The University of the State of New York
REGENTS HIGH SCHOOL EXAMINATION

ALGEBRA I

Wednesday, June 17, 2026 — 9:15 a.m. to 12:15 p.m., only

Student Name _____

School Name _____

The possession or use of any communications device is strictly prohibited when taking this examination. If you have or use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

Print your name and the name of your school on the lines above.

A separate answer sheet for **Part I** has been provided to you. Follow the instructions from the proctor for completing the student information on your answer sheet.

This examination has four parts, with a total of 35 questions. You must answer all questions in this examination. Record your answers to the Part I multiple-choice questions on the separate answer sheet. Write your answers to the questions in **Parts II**, **III**, and **IV** directly in this booklet. All work should be written in pen, except for graphs and drawings, which should be done in pencil. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. Utilize the information provided for each question to determine your answer. Note that diagrams are not necessarily drawn to scale.

The formulas that you may need to answer some questions in this examination are found at the end of the examination. This sheet is perforated so you may remove it from this booklet.

Scrap paper is not permitted for any part of this examination, but you may use the blank spaces in this booklet as scrap paper. A perforated sheet of scrap graph paper is provided at the end of this booklet for any question for which graphing may be helpful but is not required. You may remove this sheet from this booklet. Any work done on this sheet of scrap graph paper will *not* be scored.

When you have completed the examination, you must sign the statement printed at the end of the answer sheet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer sheet cannot be accepted if you fail to sign this declaration.

Notice …

A graphing calculator and a straightedge (ruler) must be available for you to use while taking this examination.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN.

Part I

Answer all 24 questions in this part. Each correct answer will receive 2 credits. No partial credit will be allowed. Utilize the information provided for each question to determine your answer. Note that diagrams are not necessarily drawn to scale. For each statement or question, choose the word or expression that, of those given, best completes the statement or answers the question. Record your answers on your separate answer sheet. [48]

Use this space for computations.

1 What is the 20th term of the arithmetic sequence 4, 7, 10, 13, …?

(1) 61
(2) 64
(3) 79
(4) 83

2 What is the value of x in the equation $0.5x - 4 = 8 - x$?

(1) 6
(2) 8
(3) 18
(4) 24

3 The binomial $4x^2 - 25$ is equivalent to

(1) $4(x + 5)(x - 5)$
(2) $4(x - 5)(x - 5)$
(3) $(2x - 5)(2x + 5)$
(4) $(2x - 5)(2x - 5)$

4 A function is defined by the following set of points:

$$\{(3, -4), (-4, 3), (1, 1), (x, 2)\}$$

What is a possible value for x?

(1) 1
(2) 2
(3) 3
(4) -4

Use this space for computations.

5 The expression $(4xy^2)^3$ is equivalent to

(1) $12x^3y^6$

(2) $12x^3y^8$

(3) $64x^3y^6$

(4) $64x^3y^8$

6 Allison was asked to write a third-degree trinomial with a leading coefficient of 4 and a constant term of 5. Which expression satisfies these conditions?

(1) $4x^3 - 5$

(2) $3x^4 + 5$

(3) $4x^3 + 8x^2 + 5$

(4) $3x^4 + 2x^3 - 5$

7 Given the sequence 128, 64, 32, …, which formula could be used to find the nth term of this sequence?

(1) $a_n = 128(-2)^{n-1}$

(2) $a_n = 128\left(\frac{1}{2}\right)^{n-1}$

(3) $a_n = 128 - 2(n - 1)$

(4) $a_n = 128 + \frac{1}{2}(n - 1)$

8 When a bicyclist increases the pressure on the brakes, the speed of the bicycle decreases. This relationship can best be described as a

(1) negative correlation and causal relationship

(2) negative correlation and non-causal relationship

(3) positive correlation and causal relationship

(4) positive correlation and non-causal relationship

Use this space for computations.

9 A garden club plans to plant 40 flowering plants this year. They will only purchase daffodils that cost \$4 per plant and tulips that cost \$5 per plant. All prices include tax. The club has \$170 to spend on plants. Which equation could be used to find the number of daffodil plants, d, the club purchases?

(1) $4d + 5(170 - d) = 40$

(2) $4d + 5(40 - d) = 170$

(3) $5d + 4(170 - d) = 40$

(4) $5d + 4(40 - d) = 170$

10 A function is defined as $h(x) = x^2 - 3x + 1$. What is the value of $h(-1)$?

(1) 1

(2) 2

(3) 3

(4) 5

11 The zeros of $p(x) = x(3x + 2)(x - 5)$ are

(1) $-\frac{2}{3}$ and 5, only

(2) $\frac{2}{3}$ and -5, only

(3) $-\frac{2}{3}$, 0, 5

(4) $\frac{2}{3}$, 0, -5

12 If $f(x) = 1.25^x$ and $g(x) = 3x + 10$, what is the *smallest* positive integer of x for which $f(x) > g(x)$?

(1) 18

(2) 19

(3) 67

(4) 69

Use this space for computations.

13 What is an equation of the line that passes through the points (2, 5) and (−2, −1)?

(1) $y - 5 = \frac{2}{3}(x - 2)$

(2) $y - 5 = \frac{3}{2}(x - 2)$

(3) $y - 2 = \frac{2}{3}(x - 5)$

(4) $y - 2 = \frac{3}{2}(x - 5)$

14 At a local high school, students were asked to name the sport they like to watch the most. The results are summarized in the table below.

	Football	Basketball	Baseball
Male	40	35	15
Female	20	40	10

Approximately what percentage of female high school students preferred to watch basketball?

(1) 35

(2) 40

(3) 53

(4) 57

15 An equation that yields the same solutions as $x^2 - 10x - 24 = 0$ is

(1) $(x + 5)^2 = 1$

(2) $(x - 5)^2 = 1$

(3) $(x + 5)^2 = 49$

(4) $(x - 5)^2 = 49$

16 The function $f(x)$ is shifted three units right and four units up. The result of this transformation is

(1) $f(x - 3) + 4$

(2) $f(x + 3) + 4$

(3) $f(x + 4) - 3$

(4) $f(x - 4) - 3$

Use this space for computations.

17 Hana was asked to solve a quadratic equation. Her first step is shown below.

$$x^2 - 8x = 3$$
$$\text{Step 1: } x^2 - 8x + 16 = 3 + 16$$

The property that Hana used is the

(1) distributive property
(2) commutative property
(3) additive inverse property
(4) addition property of equality

18 A data set is given below:

28 28 28 28 32 32 34 34 40 42

What is the value of the upper quartile of this data set?

(1) 28
(2) 32
(3) 34
(4) 42

19 When $-3x^2 + 7x - 1$ is subtracted from $2x^2 - 3x + 10$, the result is

(1) $5x^2 + 4x + 9$
(2) $5x^2 - 10x + 11$
(3) $-5x^2 + 4x + 9$
(4) $-5x^2 + 10x - 11$

20 The value of a home in Buffalo can be modeled by the function $V(t) = 96{,}949(1.0448)^t$, where $V(t)$ is the value of the house after t years. What is the percent of increase in the value of the home each year?

(1) 1.0448%
(2) 0.0448%
(3) 0.448%
(4) 4.48%

Use this space for computations.

21 A rod is an old English measure of distance that is equivalent to 5.5 yards. How many inches are 2.5 rods?

[1 yard = 3 feet]

(1) 66

(2) 165

(3) 198

(4) 495

22 When solving the equation $2x^2 - 3x - 6 = 0$ using the quadratic formula, the solutions are

(1) $\frac{3 \pm \sqrt{57}}{4}$

(2) $\frac{3 \pm \sqrt{39}}{4}$

(3) $\frac{-3 \pm \sqrt{57}}{4}$

(4) $\frac{-3 \pm \sqrt{39}}{4}$

23 For which function is the axis of symmetry $x = -4$?

(1) $f(x) = -x^2 - 4x - 1$

(2) $g(x) = -x^2 + 8x + 5$

(3) $h(x) = x^2 + 8x + 3$

(4) $k(x) = x^2 + x - 4$

24 In simplest radical form, the product of $2\sqrt{6}$ and $5\sqrt{3}$ is

(1) 10

(2) 21

(3) $30\sqrt{2}$

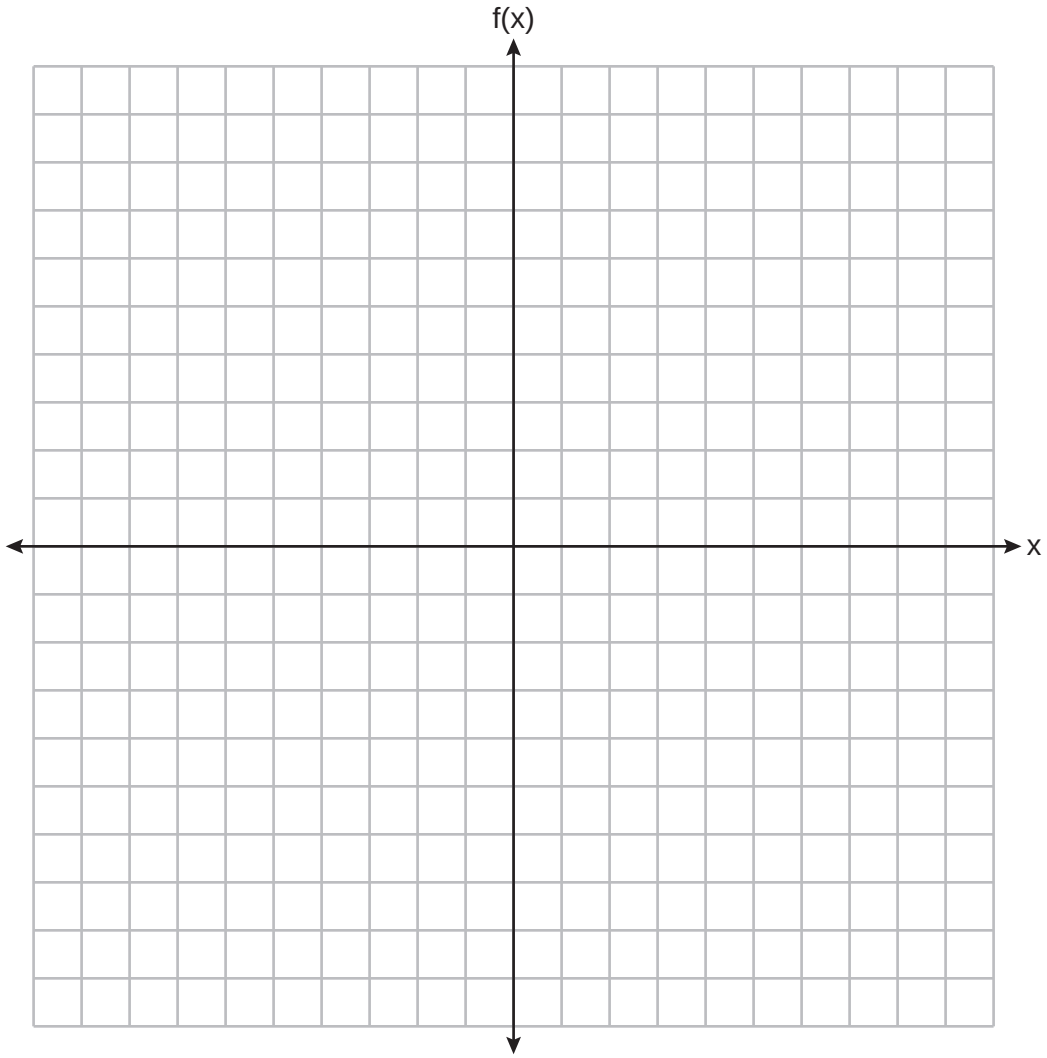
(4) $10\sqrt{18}$

Part II

Answer all 6 questions in this part. Each correct answer will receive 2 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. Utilize the information provided for each question to determine your answer. Note that diagrams are not necessarily drawn to scale. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [12]

25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.

26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

Year	Population
1970	1,539,233
1980	1,428,285
1990	1,487,536
2000	1,537,195
2010	1,585,873
2020	1,643,734

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

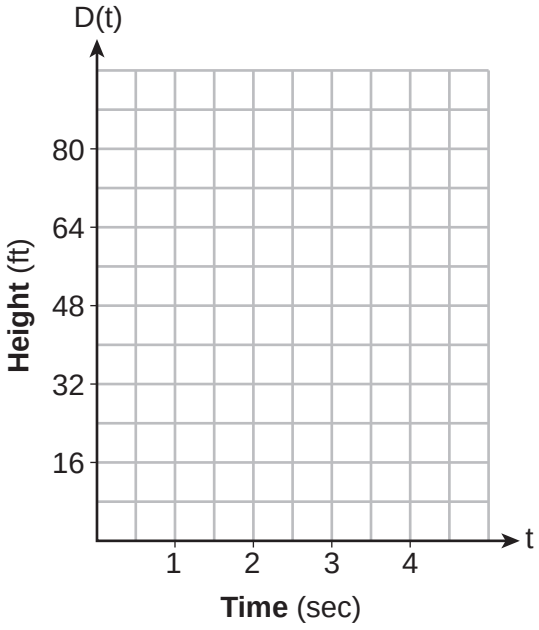
30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

Part III

Answer all 4 questions in this part. Each correct answer will receive 4 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. Utilize the information provided for each question to determine your answer. Note that diagrams are not necessarily drawn to scale. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [16]

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

State the number of seconds after the toss it will take the ball to hit the ground.

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	**Salary in Thousands of Dollars** (y)
2	15
3	28
5	42
9	54
13	64
16	90

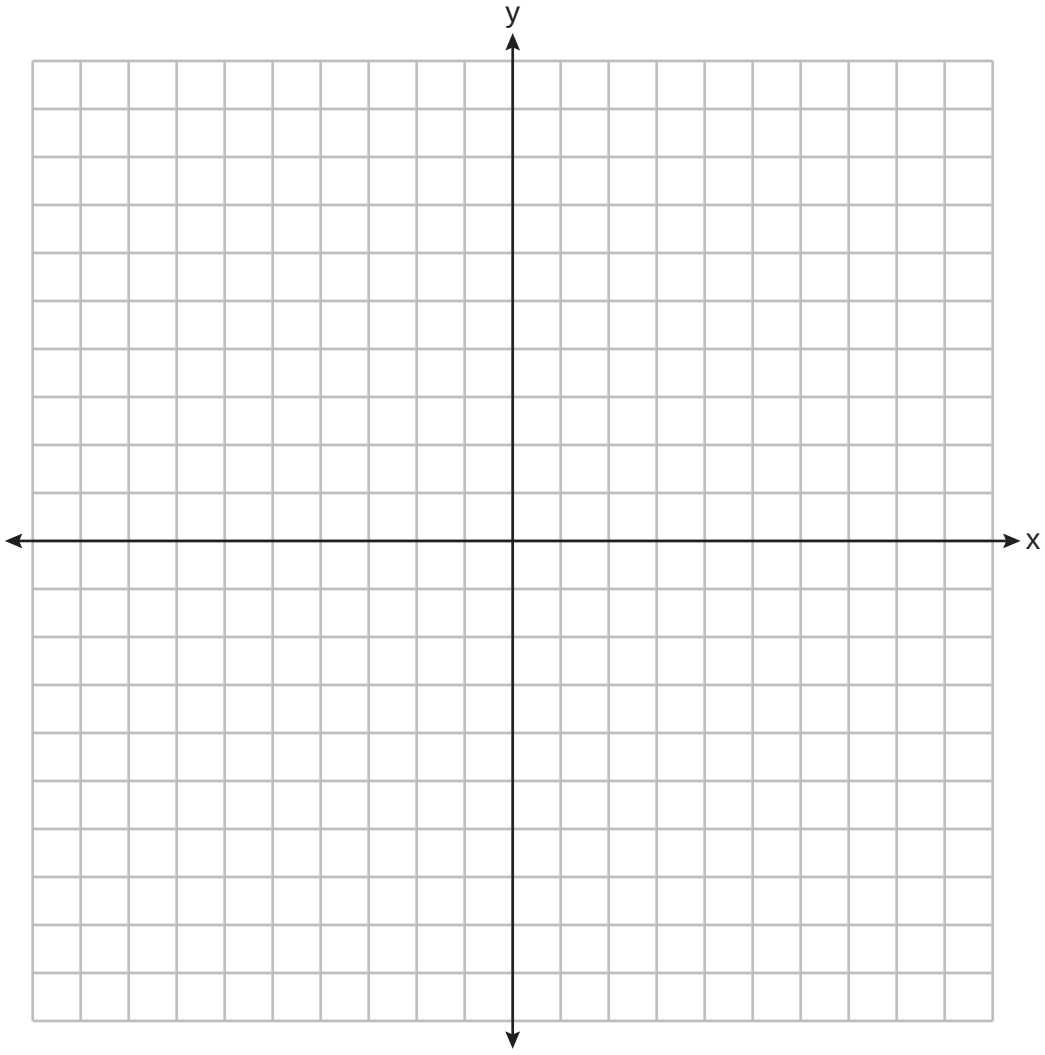
State the linear regression equation for these data. Round all values to the *nearest hundredth*.

State the correlation coefficient for this data set, to the *nearest hundredth*.

State what the correlation coefficient indicates about the linear fit of the data.

34 Graph the system of inequalities on the set of axes below.

$$2y < x - 8$$
$$3x + y \geq 6$$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

Part IV

Answer the question in this part. A correct answer will receive 6 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. Utilize the information provided to determine your answer. Note that diagrams are not necessarily drawn to scale. A correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [6]

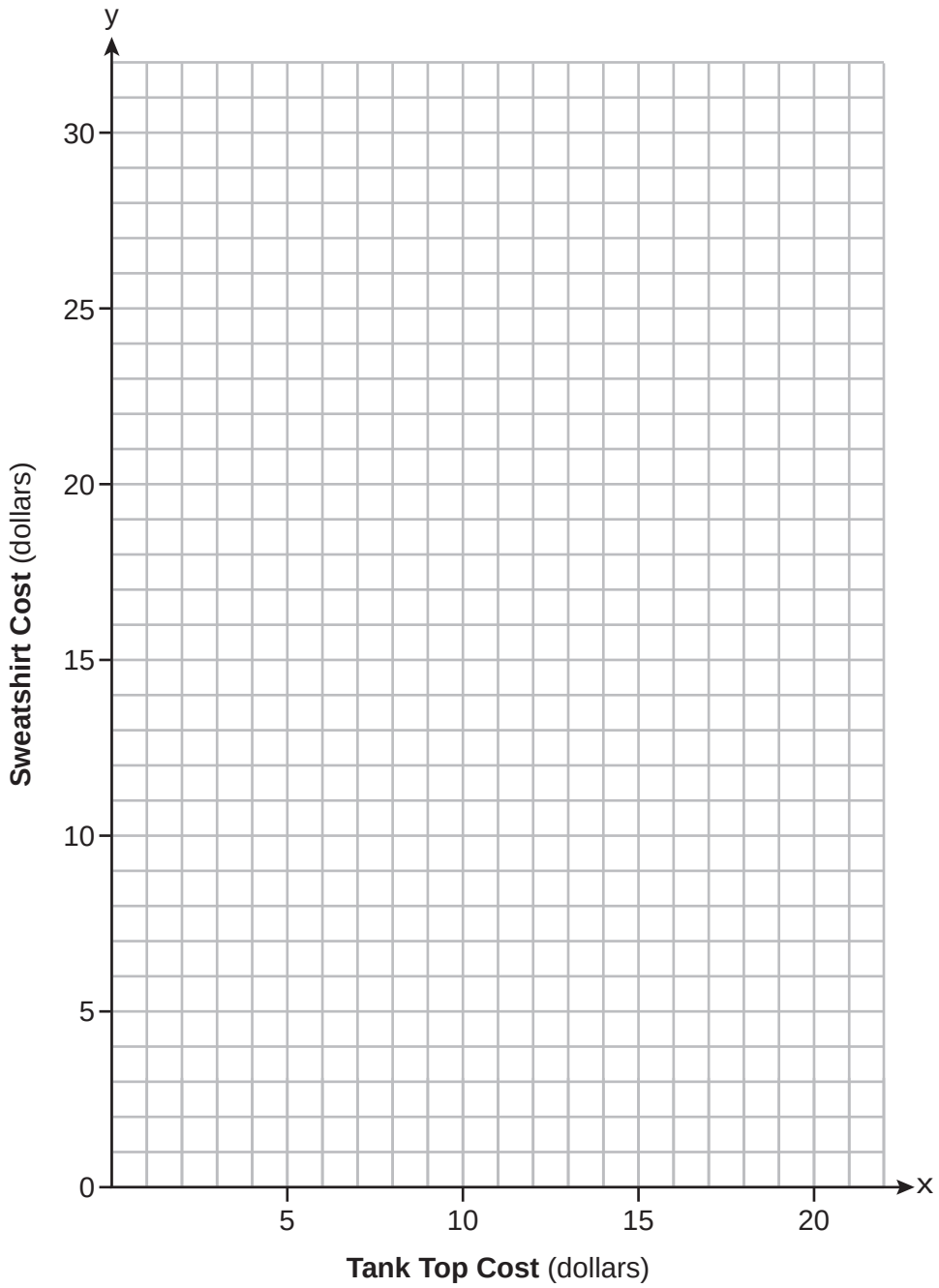
35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for \$52 or two tank tops and one sweatshirt for \$30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

Question 35 is continued on the next page.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

Explain what each coordinate of the point of intersection means in the context of the problem.

