baskets of apples did the students pick?

Estimate 12.40 baskets

On the lines below, explain how you estimated the total number of baskets.

I add 4.25 + 3.75 + 5.5 and then I got  
 my Answer 12.40 example  $\begin{array}{r} 4.25 \\ 3.75 \\ + 5.5 \\ \hline 12.40 \end{array}$  Don't forget your  
 decimal

**Part B**

Each of Lance's baskets contained 19 apples. About how many total apples did Lance pick?

Estimate 104.5 apples

This response is completely incorrect.

**Score Point - 0**







**Grade 5**  
**Mathematics**  
**Scoring Guide**  
**Sample Test 2005**

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