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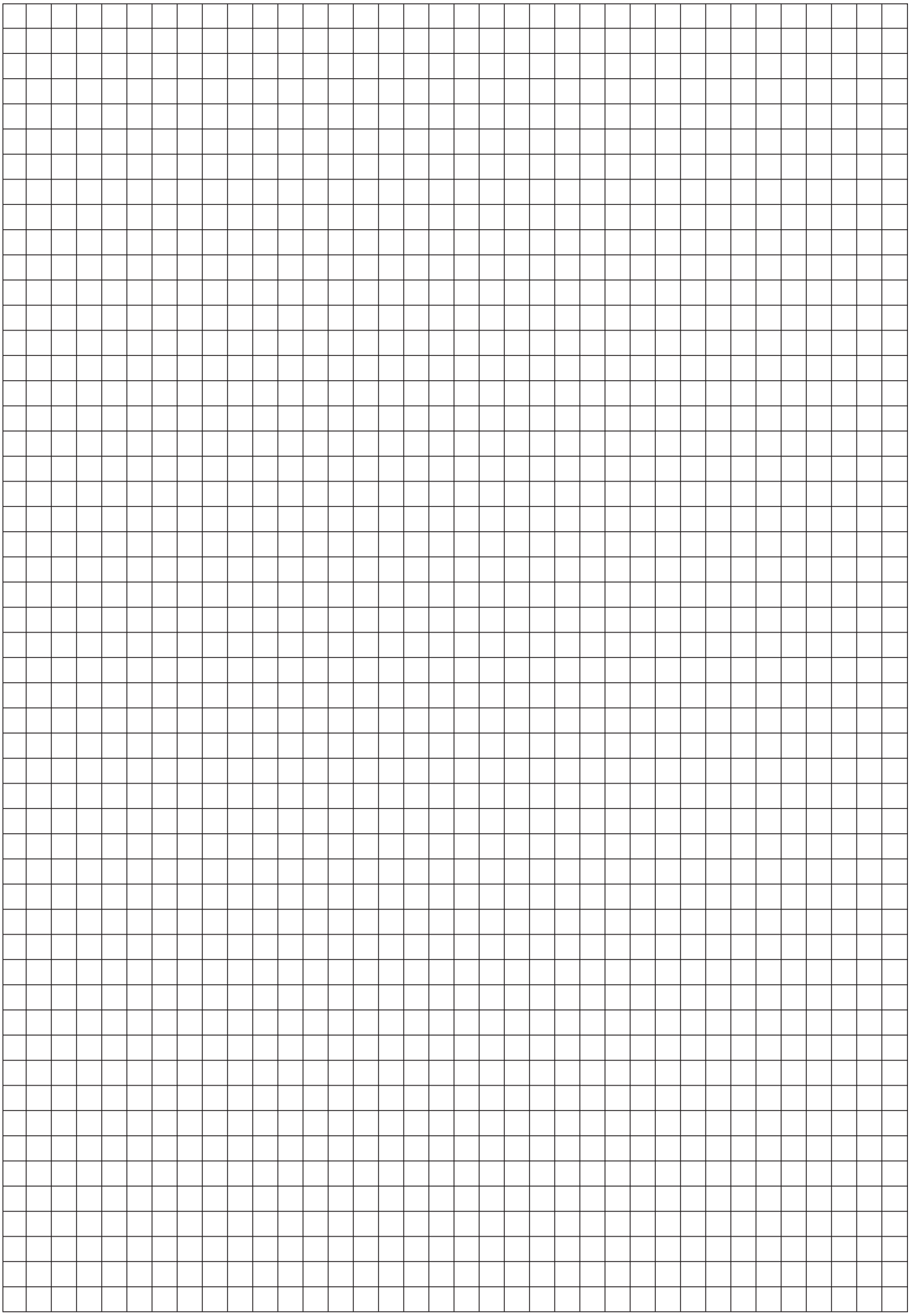
Scrap Graph Paper — this sheet will *not* be scored.



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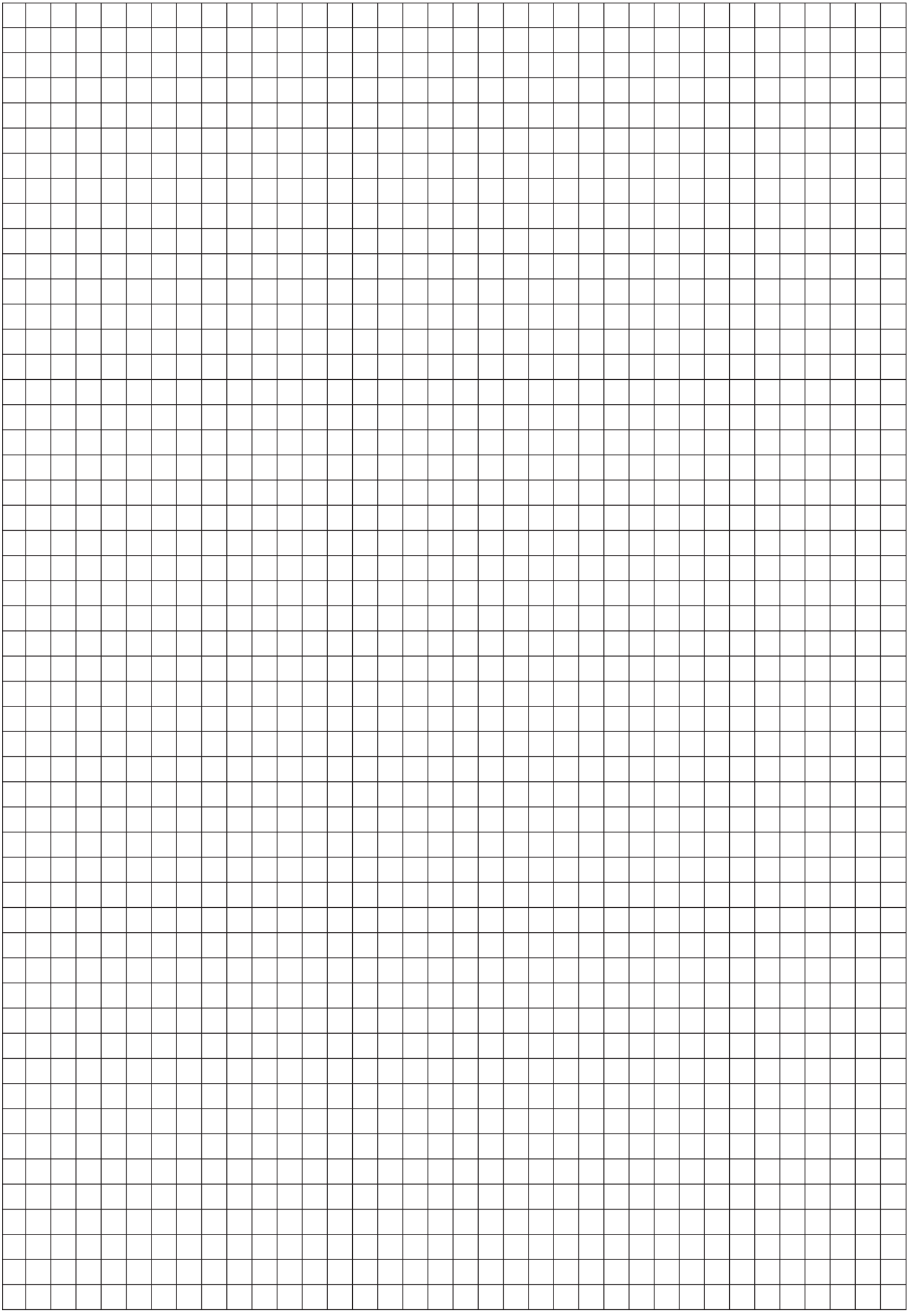

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Reference Sheet for Algebra I

Conversions

1 mile = 5280 feet
1 mile = 1760 yards
1 pound = 16 ounces
1 ton = 2000 pounds

Conversions Across Measurement Systems

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 1.609 kilometers
1 kilometer = 0.6214 mile
1 pound = 0.454 kilogram
1 kilogram = 2.2 pounds

Quadratic Equation	$y = ax^2 + bx + c$
Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Equation of the Axis of Symmetry	$x = -\frac{b}{2a}$
Slope	$m = \frac{y_2 - y_1}{x_2 - x_1}$
Linear Equation Slope Intercept	$y = mx + b$
Linear Equation Point Slope	$y - y_1 = m(x - x_1)$

Exponential Equation	$y = ab^x$
Annual Compound Interest	$A = P(1 + r)^n$
Arithmetic Sequence	$a_n = a_1 + d(n - 1)$
Geometric Sequence	$a_n = a_1 r^{n-1}$
Interquartile Range (IQR)	$IQR = Q_3 - Q_1$
Outlier	Lower Outlier Boundary = $Q_1 - 1.5(IQR)$
	Upper Outlier Boundary = $Q_3 + 1.5(IQR)$

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ALGEBRA I

The State Education Department / The University of the State of New York

Regents Examination in Algebra I – June 2026

Scoring Key: Part I (Multiple-Choice Questions)

Examination	Date	Question Number	Scoring Key	Question Type	Credit
Algebra I	June '26	**1**	1	MC	2
Algebra I	June '26	**2**	2	MC	2
Algebra I	June '26	**3**	3	MC	2
Algebra I	June '26	**4**	2	MC	2
Algebra I	June '26	**5**	3	MC	2
Algebra I	June '26	**6**	3	MC	2
Algebra I	June '26	**7**	2	MC	2
Algebra I	June '26	**8**	1	MC	2
Algebra I	June '26	**9**	2	MC	2
Algebra I	June '26	**10**	4	MC	2
Algebra I	June '26	**11**	3	MC	2
Algebra I	June '26	**12**	2	MC	2
Algebra I	June '26	**13**	2	MC	2
Algebra I	June '26	**14**	4	MC	2
Algebra I	June '26	**15**	4	MC	2
Algebra I	June '26	**16**	1	MC	2
Algebra I	June '26	**17**	4	MC	2
Algebra I	June '26	**18**	3	MC	2
Algebra I	June '26	**19**	2	MC	2
Algebra I	June '26	**20**	4	MC	2
Algebra I	June '26	**21**	4	MC	2
Algebra I	June '26	**22**	1	MC	2
Algebra I	June '26	**23**	3	MC	2
Algebra I	June '26	**24**	3	MC	2

Regents Examination in Algebra I – June 2026

Scoring Key: Parts II, III, and IV (Constructed-Response Questions)

Examination	Date	Question Number	Scoring Key	Question Type	Credit
Algebra I	June '26	**25**	-	CR	2
Algebra I	June '26	**26**	-	CR	2
Algebra I	June '26	**27**	-	CR	2
Algebra I	June '26	**28**	-	CR	2
Algebra I	June '26	**29**	-	CR	2
Algebra I	June '26	**30**	-	CR	2
Algebra I	June '26	**31**	-	CR	4
Algebra I	June '26	**32**	-	CR	4
Algebra I	June '26	**33**	-	CR	4
Algebra I	June '26	**34**	-	CR	4
Algebra I	June '26	**35**	-	CR	6

Key
MC = Multiple-choice question
CR = Constructed-response question

The chart for determining students' final examination scores for the **June 2026 Regents Examination in Algebra I** will be posted on the Department's web site at: https://www.nysedregents.org/algebraone/ on the day of the examination. Conversion charts provided for the previous administrations of the Regents Examination in Algebra I must NOT be used to determine students' final scores for this administration.

FOR TEACHERS ONLY

The University of the State of New York
REGENTS HIGH SCHOOL EXAMINATION

ALGEBRA I

Wednesday, June 17, 2026 — 9:15 a.m. to 12:15 p.m., only

RATING GUIDE

Updated information regarding the rating of this examination may be posted on the New York State Education Department's website during the rating period. Check this website at: https://www.nysed.gov/state-assessment/high-school-regents-examinations and select the link "Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents Examination period.

The Department is providing supplemental scoring guidance, the "Model Response Set," for the Regents Examination in Algebra I. This guidance is intended to be part of the scorer training. Schools should use the Model Response Set along with the rubrics in the Rating Guide to help guide scoring of student work. While not reflective of all scenarios, the model responses selected for the Model Response Set illustrate how less common student responses to constructed-response questions may be scored. The Model Response Set will be available on the Department's website at https://www.nysedregents.org/algebraone/.

Mechanics of Rating

The following procedures are to be followed for scoring student answer papers for the Regents Examination in Algebra I. More detailed information about scoring is provided in the publication *Information Booklet for Scoring the Regents Examination in Algebra I.*

Do *not* attempt to correct the student's work by making insertions or changes of any kind. In scoring the constructed-response questions, use check marks to indicate student errors. Unless otherwise specified, mathematically correct variations in the answers will be allowed. Units need not be given when the wording of the questions allows such omissions.

Each student's answer paper is to be scored by a minimum of three mathematics teachers. No one teacher is to score more than approximately one-third of the constructed-response questions on a student's paper. Teachers may not score their own students' answer papers. On the student's separate answer sheet, for each question, record the number of credits earned and the teacher's assigned rater/scorer letter.

Schools are not permitted to rescore any of the constructed-response questions on this exam after each question has been rated once, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately.

Raters should record the student's scores for all questions and the total raw score on the student's separate answer sheet. Then the student's total raw score should be converted to a scale score by using the conversion chart that will be posted on the Department's website at: https://www.nysed.gov/state-assessment/high-school-regents-examinations on the day of the examination. Because scale scores corresponding to raw scores in the conversion chart may change from one administration to another, it is crucial that, for each administration, the conversion chart provided for that administration be used to determine the student's final score. The student's scale score should be entered in the box provided on the student's separate answer sheet. The scale score is the student's final examination score.

General Rules for Applying Mathematics Rubrics

I. General Principles for Rating

The rubrics for the constructed-response questions on the Regents Examination in Algebra I are designed to provide a systematic, consistent method for awarding credit. The rubrics are not to be considered all-inclusive; it is impossible to anticipate all the different methods that students might use to solve a given problem. Each response must be rated carefully using the teacher's professional judgment and knowledge of mathematics; all calculations must be checked. The specific rubrics for each question must be applied consistently to all responses. In cases that are not specifically addressed in the rubrics, raters must follow the general rating guidelines in the publication *Information Booklet for Scoring the Regents Examination in Algebra I*, use their own professional judgment, confer with other mathematics teachers, and/or contact the State Education Department for guidance. During each Regents Examination administration period, rating questions may be referred directly to the Education Department. The contact numbers are sent to all schools before each administration period.

II. Full-Credit Responses

A full-credit response provides a complete and correct answer to all parts of the question. Sufficient work is shown to enable the rater to determine how the student arrived at the correct answer.

When the rubric for the full-credit response includes one or more examples of an acceptable method for solving the question (usually introduced by the phrase "such as"), it does not mean that there are no additional acceptable methods of arriving at the correct answer. Unless otherwise specified, mathematically correct alternative solutions should be awarded credit. The only exceptions are those questions that specify the type of solution that must be used; e.g., an algebraic solution or a graphic solution. A correct solution using a method other than the one specified is awarded half the credit of a correct solution using the specified method.

III. Appropriate Work

Full-Credit Responses: The directions in the examination booklet for all the constructed-response questions state: "Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc." The student has the responsibility of providing the correct answer ***and*** showing how that answer was obtained. The student must "construct" the response; the teacher should not have to search through a group of seemingly random calculations scribbled on the student paper to ascertain what method the student may have used.

Responses With Errors: Rubrics that state "Appropriate work is shown, but…" are intended to be used with solutions that show an essentially complete response to the question but contain certain types of errors, whether computational, rounding, graphing, or conceptual. If the response is incomplete; i.e., an equation is written but not solved or an equation is solved but not all of the parts of the question are answered, appropriate work has ***not*** been shown. Other rubrics address incomplete responses.

IV. Multiple Errors

Computational Errors, Graphing Errors, and Rounding Errors: Each of these types of errors results in a 1-credit deduction. Any combination of two of these types of errors results in a 2-credit deduction. No more than 2 credits should be deducted for such mechanical errors in a 4-credit question and no more than 3 credits should be deducted in a 6-credit question. The teacher must carefully review the student's work to determine what errors were made and what type of errors they were.

Conceptual Errors: A conceptual error involves a more serious lack of knowledge or procedure. Examples of conceptual errors include using the incorrect formula for the area of a figure, choosing the incorrect trigonometric function, or multiplying the exponents instead of adding them when multiplying terms with exponents.

If a response shows repeated occurrences of the same conceptual error, the student should not be penalized twice. If the same conceptual error is repeated in responses to other questions, credit should be deducted in each response.

For 4- and 6-credit questions, if a response shows one conceptual error and one computational, graphing, or rounding error, the teacher must award credit that takes into account both errors. Refer to the rubric for specific scoring guidelines.

Part II

For each question, use the specific criteria to award a maximum of 2 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(25) **[2]** $10x^2 - 11x + 3$, and correct work is shown.

[1] Appropriate work is shown, but one computational error is made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] Appropriate work is shown, but the polynomial is not written in standard form.

or

[1] $10x^2 - 11x + 3$, but no work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(26) **[2]** A correct graph is drawn over the given domain.

[1] One graphing error is made.

or

[1] One conceptual error is made.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(27) **[2]** $x < -1$, and correct algebraic work is shown.

[1] Appropriate work is shown, but one computational error is made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] $x < -1$, but a method other than algebraic is used.

or

[1] $x < -1$, but no work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(28) **[2]** $h = \frac{2A}{b}$, or equivalent and correct work is shown.

[1] Appropriate work is shown, but one computational error is made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] $h = \frac{2A}{b}$, but no work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(29) **[2]** 5386, and correct work is shown.

[1] Appropriate work is shown, but one computational or rounding error is made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] 5386, but no work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(30) **[2]** $\frac{5\sqrt{3}}{3}$, and correct work is shown.

[1] Appropriate work is shown, but one computational error is made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] $\frac{5\sqrt{3}}{3}$, but no work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

Part III

For each question, use the specific criteria to award a maximum of 4 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(31) **[4]** A correct graph is drawn, and 64 and 3 are stated.

[3] Appropriate work is shown, but one computational or graphing error is made.

[2] A correct graph is drawn, but no further correct work is shown.

or

[2] 64 and 3 are stated, but no further correct work is shown.

[1] 64 or 3 is stated, but no further correct work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(32) **[4]** $x = 0$, $y = 3$, and $x = 3$, $y = -3$, or (0, 3) and (3, −3), and correct algebraic work is shown.

[3] Appropriate work is shown, but one computational or factoring error is made.

or

[3] Appropriate work is shown to find $x = 0$ and $x = 3$, but no further correct work is shown.

or

[3] Appropriate work is shown to find either (0, 3) or (3, −3).

[2] Appropriate work is shown, but two computational or factoring errors are made.

or

[2] Appropriate work is shown, but one conceptual error is made.

or

[2] Appropriate work is shown to find $x(x - 3) = 0$, or $x^2 - 3x + 2.25 = 2.25$, but no further correct work is shown.

or

[2] A correct substitution is made into the quadratic formula, but no further correct work is shown.

or

[2] $x = 0$, $y = 3$, and $x = 3$, $y = -3$, but a method other than algebraic is used.

[1] A correct quadratic equation in standard form is written, but no further correct work is shown.

or

[1] $x = 0$, $y = 3$, and $x = 3$, $y = -3$, but no work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(33) **[4]** $y = 4.61x + 11.93$, 0.98, and strong is stated.

[3] Appropriate work is shown, but one computational or rounding error is made.

or

[3] The full display of the student's calculator showing incorrect values for a, b, and r is written, but used appropriately.

or

[3] Appropriate work is shown, but an expression is written instead of an equation.

[2] $y = 4.61x + 11.93$ is written, but no further correct work is shown.

[1] 0.98 is stated, but no further correct work is shown.

or

[1] Strong is stated, but no further correct work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

(34) **[4]** Both inequalities are graphed correctly, and at least one is labeled, a correct point in the solution set is stated, and a correct justification is given.

[3] Appropriate work is shown, but one computational, graphing, or labeling error is made.

or

[3] Appropriate work is shown, but the justification is missing or incorrect.

or

[3] One inequality is graphed incorrectly, but the system is used appropriately.

[2] Appropriate work is shown, but two computational, graphing, or labeling errors are made.

or

[2] Both inequalities are graphed correctly, and at least one is labeled, but no further correct work is shown.

or

[2] A correct point and justification are given, but no further correct work is shown.

[1] A correct point is stated, but no further correct work is shown.

or

[1] One inequality is graphed and labeled correctly, but no further correct work is shown.

or

[1] $2y = x - 8$ and $3x + y = 6$ are graphed correctly and at least one is labeled, but no further correct work is shown.

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

Part IV

For this question, use the specific criteria to award a maximum of 6 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(35) **[6]** $3x + 2y = 52$ and $2x + y = 30$ are written and graphed correctly, and at least one is labeled, and (8, 14) is stated, and a correct explanation in context is written.

[5] Appropriate work is shown, but one computational, graphing, or labeling error is made.

or

[5] Appropriate work is shown, but the explanation is missing or incorrect.

or

[5] Appropriate work is shown, but the coordinates are not stated.

or

[5] Appropriate work is shown, but a method other than graphing is used.

or

[5] One equation is written incorrectly, but the system is used appropriately.

[4] Appropriate work is shown, but two computational, graphing, or labeling errors are made.

or

[4] A correct system of equations is written and graphed correctly, and at least one is labeled, but no further correct work is shown.

[3] A correct system of equations is written and (8, 14) is stated, but no further correct work is shown.

[2] A correct system of equations is written, but no further correct work is shown.

or

[2] Only one equation is written and graphed correctly, but no further correct work is shown.

[1] Only one equation is written correctly, but no further correct work is shown.

or

[1] (8, 14) is stated, but no work is shown.

or

[1] A correct explanation is written, but no further correct work is shown.

[0] 8 and 14 are stated, but no further correct work is shown.

or

[0] A zero response does not contain enough relevant course-level work to receive any credit, does not satisfy the criteria for one or more credits, or is a correct response that was obtained by an obviously incorrect procedure.

Map to the Learning Standards
Algebra I
June 2026

Question	Type	Credits	Cluster
1	Multiple Choice	2	F-IF.A
2	Multiple Choice	2	A-REI.B
3	Multiple Choice	2	A-SSE.A
4	Multiple Choice	2	F-IF.A
5	Multiple Choice	2	A-SSE.B
6	Multiple Choice	2	A-SSE.A
7	Multiple Choice	2	F-IF.A
8	Multiple Choice	2	S-ID.C
9	Multiple Choice	2	A-CED.A
10	Multiple Choice	2	F-IF.A
11	Multiple Choice	2	A-APR.B
12	Multiple Choice	2	F-LE.A
13	Multiple Choice	2	A-REI.D
14	Multiple Choice	2	S-ID.B
15	Multiple Choice	2	A-REI.B
16	Multiple Choice	2	F-BF.B
17	Multiple Choice	2	A-REI.A
18	Multiple Choice	2	S-ID.A
19	Multiple Choice	2	A-APR.A
20	Multiple Choice	2	F-LE.B

21	Multiple Choice	2	N-Q.A
22	Multiple Choice	2	A-REI.B
23	Multiple Choice	2	F-IF.C
24	Multiple Choice	2	N-RN.B
25	Constructed Response	2	A-APR.A
26	Constructed Response	2	F-IF.C
27	Constructed Response	2	A-REI.B
28	Constructed Response	2	A-CED.A
29	Constructed Response	2	F-IF.B
30	Constructed Response	2	N-RN.B
31	Constructed Response	4	F-IF.B
32	Constructed Response	4	A-REI.C
33	Constructed Response	4	S-ID.C
34	Constructed Response	4	A-REI.D
35	Constructed Response	6	A-CED.A

The *Chart for Determining the Final Examination Score for the June 2026 Regents Examination in Algebra I* will be posted on the Department's website at: https://www.nysed.gov/state-assessment/high-school-regents-examinations no later than on the day of the examination. Conversion charts provided for previous administrations of the Regents Examination in Algebra I must NOT be used to determine students' final scores for this administration.

Online Submission of Teacher Evaluations of the Test to the Department

Suggestions and feedback from teachers provide an important contribution to the test development process. The Department provides an online evaluation form for State assessments. It contains spaces for teachers to respond to several specific questions and to make suggestions. Instructions for completing the evaluation form are as follows:

1. Go to https://www.nysed.gov/state-assessment/teacher-feedback-state-assessments.

2. Click Regents Examinations.

3. Complete the required demographic fields.

4. Select the test title from the Regents Examination dropdown list.

5. Complete each evaluation question and provide comments in the space provided.

6. Click the SUBMIT button at the bottom of the page to submit the completed form.

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

ALGEBRA I

Wednesday, June 17, 2026 — 9:15 a.m. to 12:15 p.m., only

MODEL RESPONSE SET

Table of Contents

Question 25

25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.

$(1-2x)(3-5x)$

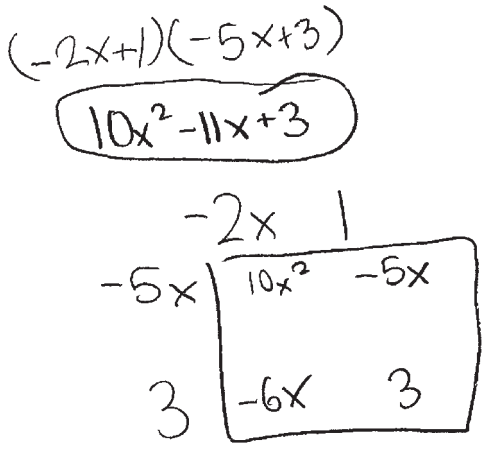
$3-5x-6x+10x^2$

$10x^2-11x+3$

Score 2: The student gave a complete and correct response.

Question 25

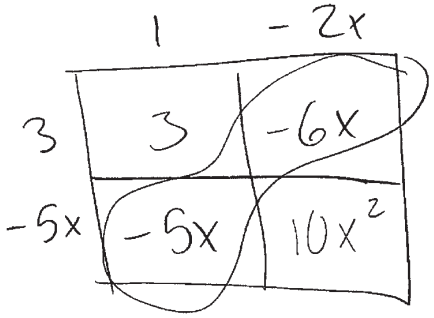
25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.



Score 2: The student gave a complete and correct response.

Question 25

25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.

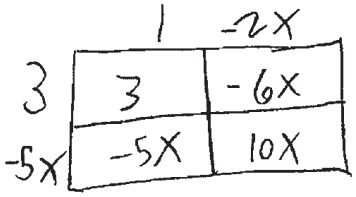


$3 - 11x + 10x^2$

Score 1: The student did not write the expression in standard form.

Question 25

25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.

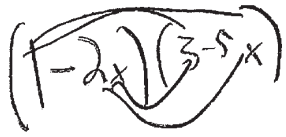


$-1x+3$

Score 1: The student made one computational error.

Question 25

25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.



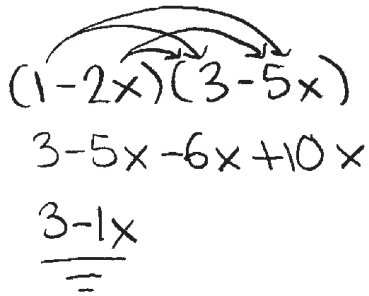
$3 - 5x + 6x - 10x^2$

$-10x^2 + x + 3$

Score 1: The student made one error by multiplying by $2x$ instead of $-2x$.

Question 25

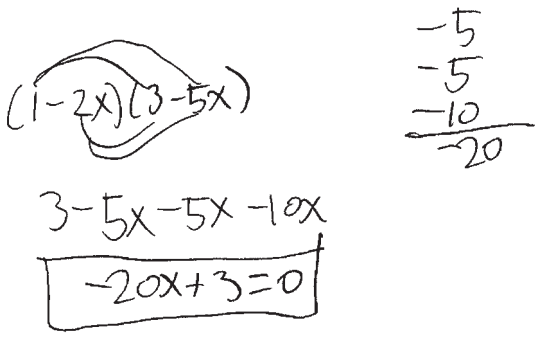
25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.



Score 0: The student made a computational error and did not express the polynomial in standard form.

Question 25

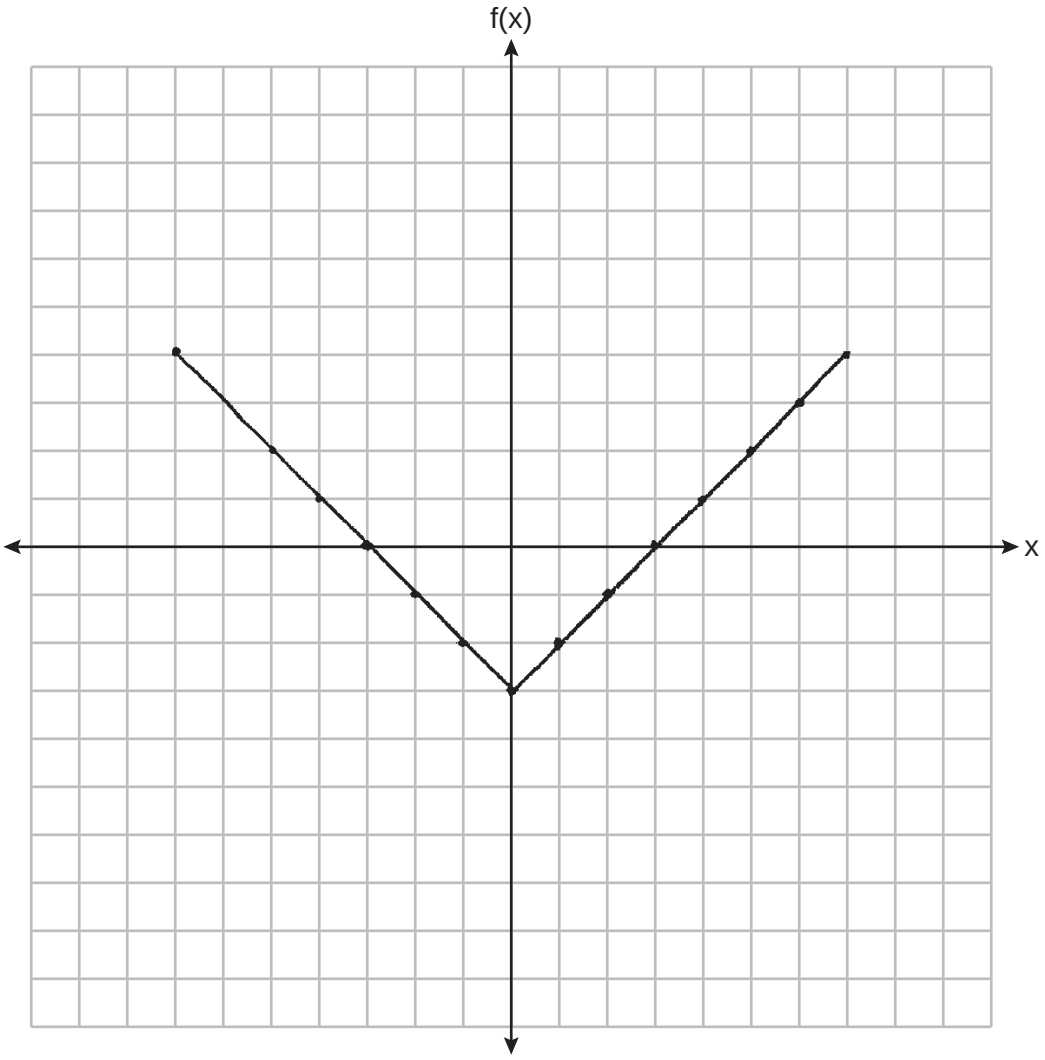
25 Express the product of $(1 - 2x)$ and $(3 - 5x)$ as a polynomial in standard form.



Score 0: The student did not show enough course-level work to receive any credit.

Question 26

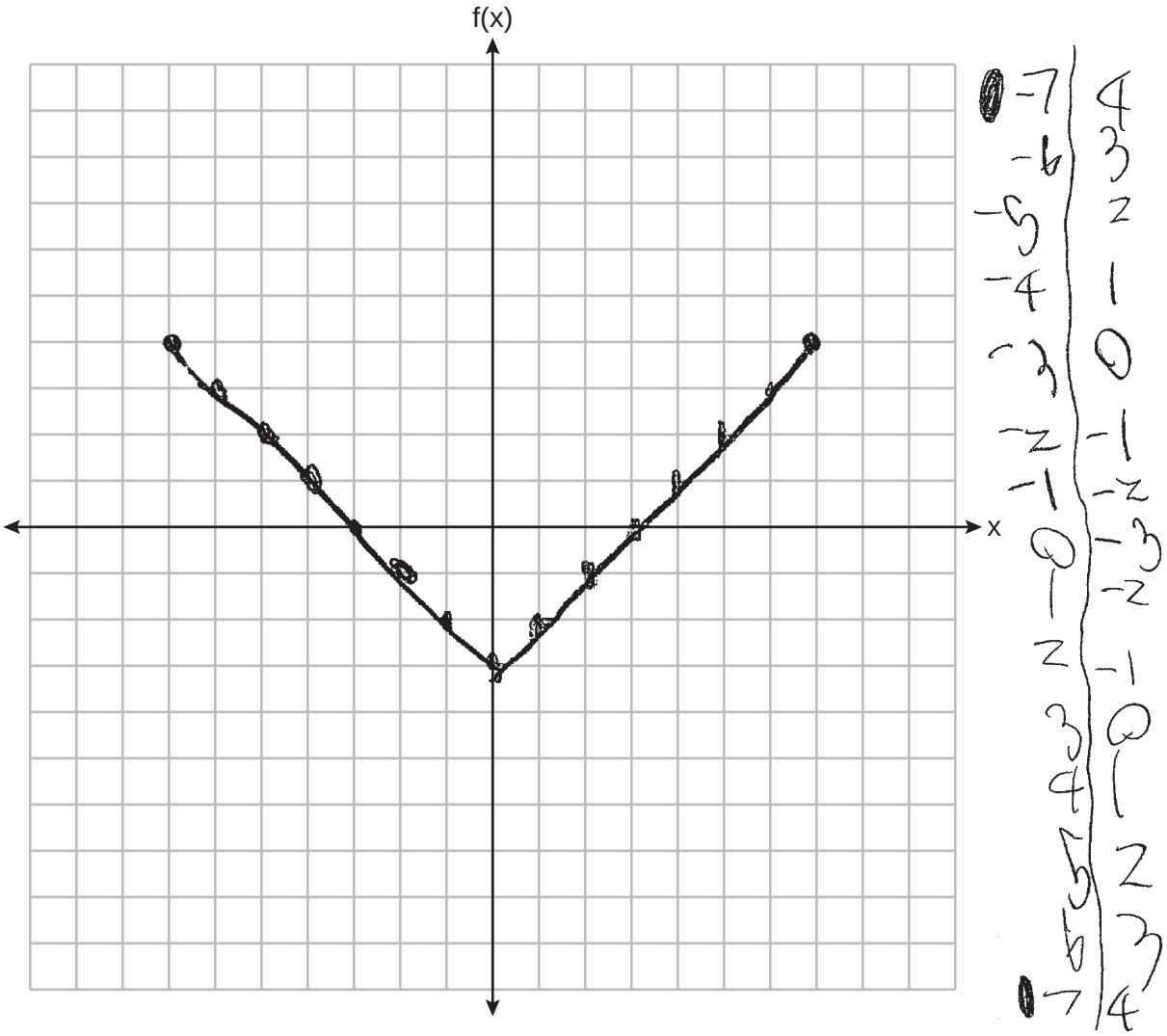
26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



Score 2: The student gave a complete and correct response.

Question 26

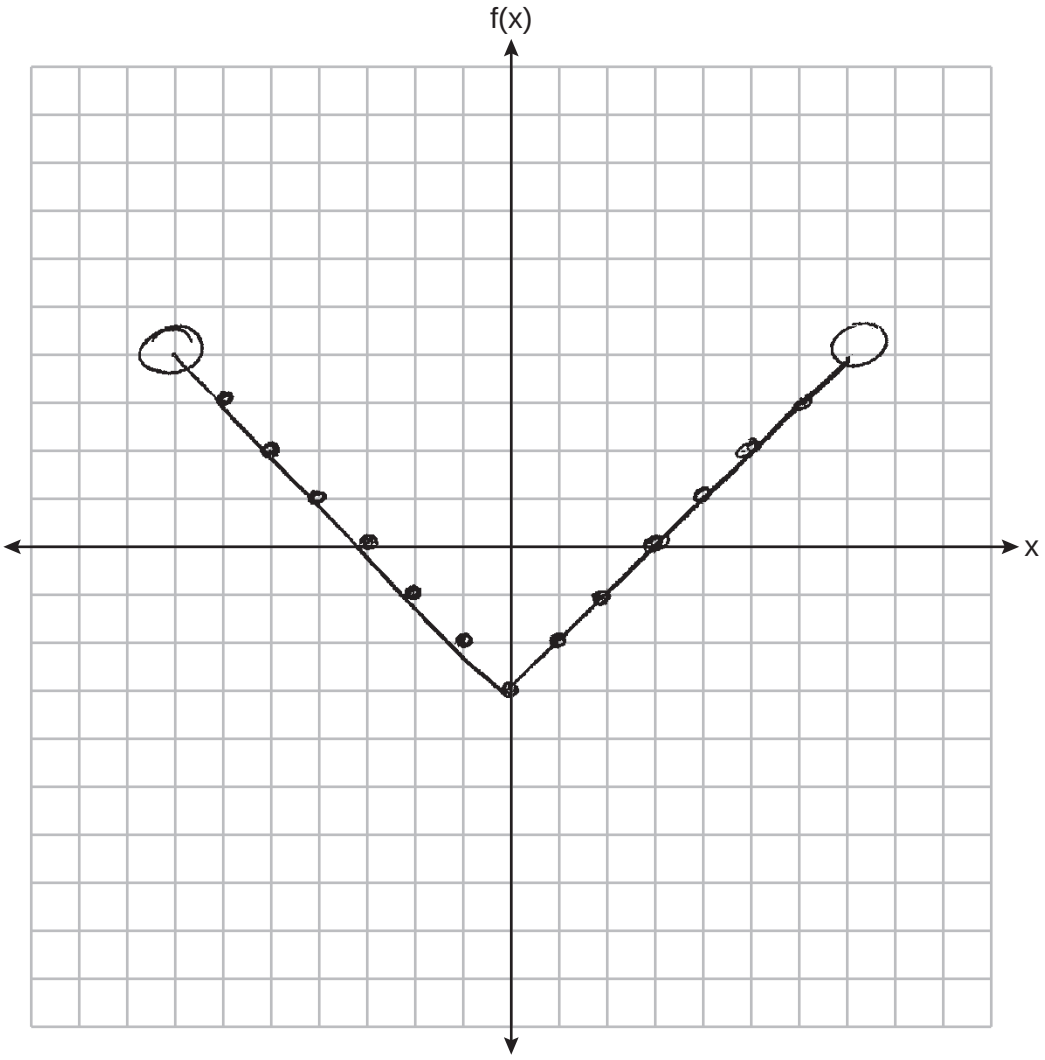
26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



Score 2: The student gave a complete and correct response.

Question 26

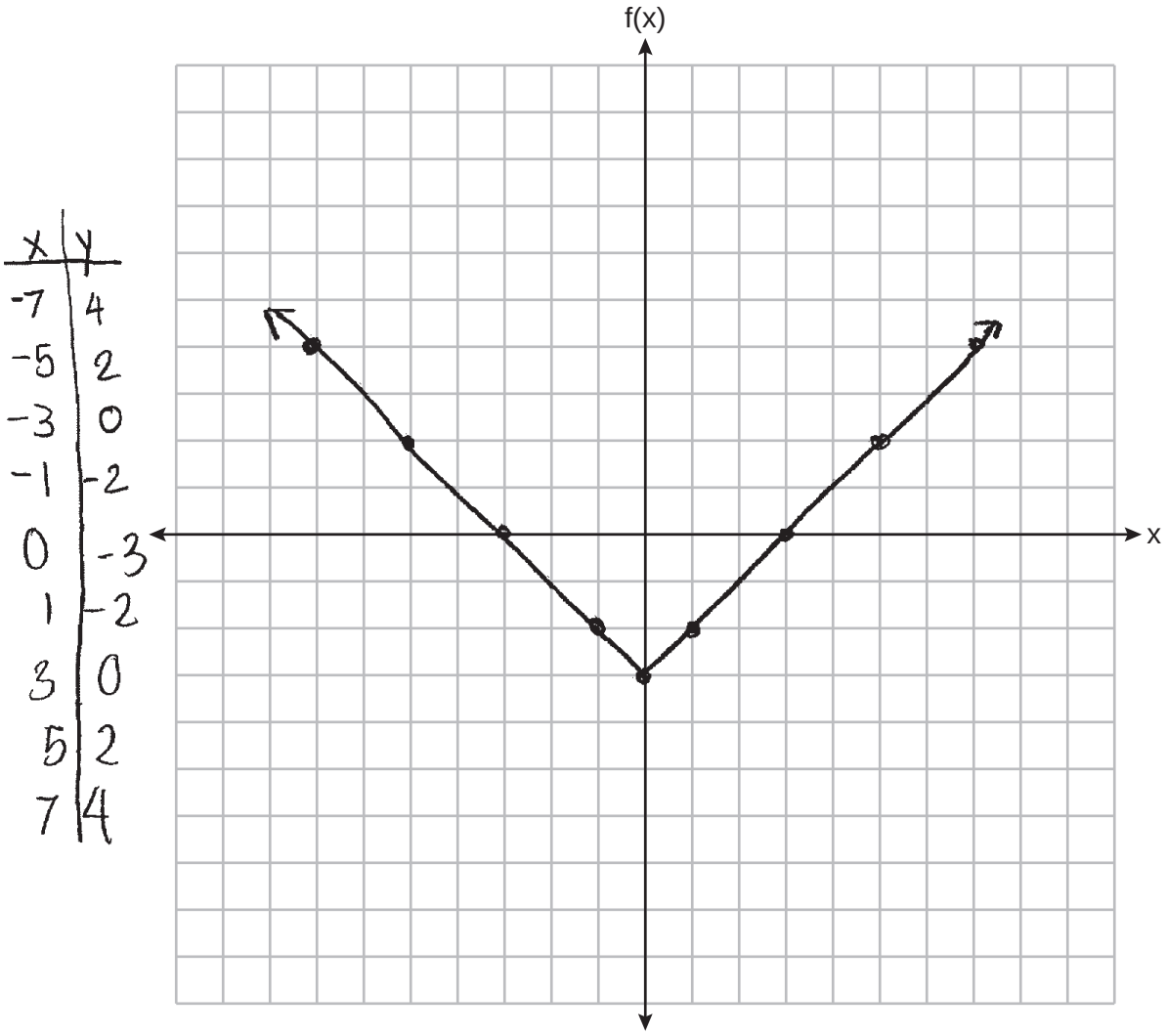
26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



Score 1: The student made an error by graphing open circles.

Question 26

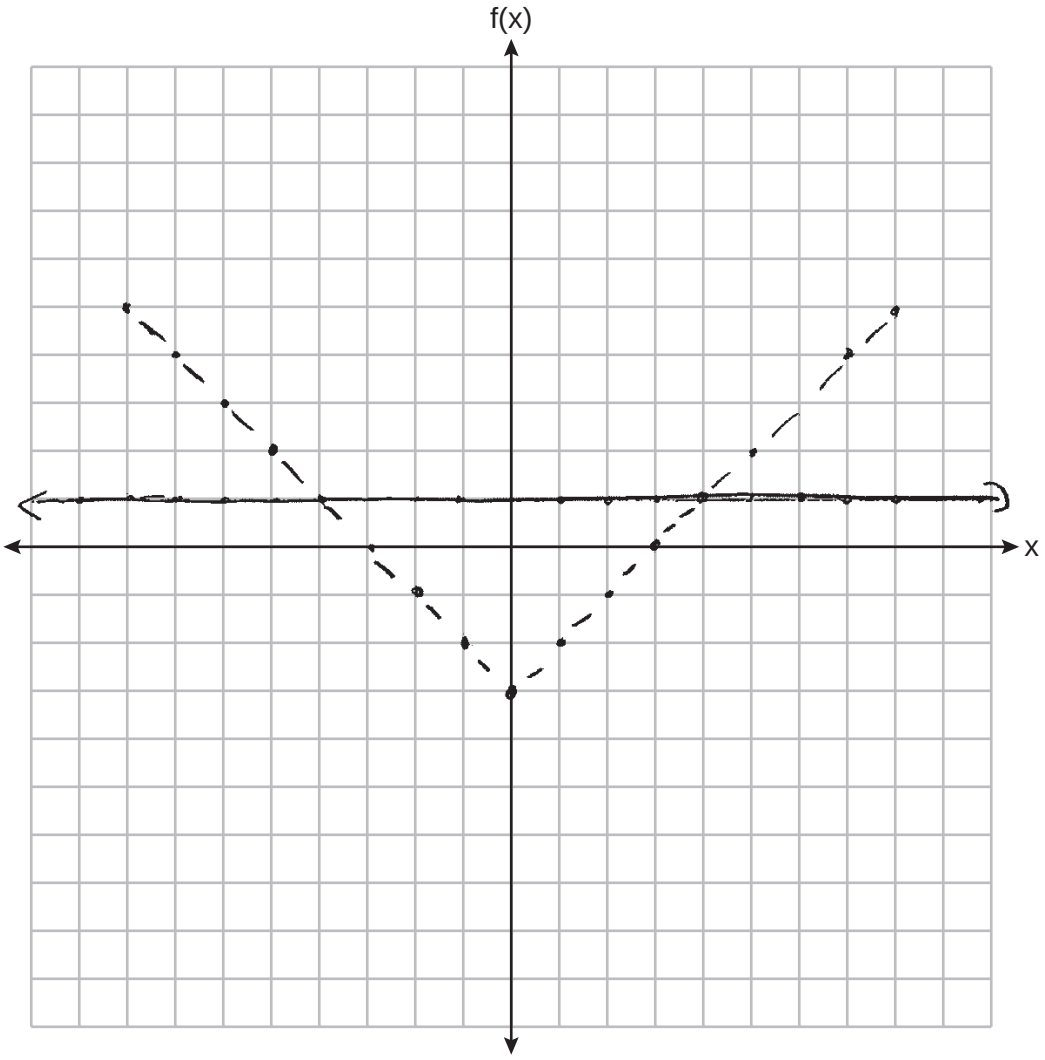
26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



Score 1: The student made an error by graphing beyond the given domain.

Question 26

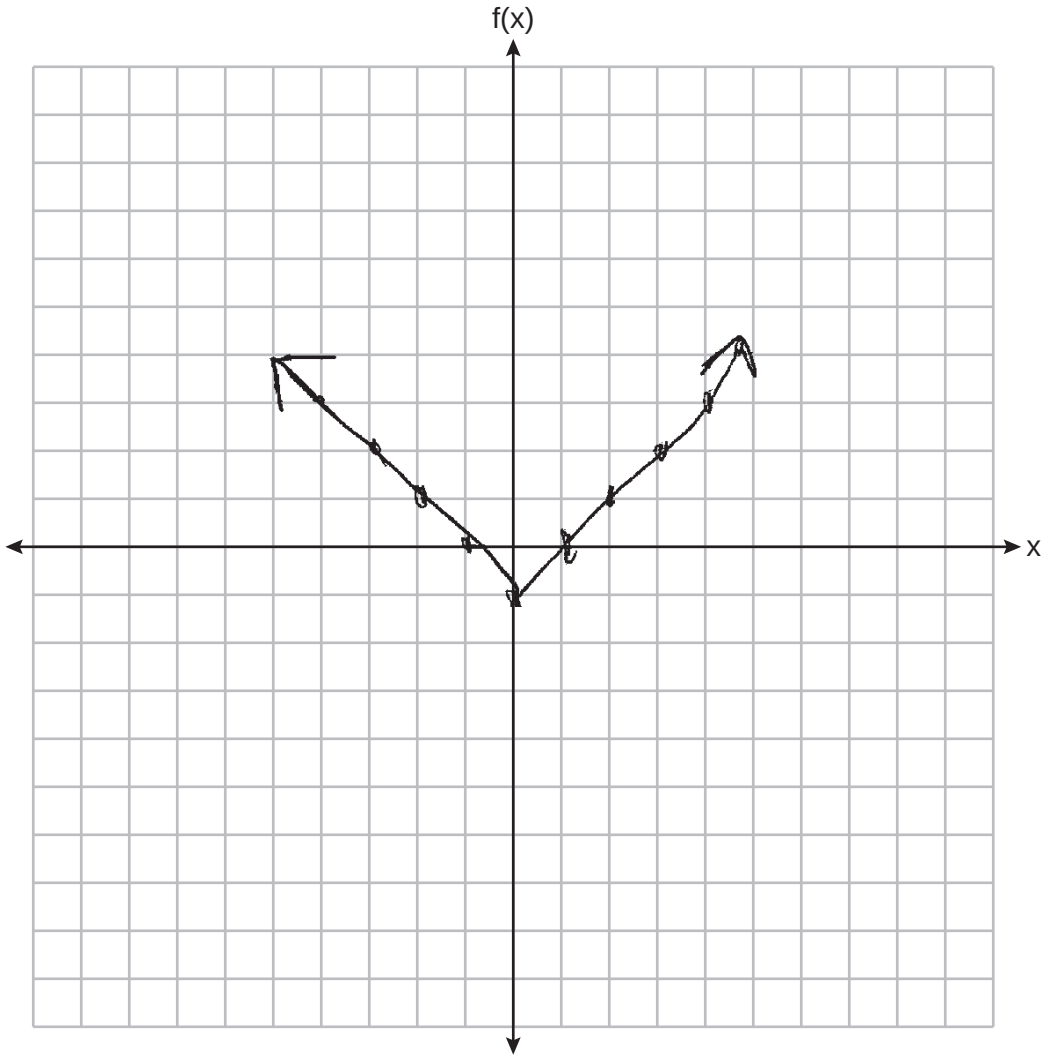
26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



Score 0: The student made multiple graphing errors.

Question 26

26 On the set of axes below, graph $f(x) = |x| - 3$ over the domain $-7 \leq x \leq 7$.



Score 0: The student made multiple graphing errors.

Question 27

27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

$-4x+1>9+6x+3+x$

$-4x+1>12+7x$

$-1 \quad -1$

$-4x>11+7x$

$-7x \quad -7x$

$\frac{-11x}{-11} > \frac{11}{-11}$

$x<-1$

Score 2: The student gave a complete and correct response.

Question 27

27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

$-4x+1 > 9+3(2x+1)+x$

$-4x+1 > 9+6x+3+x$

$-4x+1 > 7x+12$

$+4x \quad +4x$

$1 > 11x+12$

$-12 \quad -12$

$\frac{-11}{11} > \frac{11x}{11}$

$-1 > x$

Score 2: The student gave a complete and correct response.

Question 27

27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

$-4x+1 > 9+6x+3+x$

$-4x+1 > 12+7x$

$-11x > 11$

$x = -1$

Score 1: The student did not use an inequality sign in their answer.

Question 27

27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

$-4x+1>9+6x+3+x$

$-4x+1>12+7x$
$-7 \quad -1$

$-4x>11+7x$
$-7x \quad -7x$

$-11x>11$

$\frac{-11x>11}{-11 \quad -11}$

$X>-1$

Score 1: The student used an incorrect inequality sign.

Question 27

27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

$-4x + 1 > 9 + 6x + 3 + x$

$-4x + 1 > 7x + 12$

$-1 \quad\quad -1$

$-4x > 7x + 11$

$-7x \quad -7y$

$\frac{-11x}{-11} > \frac{11}{-11}$

$\boxed{x > 1}$

Score 0: The student made two errors.

Question 27

27 Solve the inequality algebraically:

$$-4x + 1 > 9 + 3(2x + 1) + x$$

$-4x+1>9+6x+3+x$

$-4x+1>12+7x$

Score 0: The student did not show enough course-level work to receive any credit.

Question 28

28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.

$$\frac{A}{b} = \frac{\frac{1}{2}bh}{b}$$

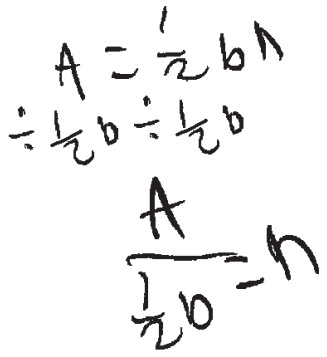
$$\frac{2}{1} \cdot \frac{A}{b} = \frac{1}{2} \cdot \frac{2}{1} h$$

$$\frac{2A}{b} = h$$

Score 2: The student gave a complete and correct response.

Question 28

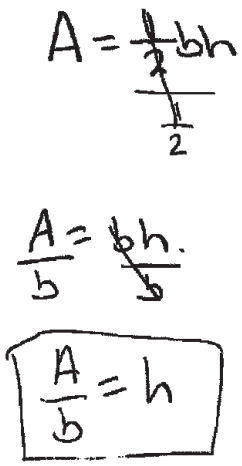
28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.



Score 2: The student gave a complete and correct response.

Question 28

28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.



Score 1: The student did not divide A by $\frac{1}{2}$.

Question 28

28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.

$\frac{1}{2}b \quad \frac{1}{2}b$

$2b(A) = h$

Score 1: The student only divided by $\frac{1}{2}$ correctly.

Question 28

28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.

$A = \frac{1}{2}bh$

$2A = hb$

$hb = 2A$

$b = \frac{2A}{h}, h \neq 0$

Score 1: The student divided by h instead of b.

Question 28

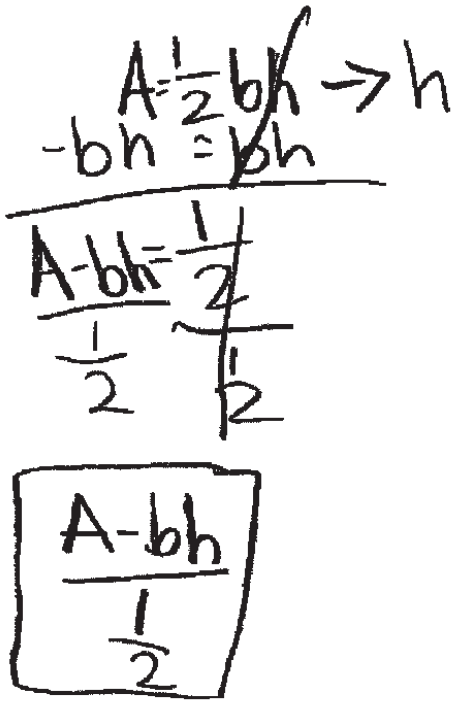
28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.

$h=2(A)(b)$

Score 0: The student did not show any work and gave an incorrect response.

Question 28

28 Solve the formula $A = \frac{1}{2}bh$ for h in terms of A and b.



Score 0: The student did not show enough course-level work to receive any credit.

Question 29

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

Year	Population
1970	1,539,233
1980	1,428,285
1990	1,487,536
2000	1,537,195
2010	1,585,873
2020	1,643,734

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

$$\frac{215449}{40} \approx 5386$$

Score 2: The student gave a complete and correct response.

Question 29

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

Year	Population
1970	1,539,233
1980	1,428,285
1990	1,487,536
2000	1,537,195
2010	1,585,873
2020	1,643,734

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

(1980, 1,428,285) - (2020, 1,643,734)
y_1 y_2

$$\frac{215449}{40} = 5386.2$$

Score 1: The student made one rounding error.

Question 29

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

	Year	Population
1	1970	1,539,233
2	1980	1,428,285
3	1990	1,487,536
4	2000	1,537,195
5	2010	1,585,873
6	2020	1,643,734

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

$$m = \frac{1,643,734 - 1,428,285}{6-2} = \frac{215,449}{4}$$

$$m \approx 53,862$$

Score 1: The student appropriately used an incorrect denominator.

Question 29

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

Year	Population
1970	1,539,233
1980	1,428,285
1990	1,487,536
2000	1,537,195
2010	1,585,873
2020	1,643,734

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

$$\frac{1{,}643{,}734 - 1{,}539{,}233}{50} = \frac{104501}{50}$$

2090.02

2090 average rate of change per year

Score 1: The student found the correct rate of change for the wrong interval.

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

Year	Population
1970	1,539,233
1980	1,428,285
1990	1,487,536
2000	1,537,195
2010	1,585,873
2020	1,643,734

rate of change = rise / run

>110,948
>-59,251
>-49659
>-48678
>-57,861

9221856

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

The average rate between the years is 1,536,976.

$\frac{\text{add population}}{6} = \frac{9221856}{6} = 1,536,976$

Score 0: The student did not show enough course-level work to receive any credit.

Question 29

29 The table below shows the population of Manhattan for the years indicated, according to the U.S. Census Bureau.

Year	Population
~~1970~~	~~1,539,233~~
1980	1,428,285
1990	1,487,536
2000	1,537,195
2010	1,585,873
2020	1,643,734

1,682,623
5
1,536,525

Determine the average rate of change of the population per year between the years 1980 and 2020, rounded to the *nearest integer*.

+ 1,536,525

Score 0: The student did not show enough course-level work to receive any credit.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

$\frac{5}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{5\sqrt{3}}{3}$

Score 2: The student gave a complete and correct response.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

$$\frac{5 \cdot \sqrt{3}}{3}$$

Score 1: The student wrote a correct answer, but no work is shown.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

Score 1: The student made a computational error.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

Score 1: The student made a conceptual error by squaring the numerator and denominator.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

Score 1: The student made a computational error.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

$\frac{5 \cdot 3}{\sqrt{3} \cdot 5}$ $\frac{15}{\sqrt{15}}$

Score 0: The student did not show enough course-level work to receive any credit.

Question 30

30 Rewrite $\frac{5}{\sqrt{3}}$ as a fraction with a rational denominator.

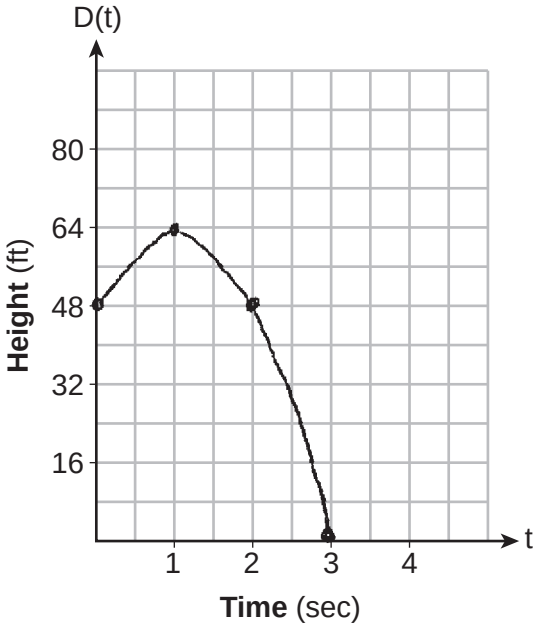
$\frac{5}{\sqrt{3}} \approx 2.886\ldots$

Score 0: The student did not show enough course-level work to receive any credit.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



D(t)

x	y
-2	-80
-1	0
0	48
1	64
2	48
3	0
4	-80

State the maximum number of feet above the ground that the ball will reach.

64ft

State the number of seconds after the toss it will take the ball to hit the ground.

3 seconds

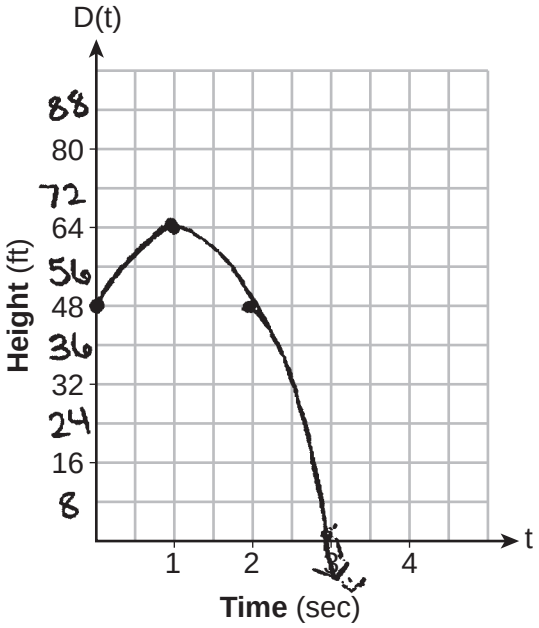
Score 4: The student gave a complete and correct response.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.

X	Y
0	48
1	64
2	48
3	0



State the maximum number of feet above the ground that the ball will reach.

64 feet

State the number of seconds after the toss it will take the ball to hit the ground.

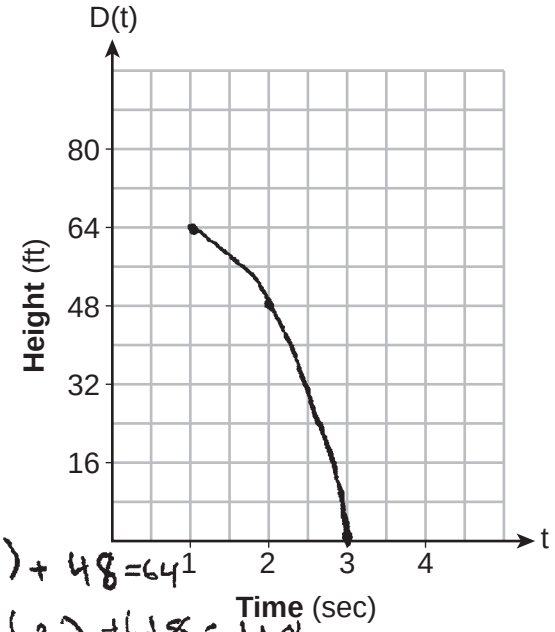
3 seconds

Score 3: The student misinterpreted the context by extending the graph beyond the axis.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



$-16(1)^2 + 32(1) + 48 = 64$

$-16(2)^2 + 32(2) + 48 = 48$

$-16(3)^2 + 32(3) + 48 = 0$

State the maximum number of feet above the ground that the ball will reach.

64 feet

State the number of seconds after the toss it will take the ball to hit the ground.

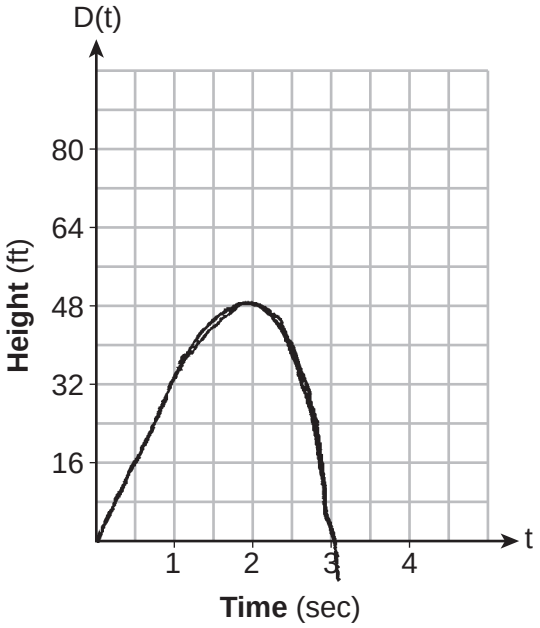
3 seconds.

Score 3: The student did not graph from 0 to 3 seconds.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

The maximum number of feet above the ground that the ball will reach is 48 ft

State the number of seconds after the toss it will take the ball to hit the ground.

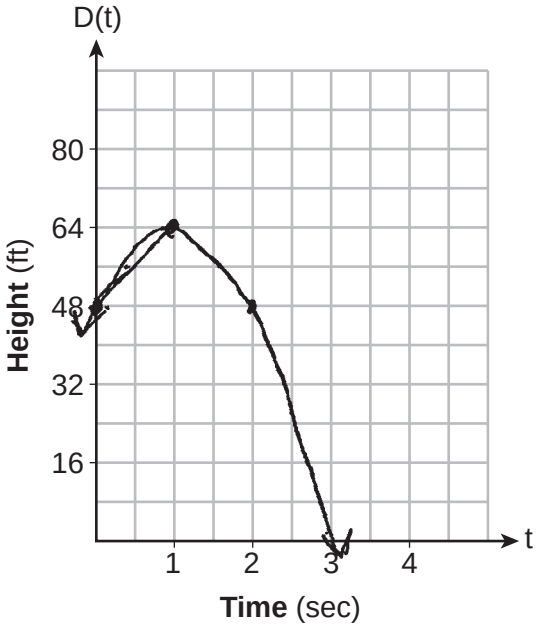
It will take the ball 3 seconds to hit the ground.

Score 2: The student gave two appropriate answers based on an incorrect graph.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

max = 64ft

State the number of seconds after the toss it will take the ball to hit the ground.

$0 = -16t^2 + 32t + 48$

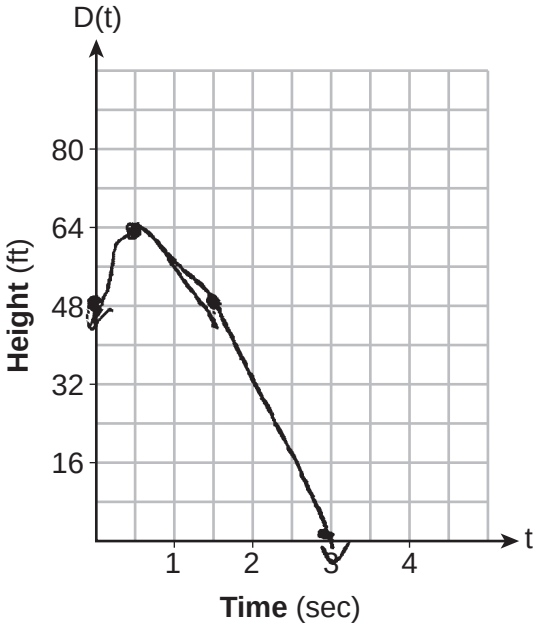
$-48 = -16t^2 + 32t$

Score 2: The student misinterpreted the context by extending the graph beyond the axes and did not state the number of seconds it will take the ball to hit the ground.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

64 ft above the ground

State the number of seconds after the toss it will take the ball to hit the ground.

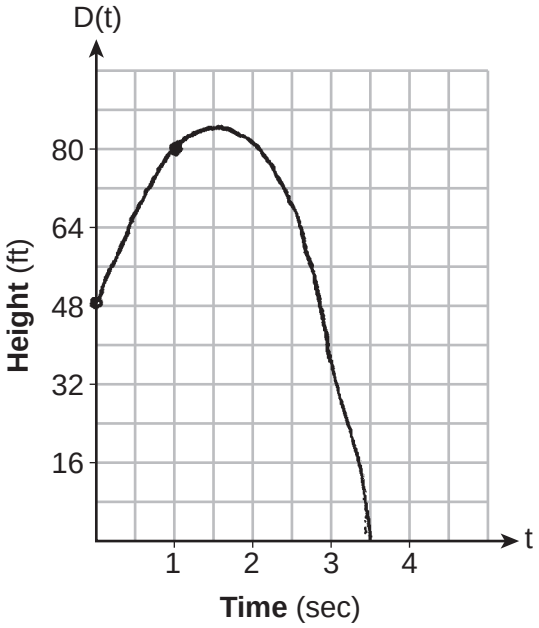
3 Seconds

Score 2: The student stated 64 and 3.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

it will reach a max of 80 feet

State the number of seconds after the toss it will take the ball to hit the ground.

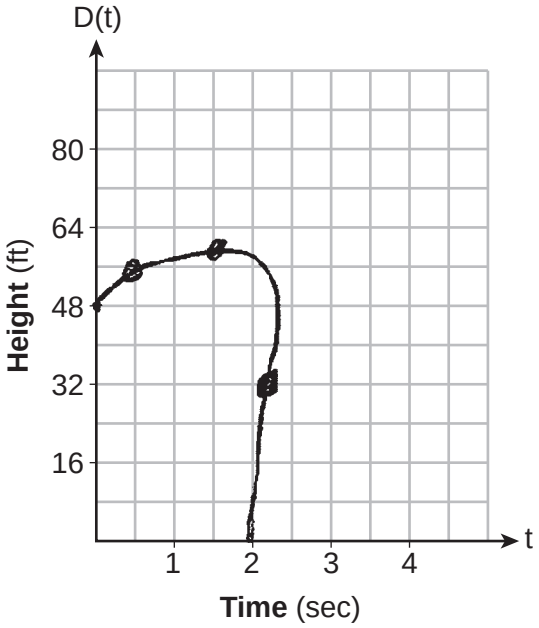
it will take 3.5 seconds for it to reach the ground

Score 1: The student stated 3.5 based on an incorrect graph.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

64 is the maximum number

State the number of seconds after the toss it will take the ball to hit the ground.

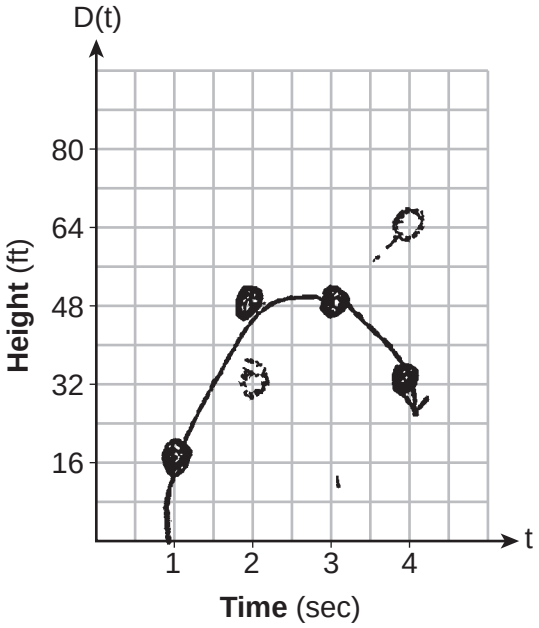
It took 1 second because

Score 1: The student stated 64.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.



State the maximum number of feet above the ground that the ball will reach.

it will hit it 32 Feet

State the number of seconds after the toss it will take the ball to hit the ground.

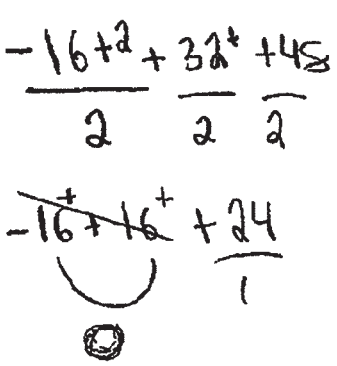
4 seconds

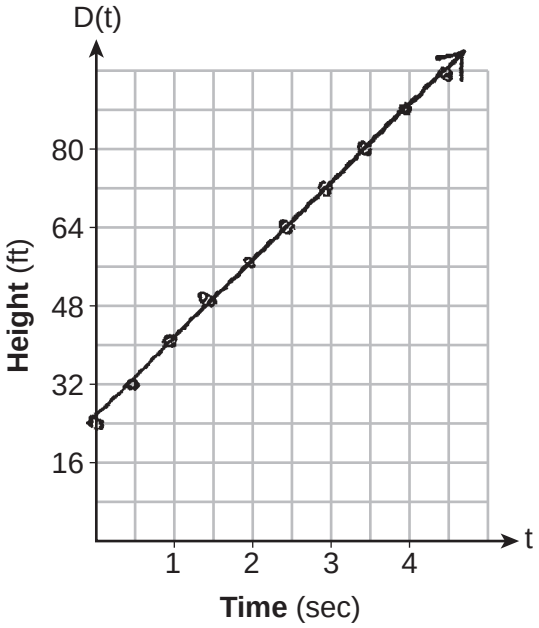
Score 0: The student did not show enough course-level work to receive any credit.

Question 31

31 A ball is tossed up into the air from the deck of a building. The distance that the ball is above the ground t seconds after it is tossed can be modeled by the function $D(t) = -16t^2 + 32t + 48$, where the distance is measured in feet.

On the set of axes below, graph $D(t) = -16t^2 + 32t + 48$.





State the maximum number of feet above the ground that the ball will reach.

80 feet

State the number of seconds after the toss it will take the ball to hit the ground.

4 Seconds

Score 0: The student did not show enough course-level work to receive any credit.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$

$x^2 - 5x + 3 = -2x + 3$
$+2x - 3 \quad +2x - 3$

$x^2 - 3x = 0$

$(x - 3)(x + 0)$

$x - 3 = 0 \mid x + 0 = 0$
$+3 \quad +3 \mid x = 0$
$x = 3$

$y = -2x + 3$
$y = -2(3) + 3$
$y = -6 + 3$
$y = -3$

$(3, -3)$

$y = -2x + 3$
$y = -2(0) + 3$
$y = 3$

$(0, 3)$

$y = x^2 - 5x + 3$
$-3 = 3^2 - 5(3) + 3$
$-3 = 9 - 15 + 3$
$-3 = -6 + 3$
$-3 = -3$ ✓

$y = x^2 - 5x + 3$
$3 = 0^2 - 5(0) + 3$
$3 = 3$ ✓

Score 4: The student gave a complete and correct response.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$

$-2x+3 = x^2-5x+3$
$+2x \quad -3 \quad +2x \quad -3$

$x^2 - 3x = 0$
$\sqrt{(x-1.5)^2} = \sqrt{2.25}$
$x = 1.5 \pm 1.5$
$\{0, 3\}$

$y = -2(0)+3$
$y = 3$
$y = -2(3)+3$
$y = -6+3$
$y = -3$

$(0,3)$
$(3,-3)$

Score 4: The student gave a complete and correct response.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$y = -2x + 3$
$y = x^2 - 5x + 3$

$a=1 \quad b=-3$
$c=0$

$-2x + 3 = x^2 - 5x + 3$
$+3 \qquad\qquad -3$

$-2x = x^2 - 5x$
$+2x \qquad +2x$

$0 = x^2 - 3x$

$x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4(1)(0)}}{2(1)}$

$x = \frac{3 \pm \sqrt{9}}{2}$

$x = \frac{3+3}{2} \qquad x = \frac{3-3}{2}$

$x = 3 \qquad x = 0$

Score 3: The student did not solve for the y-values.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$

$x^2 - 5x + 3 = -2x + 3$
$-3 + 2x \quad +2x - 3$
$x^2 - 3x = 0$

$x = 3$

$y = -2(3) + 3$
$-6 + 3$
$y = -3$

Score 3: The student only wrote one correct solution.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$

$-2x + 3 = x^2 - 5x + 3$
$+2x - 3 \qquad +2x - 3$
$0 = x^2 - 3x + 0$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

$x = \frac{-(-3) \pm \sqrt{(-3)^2 - 4(1)(0)}}{2(1)}$

$x = \frac{3 \pm \sqrt{9}}{2}$

$x = 1$
$y = -3$
$c = 0$

Score 2: The student made a correct substitution into the quadratic formula.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$

$-2x+3=x^2-5x+3$
$-3 \quad\quad -3$
$-2x = x^2-5x$
$+5x \quad\quad +5x$
$\frac{3x}{x} = \frac{x^2}{x}$
$3 = x$

$Y = -2(3)+3$
$Y = -3$

$3^2-5(3)+3=-3$

$x=3$
$y=-3$

Score 2: The student used an incorrect method to find only one solution.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$y = -2x + 3$

$-1(y = x^2 - 5x + 3)$

$y = -2x + 3$

$-y = -x^2 + 5x - 3$

$0 = -x^2 + 3x$

$\sqrt{-1}\quad\sqrt{-1}$

$\sqrt{0} = \sqrt{x^2 + 3x}$

$0 = x + 3x$

$0 = x + 3x$

$0 = 4x$

$/4\quad/4$

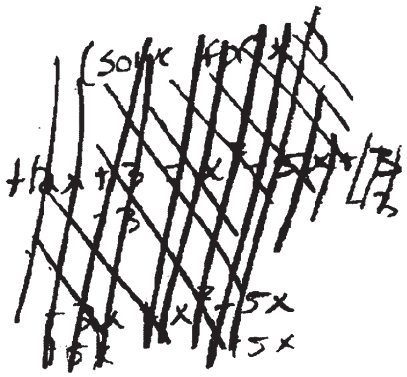
$0 = x$

Score 1: The student wrote a correct quadratic equation set equal to zero.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$$y = -2x + 3$$
$$y = x^2 - 5x + 3$$



$-2x+3 = x^2-5x+3$
$+5x \qquad\qquad +5x$

$3x+3 = x^2+3$
$\quad -3 \quad\; -3$

$3x = x^2$

$\sqrt{x^2} = \sqrt{3x}$

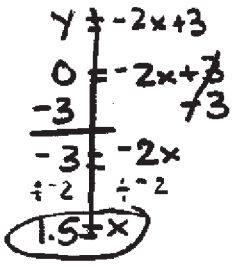
$x =$

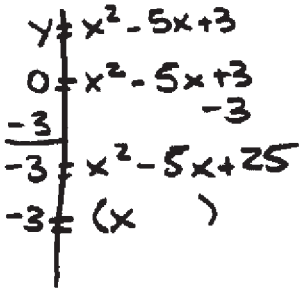
Score 0: The student did not show enough correct work to receive any credit.

Question 32

32 Solve the following system of equations algebraically for all values of x and y.

$y = -2x + 3$ (linear Equation)
$y = x^2 - 5x + 3$ (quadratic equation)





B = -5
B² = 25

Score 0: The student did not show enough correct work to receive any credit.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = ax + b$
$a = 4.6125$
$b = 11.93333333$

$y = 4.61x + 11.93$

State the correlation coefficient for this data set, to the *nearest hundredth*.

$r = 0.98$

State what the correlation coefficient indicates about the linear fit of the data.

The correlation coefficient indicates that the linear fit of data is almost perfect

Score 4: The student gave a complete and correct response.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = 4.61x + 11.93$

State the correlation coefficient for this data set, to the *nearest hundredth*.

$r = .98$

State what the correlation coefficient indicates about the linear fit of the data.

The relationship will be strong because the value of r is close to 1

Score 4: The student gave a complete and correct response.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = 4.6125x + 11.9333$

$y = 4.6x + 11.9$

State the correlation coefficient for this data set, to the *nearest hundredth*.

$r = 0.975544$

$r = 0.98$

State what the correlation coefficient indicates about the linear fit of the data.

There is a strong correlation coefficient between number of years of Experience and Salary in Thousands of Dollars.

Score 3: The student made one rounding error.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = 11.93 + 4.61x$

State the correlation coefficient for this data set, to the *nearest hundredth*.

$r^2 = 0.95$

State what the correlation coefficient indicates about the linear fit of the data.

The correlation coefficient indicates a strong linear fit of the data.

Score 3: The student wrote an incorrect correlation coefficient.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = 4.61x + 11.93$

State the correlation coefficient for this data set, to the *nearest hundredth*.

0.97

State what the correlation coefficient indicates about the linear fit of the data.

This correlation coefficient indicates that the salary is more linear than not.

Score 2: The student wrote a correct equation.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = mx + b$

$y = 4.6x + 11.93$

$m = 4.6125$

$b = 11.9333$

State the correlation coefficient for this data set, to the *nearest hundredth*.

$r = 0.975544$

$r = .96$

State what the correlation coefficient indicates about the linear fit of the data.

The correlation between Number of years and Salary in thousands of dollars is a strong positive.

Score 2: The student made two different rounding errors.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$y = 4.6x + 11.9$

State the correlation coefficient for this data set, to the *nearest hundredth*.

5.7

State what the correlation coefficient indicates about the linear fit of the data.

its positive but weak.

Score 1: The student wrote an appropriate equation with one rounding error.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

0.98=4.61+11.93

State the correlation coefficient for this data set, to the *nearest hundredth*.

r=0.98

State what the correlation coefficient indicates about the linear fit of the data.

it's weak or strong and it's negative or positive

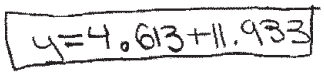
Score 1: The student wrote the correct correlation coefficient.

Question 33

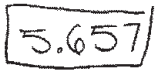
33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.



State the correlation coefficient for this data set, to the *nearest hundredth*.



State what the correlation coefficient indicates about the linear fit of the data.

Score 0: The student made multiple errors.

Question 33

33 The table below shows the number of years of experience, x, working as a salesperson and their corresponding salaries, y, in thousands of dollars.

Number of Years of Experience (x)	Salary in Thousands of Dollars (y)
2	15
3	28
5	42
9	54
13	64
16	90

State the linear regression equation for these data. Round all values to the *nearest hundredth*.

$\frac{\Delta y}{\Delta x}$ $\frac{y_2 - y_1}{x_2 - x_1}$ $\frac{64,000 - 54,000}{9-5}$ $\frac{10,000}{4}$ = $2,500

$y = mx + b$

State the correlation coefficient for this data set, to the *nearest hundredth*.

Correlation Coefficient: 5

$\frac{\sum x}{5} = \frac{42,000}{5}$

$\bar{x}$ = $8,400

State what the correlation coefficient indicates about the linear fit of the data.

The correlation coefficient indicates the money that was earned those 5 years.

Score 0: The student did not show enough course-level work to receive any credit.

Question 34

34 Graph the system of inequalities on the set of axes below.

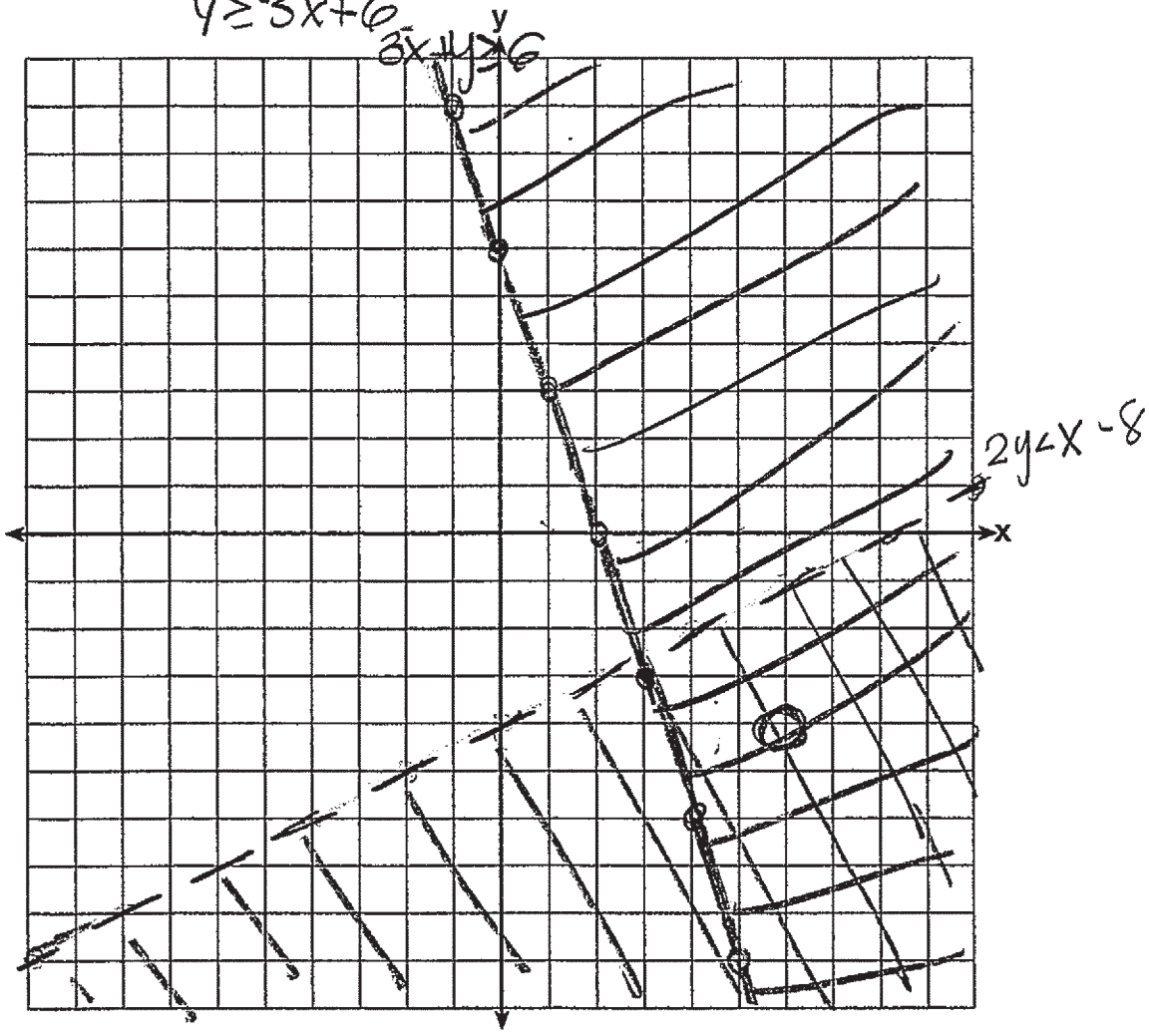
$\frac{2y}{2} < \frac{x}{2} - \frac{8}{2}$

$3x + y \geq 6$

$-3x \quad -3x$

$y \geq -3x + 6$

$3x + y \geq 6$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

(6, -4), it's in the part that is shaded twice.

Score 4: The student gave a complete and correct response.

Question 34

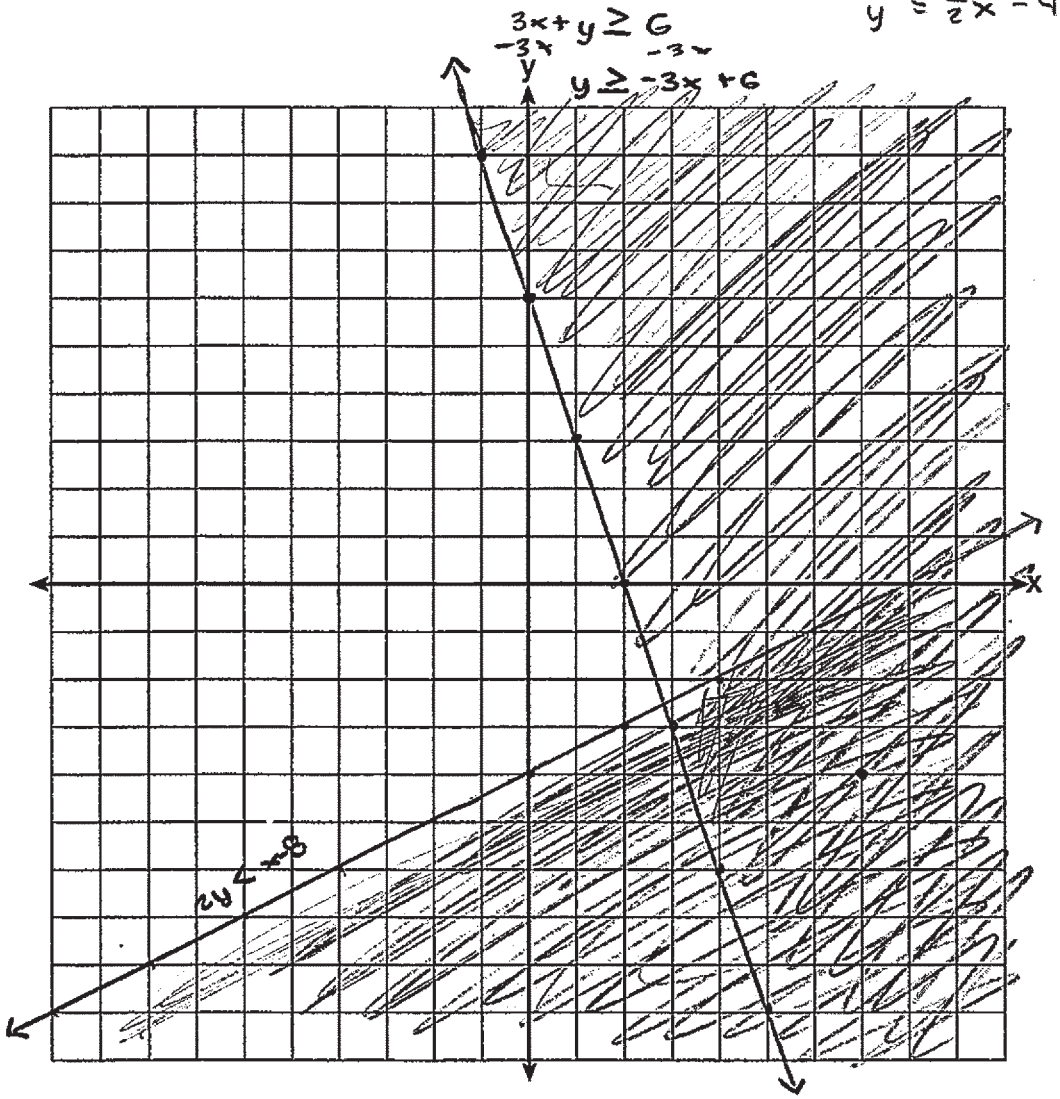
34 Graph the system of inequalities on the set of axes below.

$2y < x - 8$

$3x + y \geq 6$

$\frac{2y}{2} < \frac{x-8}{2}$

$y = \frac{1}{2}x - 4$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

The point (7,-4) satisfies both inequalities because the point lies in the shaded area that both inequalities share.

Score 3: The student made an error, in graphing $2y < x - 8$.

Question 34

34 Graph the system of inequalities on the set of axes below.

$3x + y \geq 6$

$-3x \quad -3x$

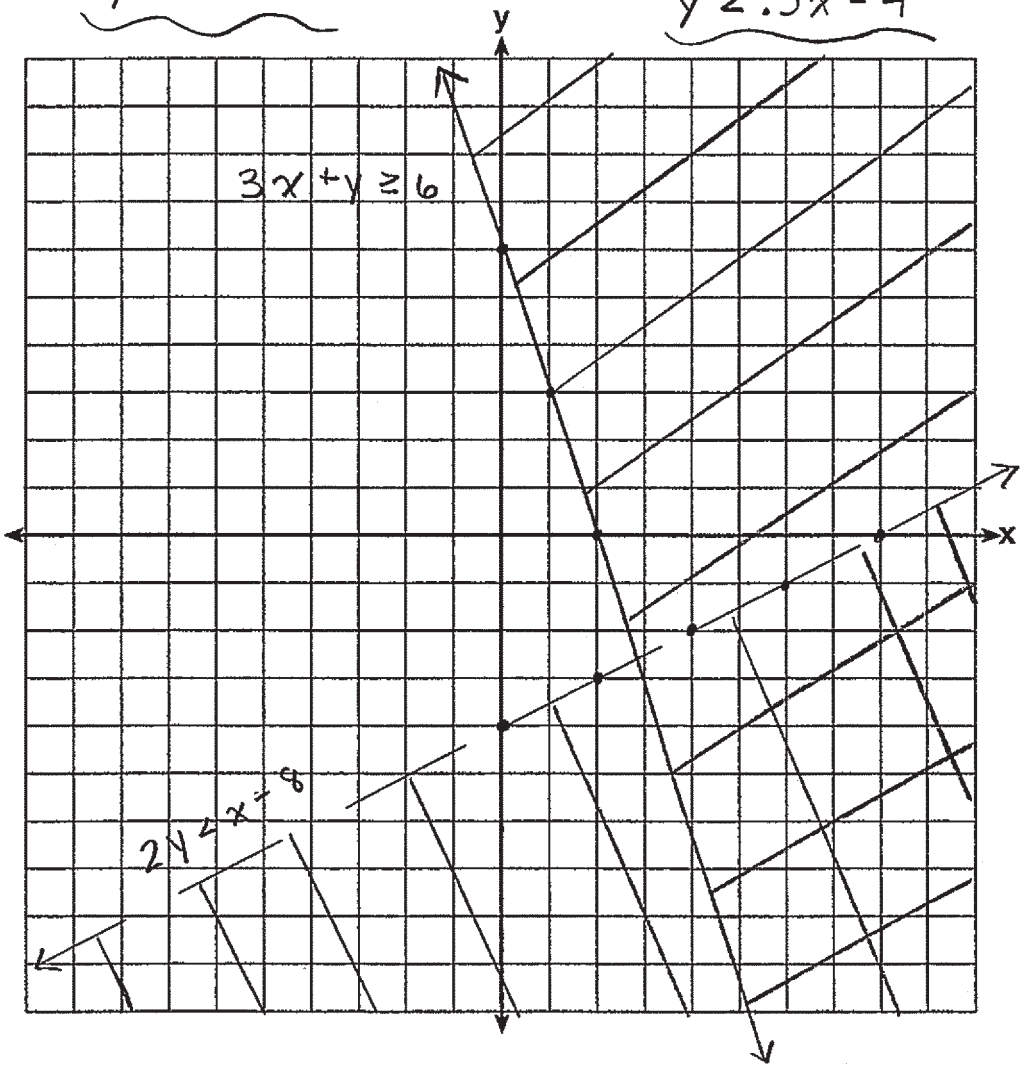
$y \geq -3x + 6$

$2y < x - 8$

$3x + y \geq 6$

$\frac{2y}{2} < \frac{x - 8}{2}$

$y < .5x - 4$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

(6, -3)

Score 3: The student did not give a justification.

Question 34

34 Graph the system of inequalities on the set of axes below.

$2y < x - 8$

$3x + y \geq 6$

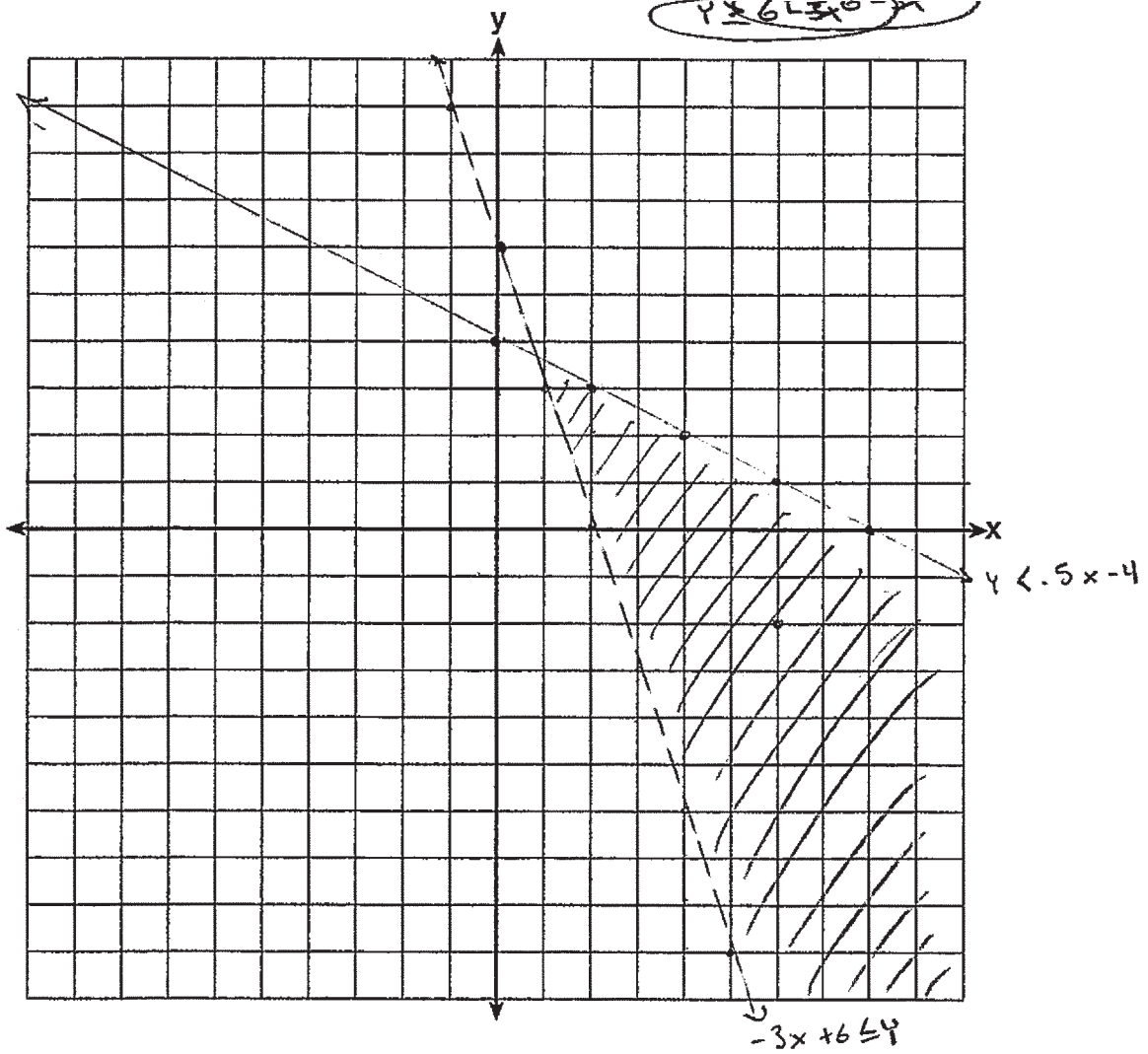
$\frac{2y}{2} < \frac{x-8}{2}$

$y < .5x - 4$

$3x + y \geq 6$

$-3x \quad -3x$

$y \geq 6 - 3x$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

(6, -2)

JUSTIFY

$-3(6) + 6 \leq -2$

$-18 + 6 \leq -2$

$-12 \leq -2$ ✓

$-2 < .5(6) - 4$

$-2 < 3 - 4$

$-2 < -1$ ✓

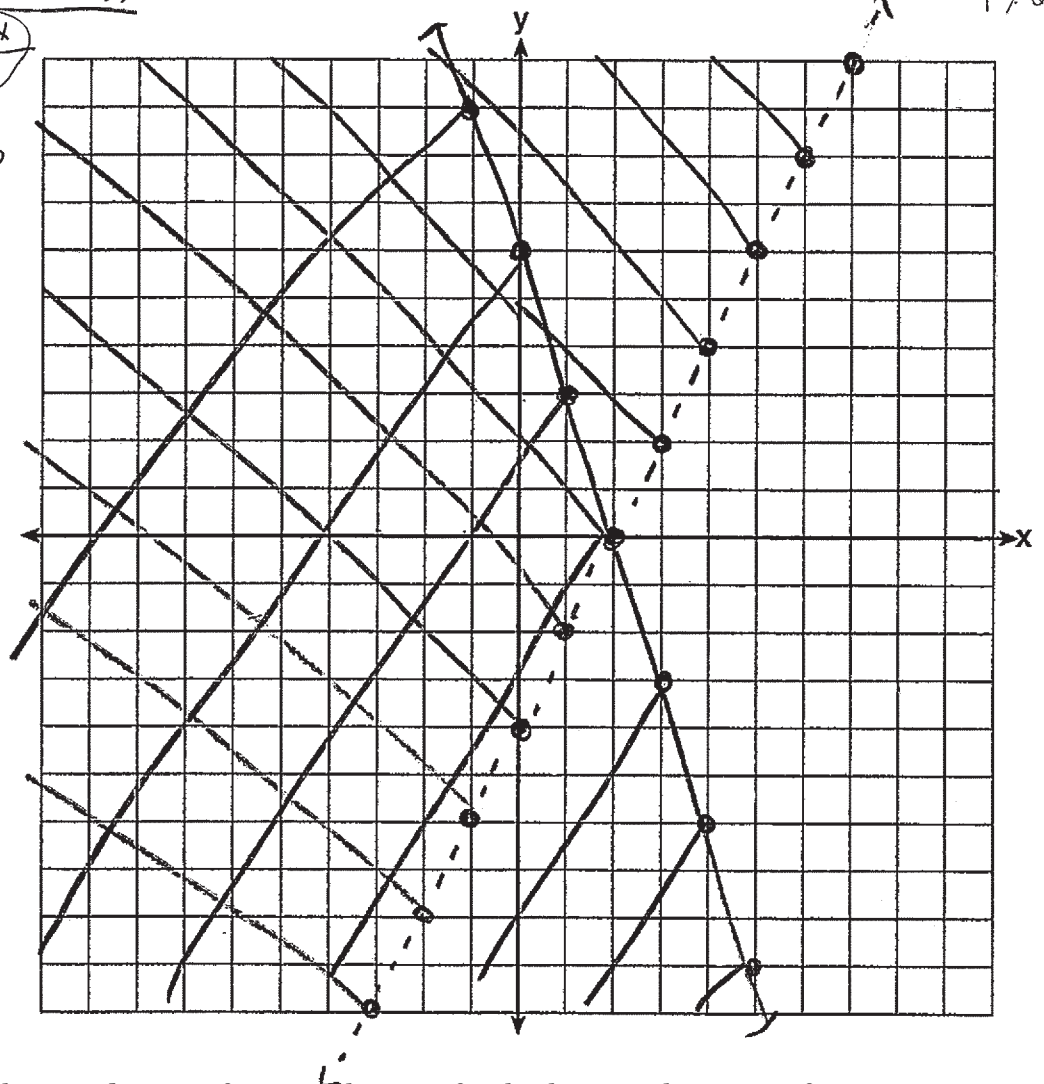
Score 2: The student stated a correct point and gave a correct justification.

Question 34

34 Graph the system of inequalities on the set of axes below.

$2y < x - 8$

$3x + y \geq 6$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

The coordinate (-4, 1) satisfies both inequalities because if you were to plot that point on the graph it would be in the double shaded area.

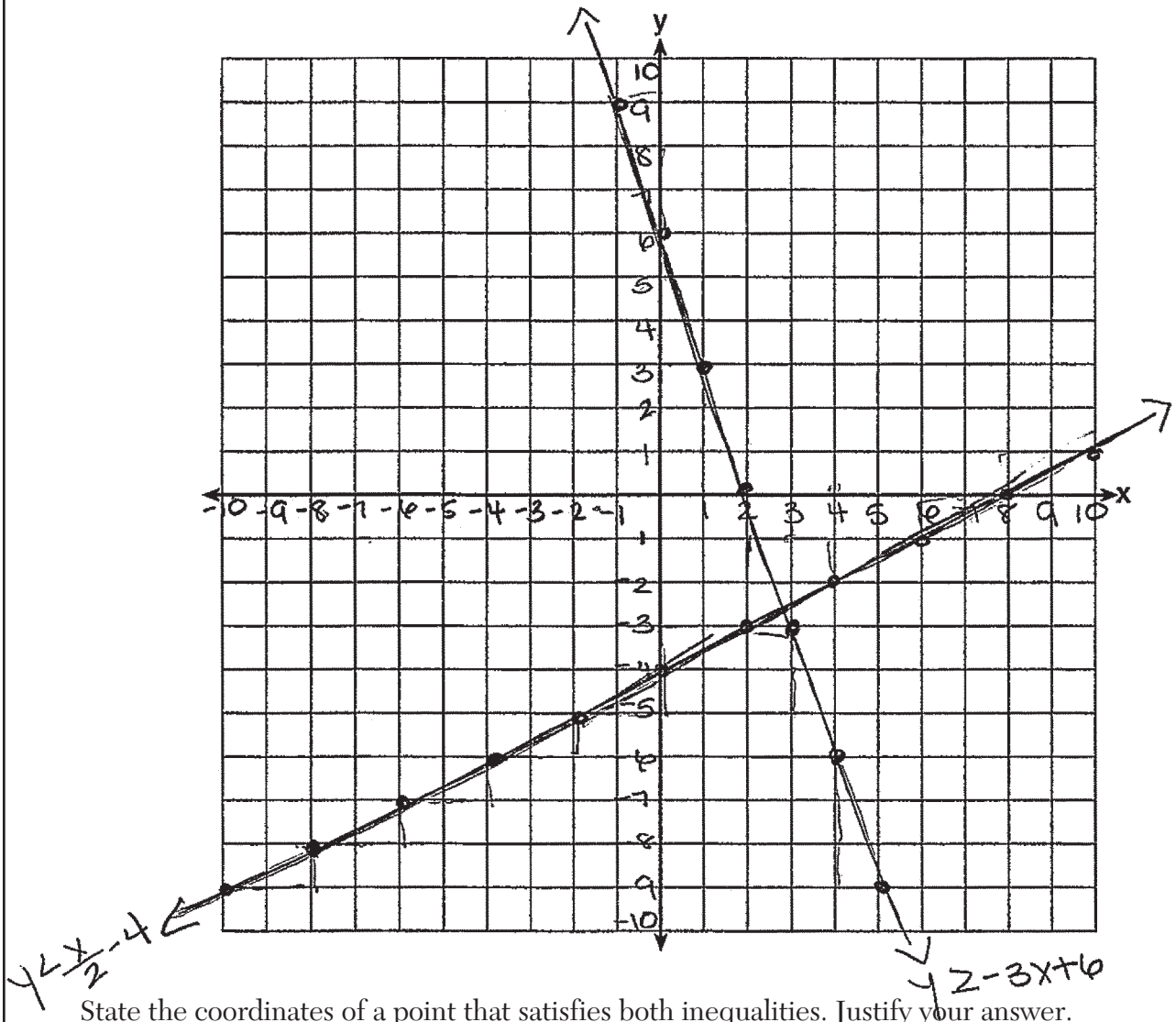
Score 2: The student stated an appropriate point and gave a correct explanation based on an incorrect graph.

Question 34

34 Graph the system of inequalities on the set of axes below.

$2y < x - 8$

$3x + y \geq 6$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

$\frac{2y}{2} < \frac{x}{2} - \frac{8}{2}$

$y < \frac{x}{2} - 4$

m: $\frac{1 \text{ up}}{2 \text{ right}}$

b: -4

$3x + y \geq 6$

$-3x \quad -3x$

$y \geq -3x + 6$

m: $\frac{-3 \text{ down}}{1 \text{ right}}$

b: 6

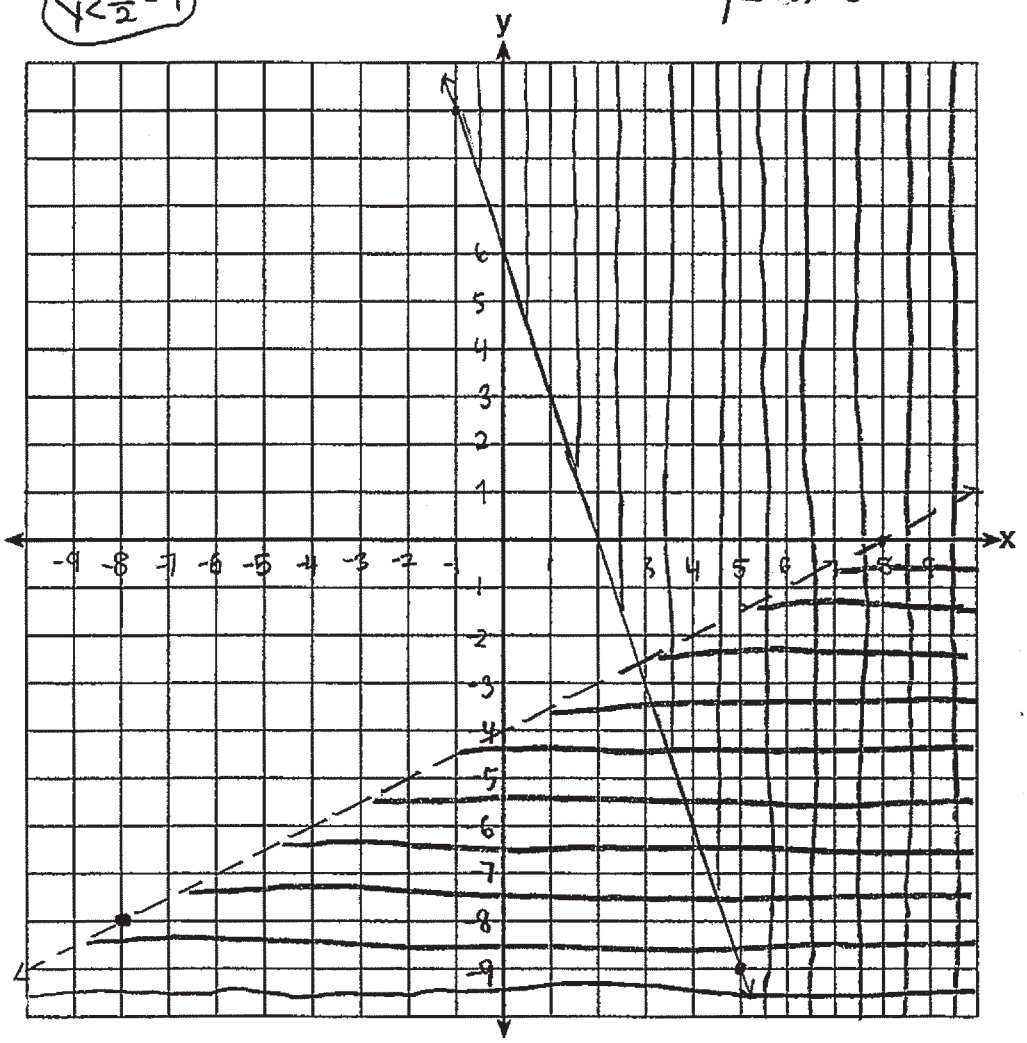
Score 1: The student graphed $2y = x - 8$ and $3x + y = 6$ correctly.

Question 34

34 Graph the system of inequalities on the set of axes below.

$2y < x - 8$

$3x + y \geq 6$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

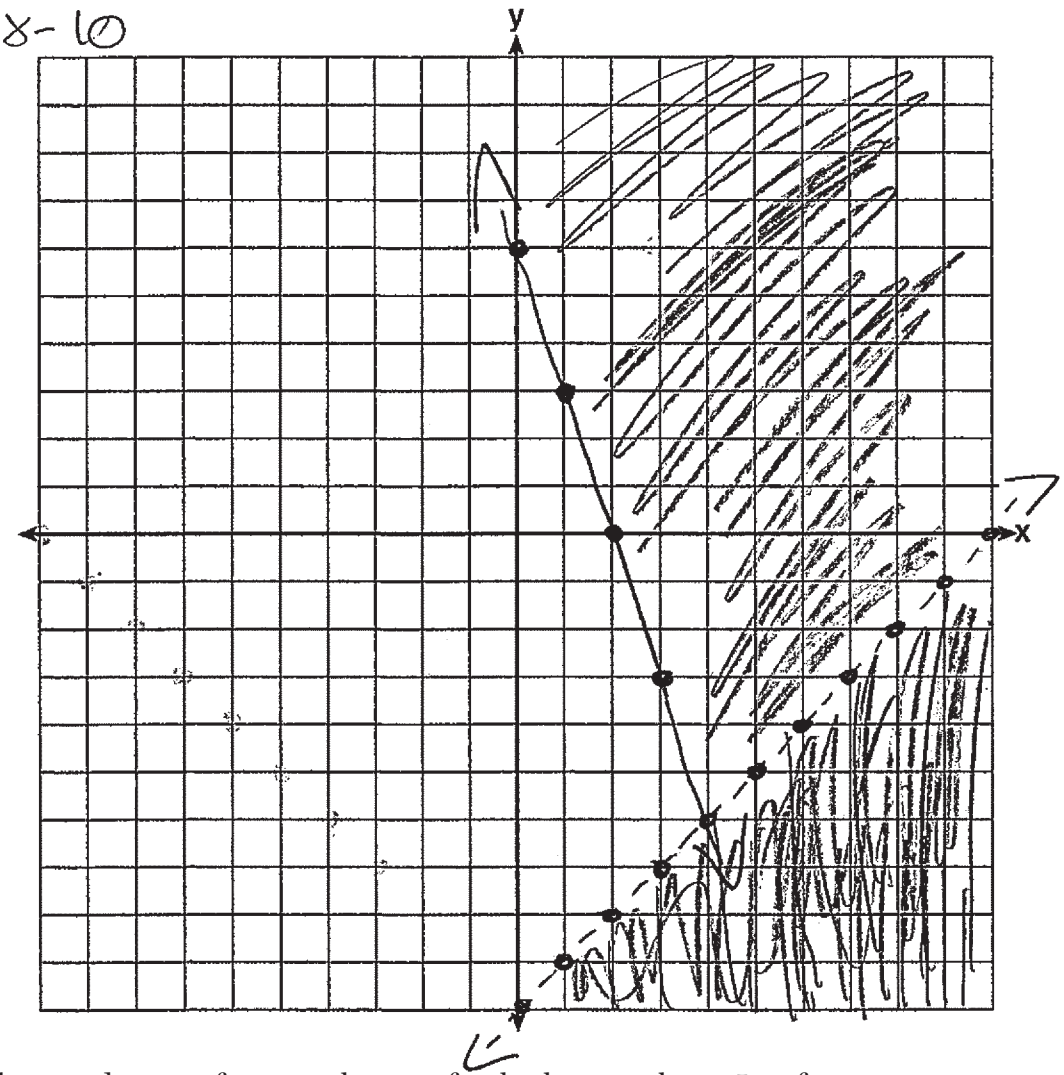
Score 1: The student made one labeling error and the point and justification are missing.

Question 34

34 Graph the system of inequalities on the set of axes below.

$2y < x - 8$

$3x + y \geq 6$



State the coordinates of a point that satisfies both inequalities. Justify your answer.

Score 0: The student did not show enough correct work to receive any credit.

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x + 2y = 52$ $\quad$ $2x + y = 30$

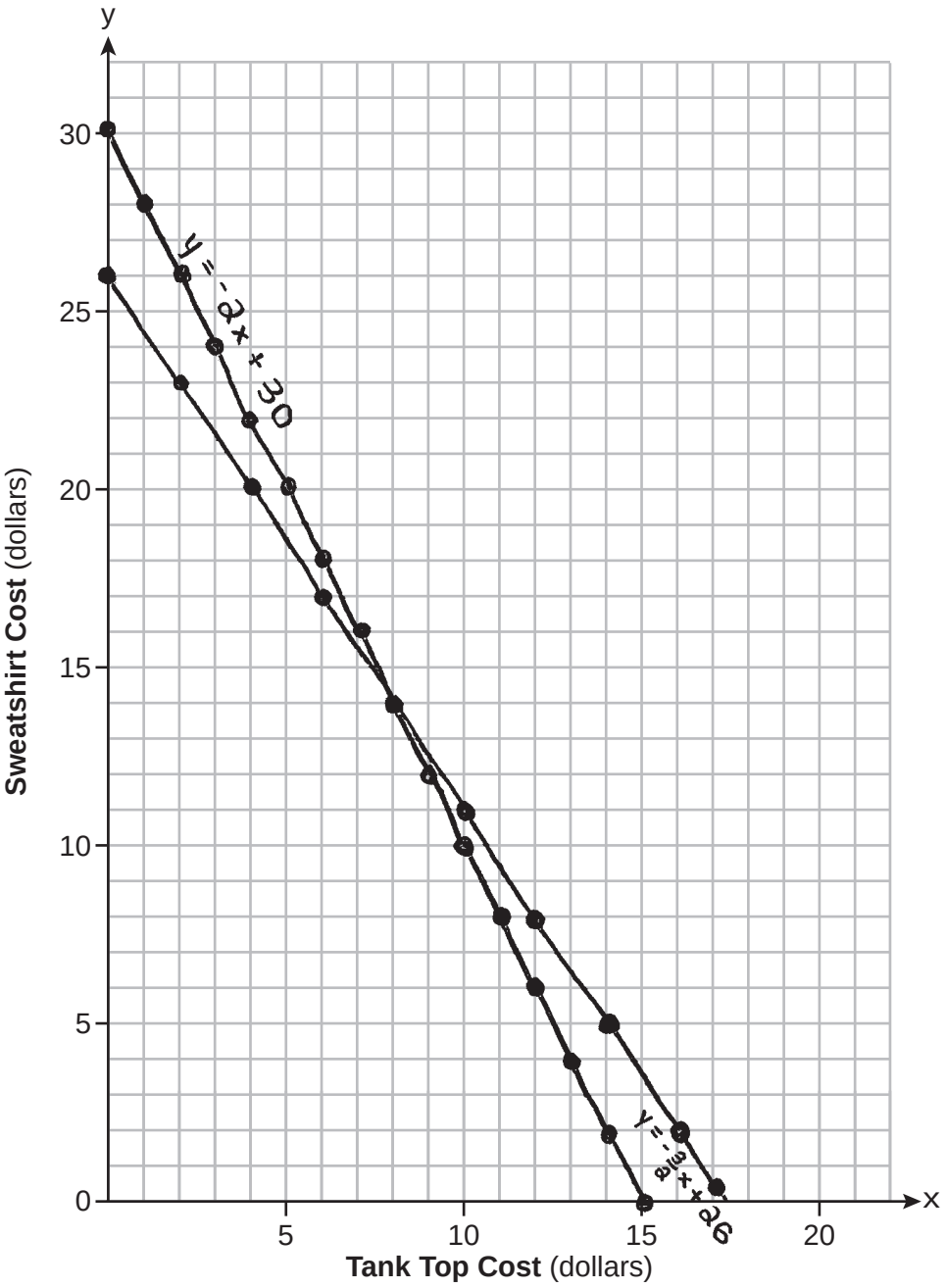
$y = -\frac{3}{2}x + 26$ $\quad$ $y = -2x + 30$

Question 35 is continued on the next page.

Score 6: The student gave a complete and correct response.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(8, 14)

Explain what each coordinate of the point of intersection means in the context of the problem.

the x-coordinate means the cost of the one tank top. and the y-coordinate means the cost of the one sweatshirt.

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x + 2y = 52$
$2x + y = 30$

$2x + y = 30$
$-2x \quad -2x$
$y = -2x + 30$
$3x + 2(-2x + 30) = 52$
$3x - 4x + 60 = 52$
$-x + 60 = 52$
$-60 \quad -60$
$\frac{-x}{-1} = \frac{-8}{-1}$
$x = 8$

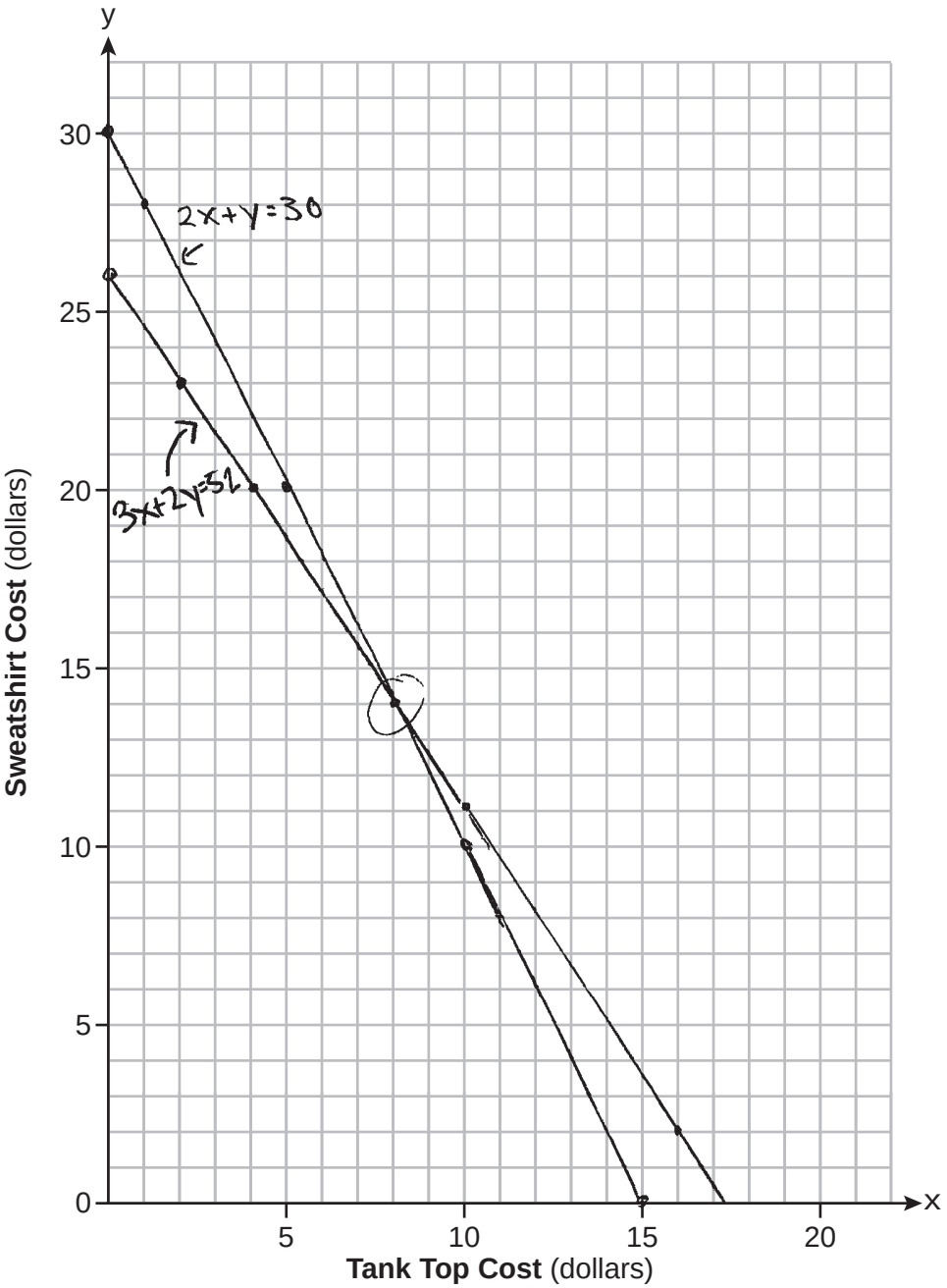
$3x + 2y = 52$
$-3x \quad -3x$
$\frac{2y}{2} = \frac{-3x + 52}{2}$
$y = -\frac{3}{2}x + 26$

Question 35 is continued on the next page.

Score 6: The student gave a complete and correct response.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(8, 14)

Explain what each coordinate of the point of intersection means in the context of the problem.

In the context of the problem, the point of intersection is (8,14), this means that one tank top costs $8 and one sweatshirt costs $14.

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x + 2y = 52$ $\quad$ $2x + 1y = 30$

$\frac{2y = -3x + 52}{2}$ $\quad$ $1y = -2x + 30$

$y = -\frac{3}{2}x + 26$ $\quad$ $y = -2x + 30$

$3x + 2y = 52$

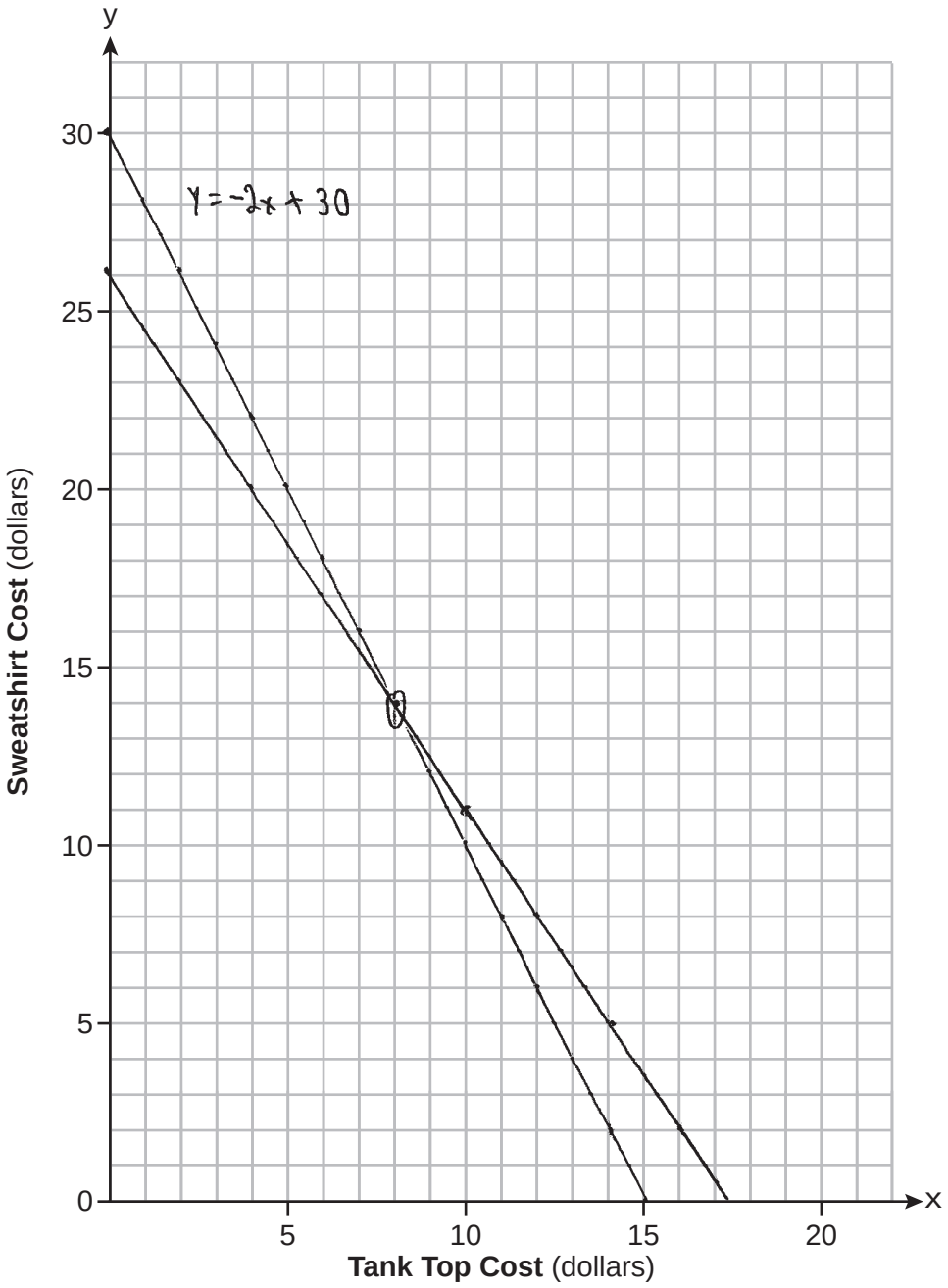
$2x + 1y = 30$

Question 35 is continued on the next page.

Score 5: The student wrote an incorrect explanation.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(8, 14)

Explain what each coordinate of the point of intersection means in the context of the problem.

The coordinate means when the amount of tank tops and sweatshirts equal the same amount

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x+2y=52$

$2x+y=30$

$y=-2x+30$

$2y=-3x+52$

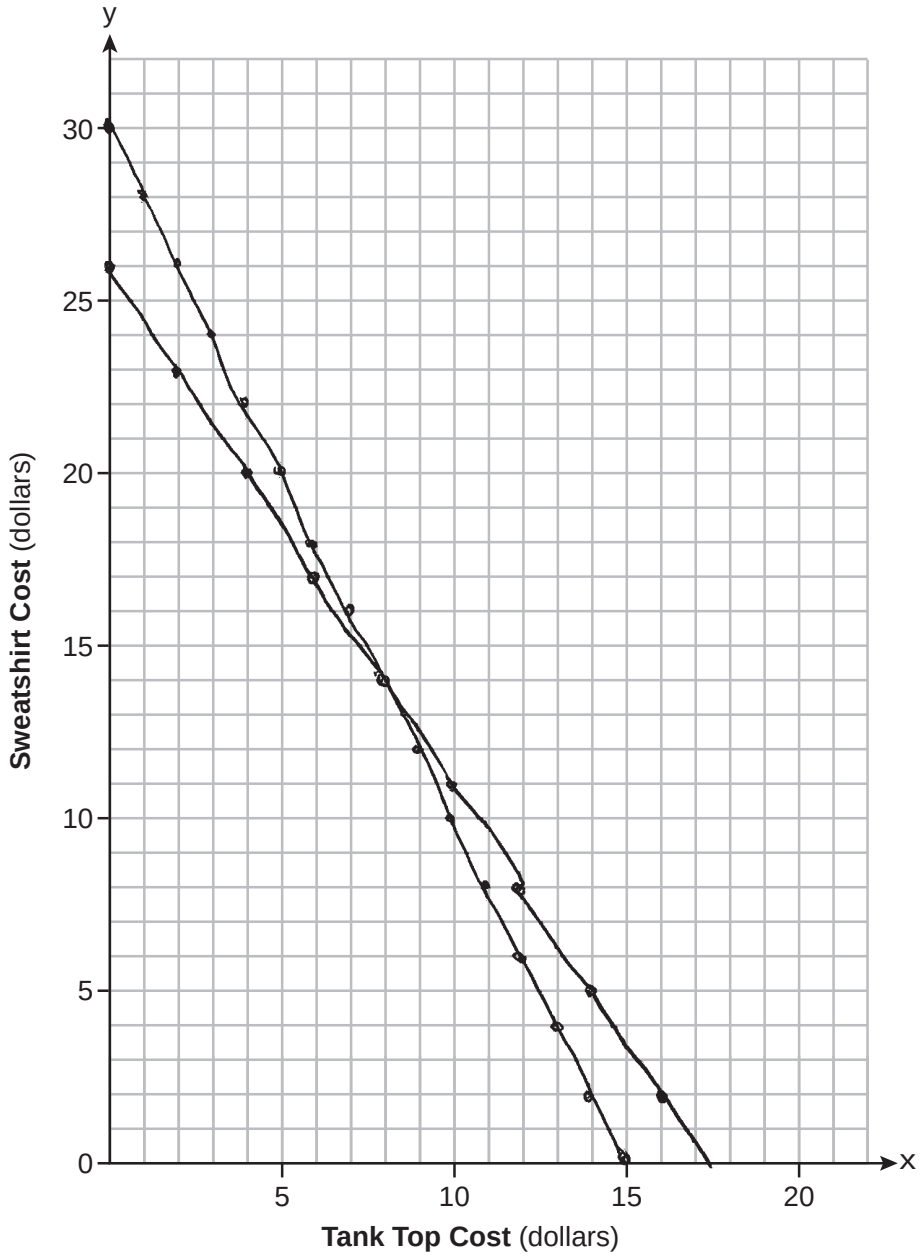
$y=-\frac{3}{2}x+26$

Question 35 is continued on the next page.

Score 5: The student made one labeling error.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(8, 14)

Explain what each coordinate of the point of intersection means in the context of the problem.

Each coordinate shows the potential dollar amount for the tank top and sweatshirt. For example, a coordinate in the $2x + y = 30$ line is (15, 0). $2(15) + (0) = 30$. Another coordinate is (14, 2). $2(14) + 1(2) = 30$. However, the intersection coordinate shows the correct price. ($8 per tank top and $14 per sweatshirt)

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x + 2y = 52$

$2x + 1y = 30$

$3x+2y=52$

$-3x \quad -3x$

$\frac{2y}{2} = \frac{52-3x}{2}$

$y = 26 - \frac{3}{2}x$

$2x + 1y = 30$

$-2x \quad -2x$

$1y = 30 - 2x$

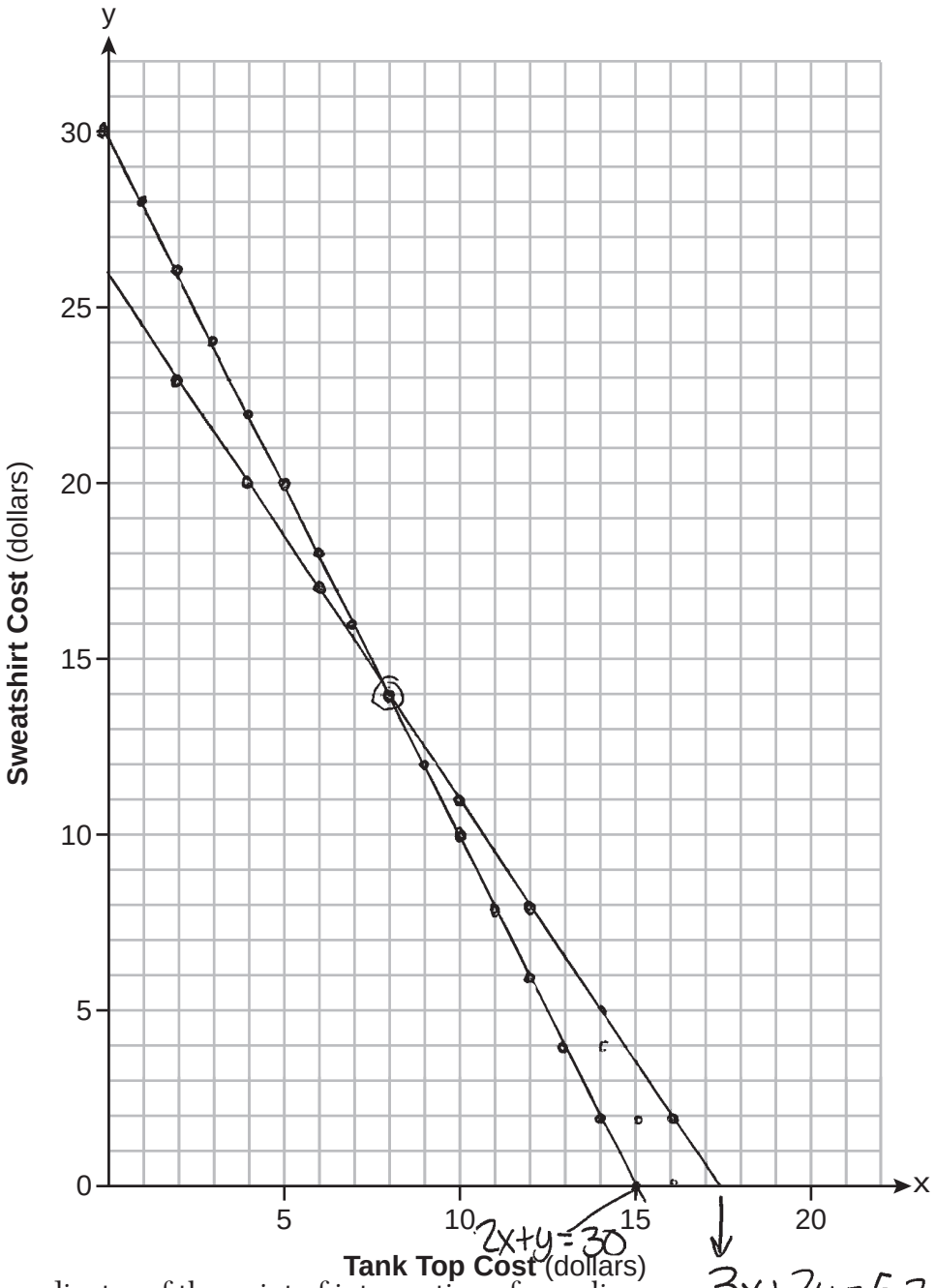
$y = -2x + 30$

Question 35 is continued on the next page.

Score 4: The student stated an incorrect point and wrote an incorrect explanation.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(7, 14)

Explain what each coordinate of the point of intersection means in the context of the problem.

The cost of 7 tank tops is equal to the cost of 14 sweatshirts

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x + 2y = 52$ $2x + y = 30$ → $2y = -3x + 52$

$y = -\frac{3}{2}x + 26$

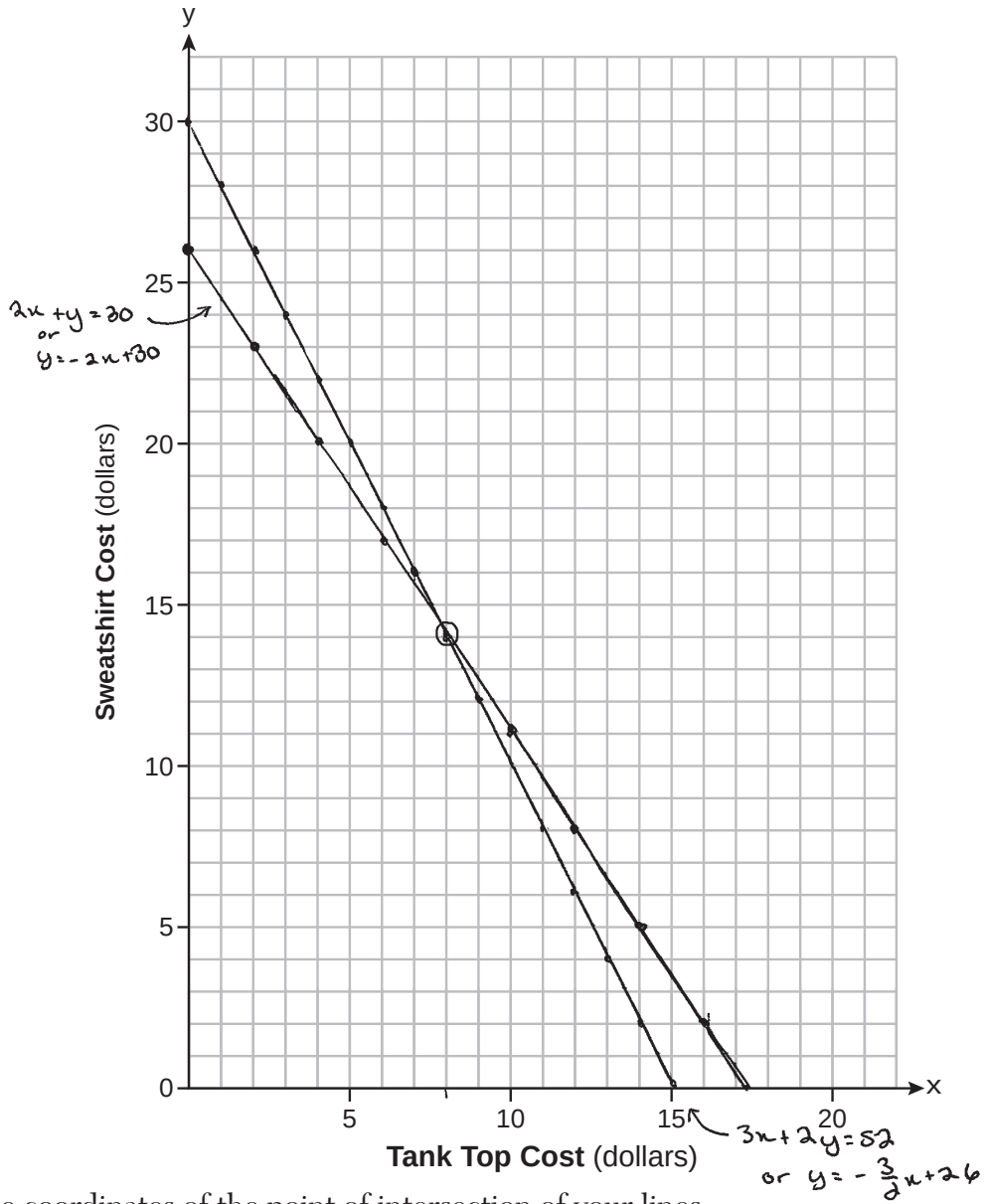
$y = -2x + 30$

Question 35 is continued on the next page.

Score 4: The student labeled the lines incorrectly and wrote an incorrect explanation.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(8, 14)

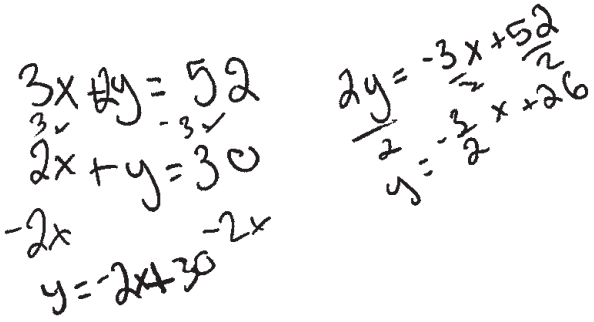
Explain what each coordinate of the point of intersection means in the context of the problem.

If you buy 2 tank tops and 1 sweatshirt for $30.00, 2 tank tops cost $8.00 in total and $14.00 for the sweatshirt.
If you buy 3 tank tops and 2 sweatshirts for $52.00, 3 tank tops will cost $8.00 in total and 2 sweatshirts will cost $14 in total.

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

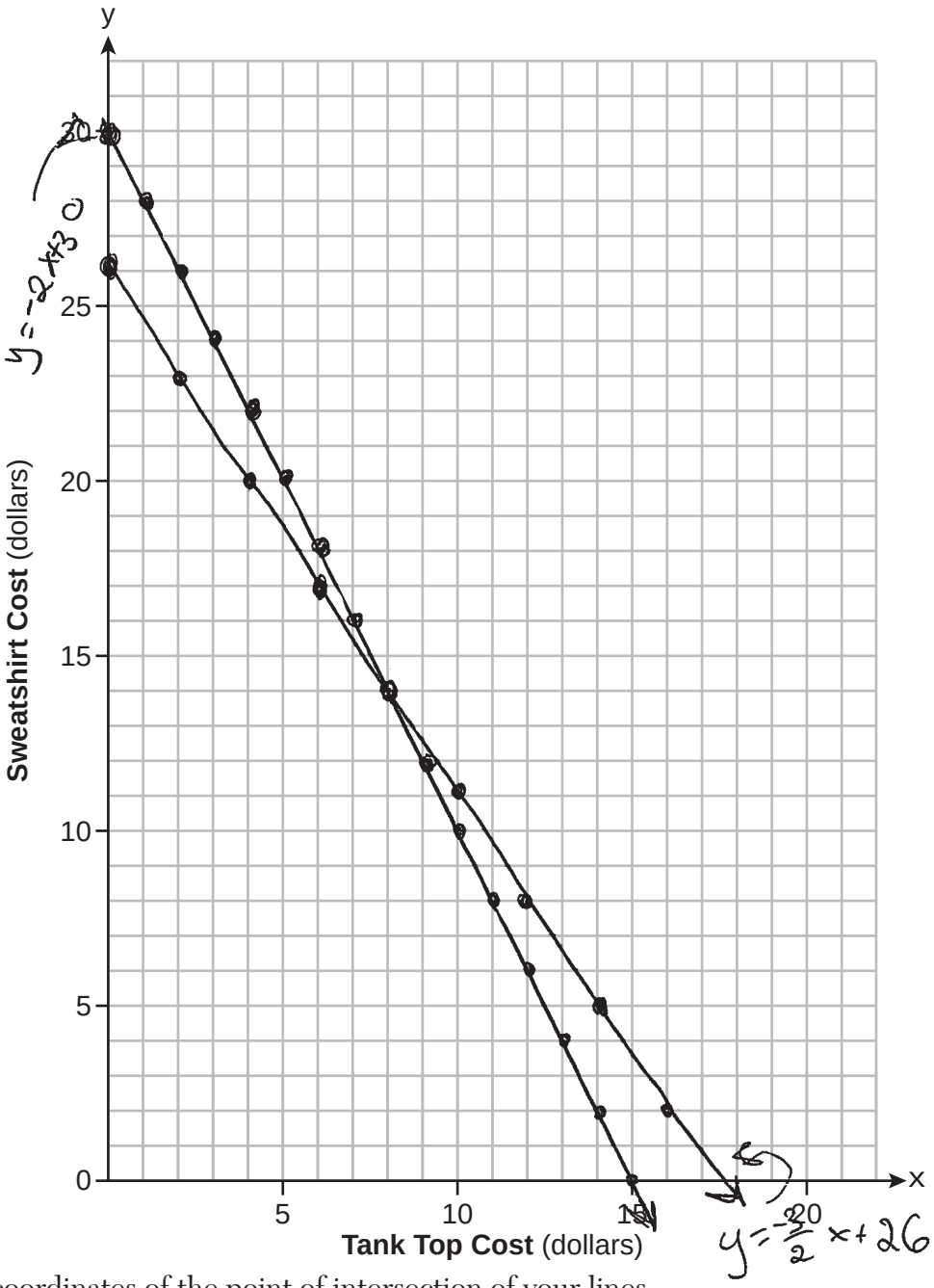


Question 35 is continued on the next page.

Score 3: The student wrote a correct system of equations, but misinterpreted the context by extending the graph beyond the axis and an incorrect point and explanation are written.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(7, 14)

Explain what each coordinate of the point of intersection means in the context of the problem.

As the price increases, the less tank tops and sweatshirts Jane can buy.

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$3x+2y=52$

$3x+2y=52$

$\frac{-2y}{-2}=\frac{3x-52}{-2}$

$y=-1\frac{1}{2}x+26$

$2x+1y=30$

$2x+1y=30$

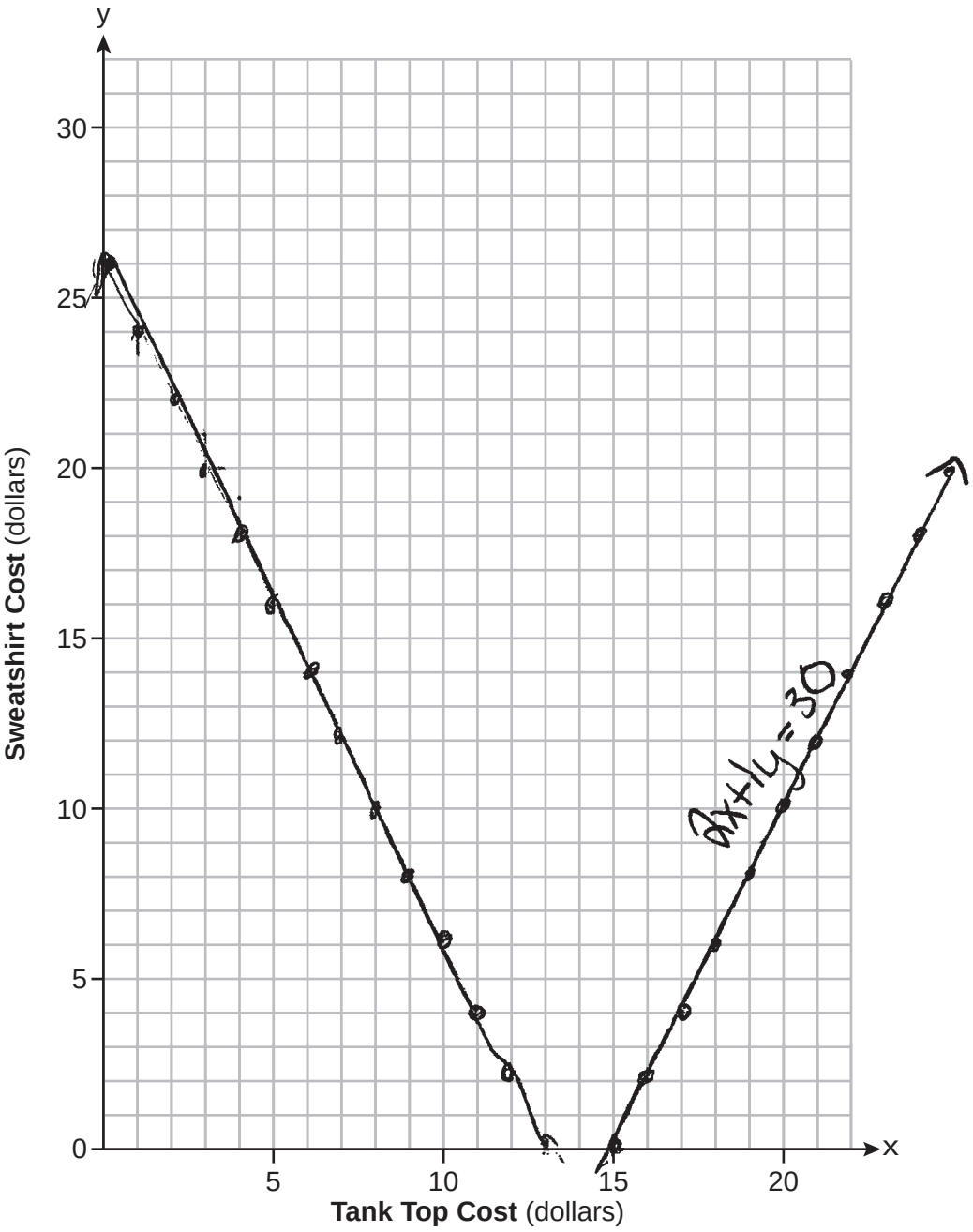
$y=-2x+30$

Question 35 is continued on the next page.

Score 2: The student wrote a correct system of equations.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(14, -1)

Explain what each coordinate of the point of intersection means in the context of the problem.

Each point is the cost of the number of tank tops vs. the cost of the number of sweatshirts

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

$2x + 2y = 52$

or

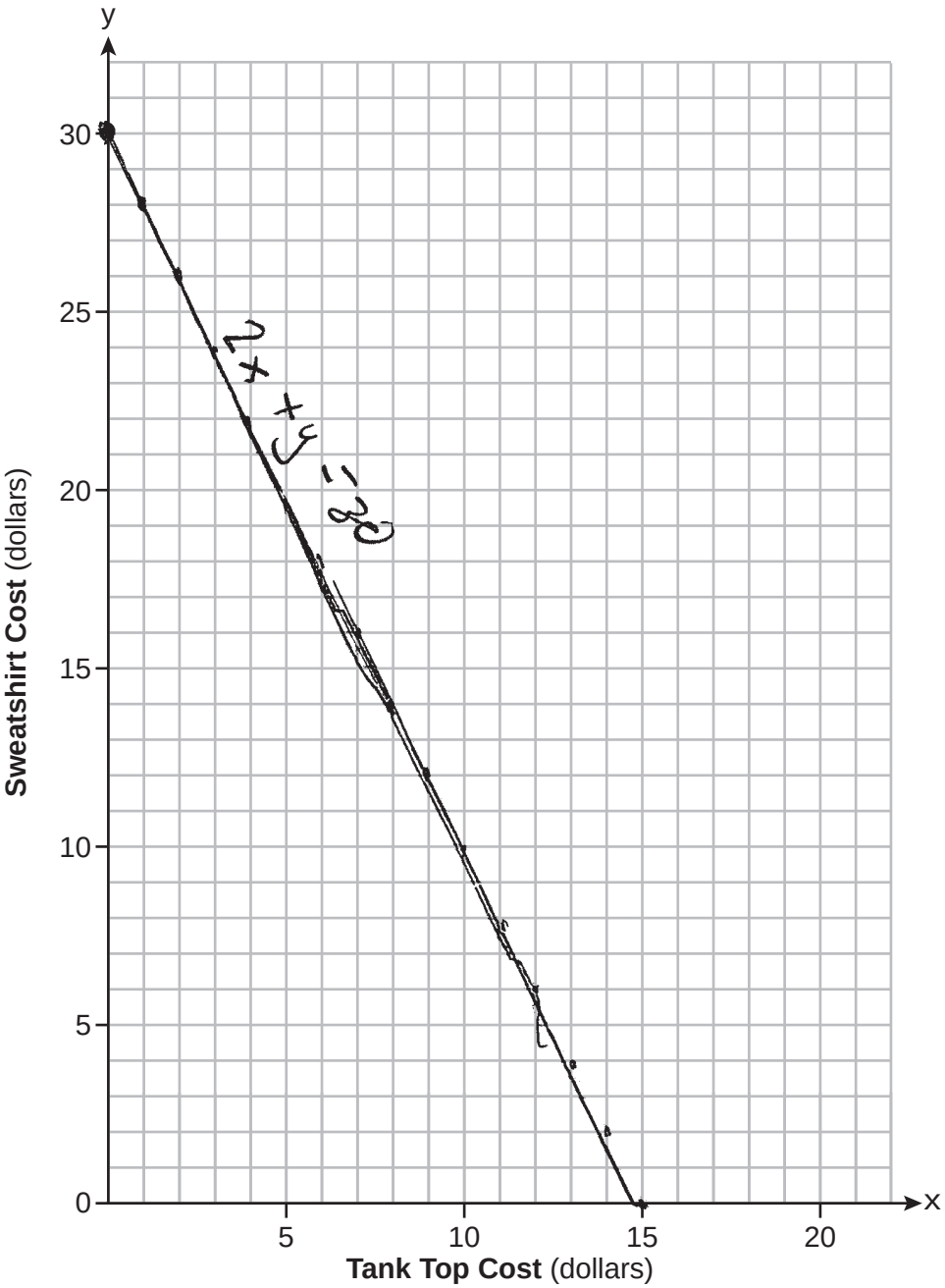
$2x + y = 30$

Question 35 is continued on the next page.

Score 2: The student wrote and graphed one equation correctly.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

Explain what each coordinate of the point of intersection means in the context of the problem.

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

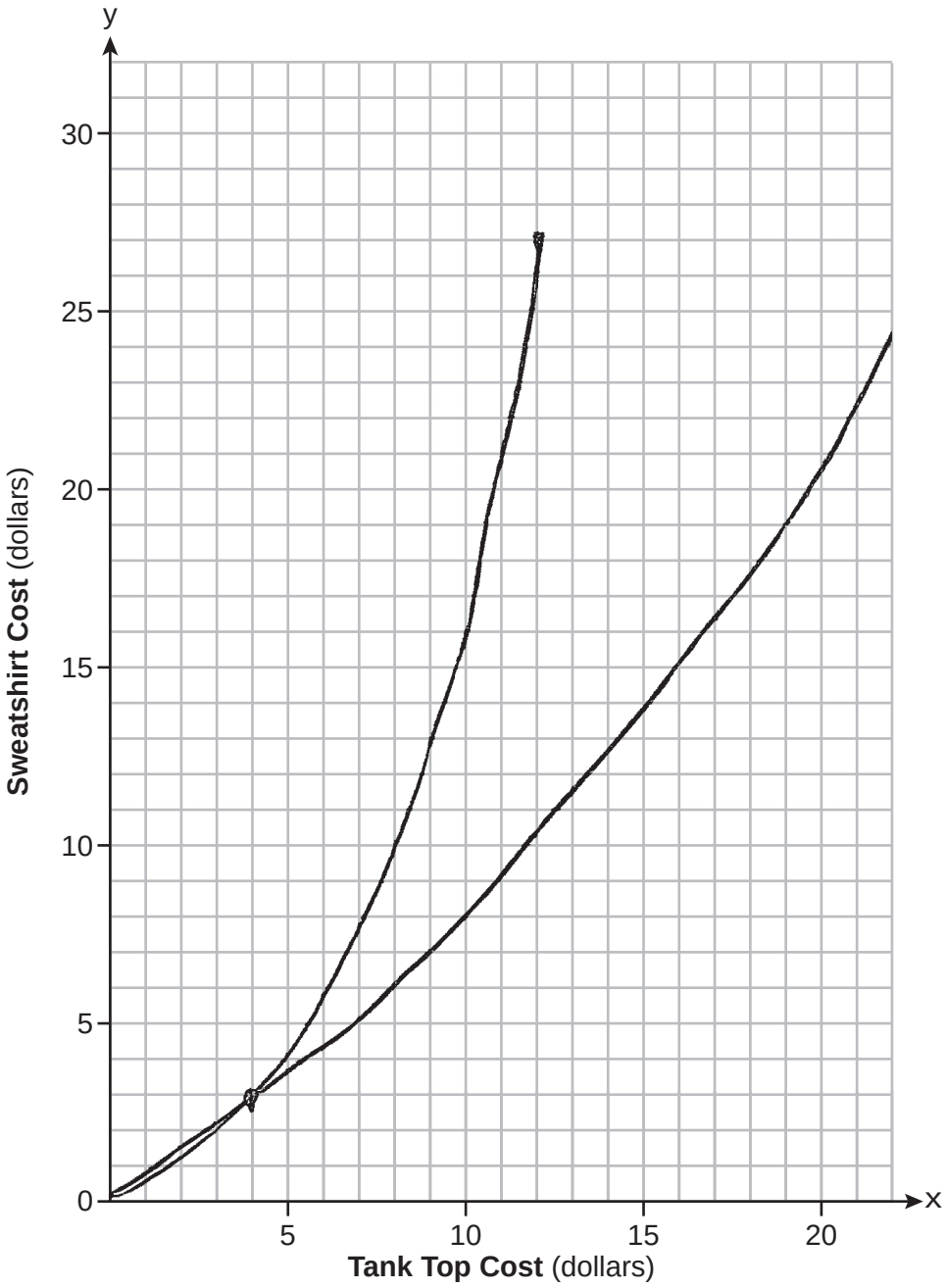
If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

Question 35 is continued on the next page.

Score 1: The student wrote an appropriate point based on an incorrect graph.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(4, 3)

Explain what each coordinate of the point of intersection means in the context of the problem.

I think it means the price of each item

Question 35

35 At a department store in a tax-free state, Jane can either buy three tank tops and two sweatshirts for $52 or two tank tops and one sweatshirt for $30.

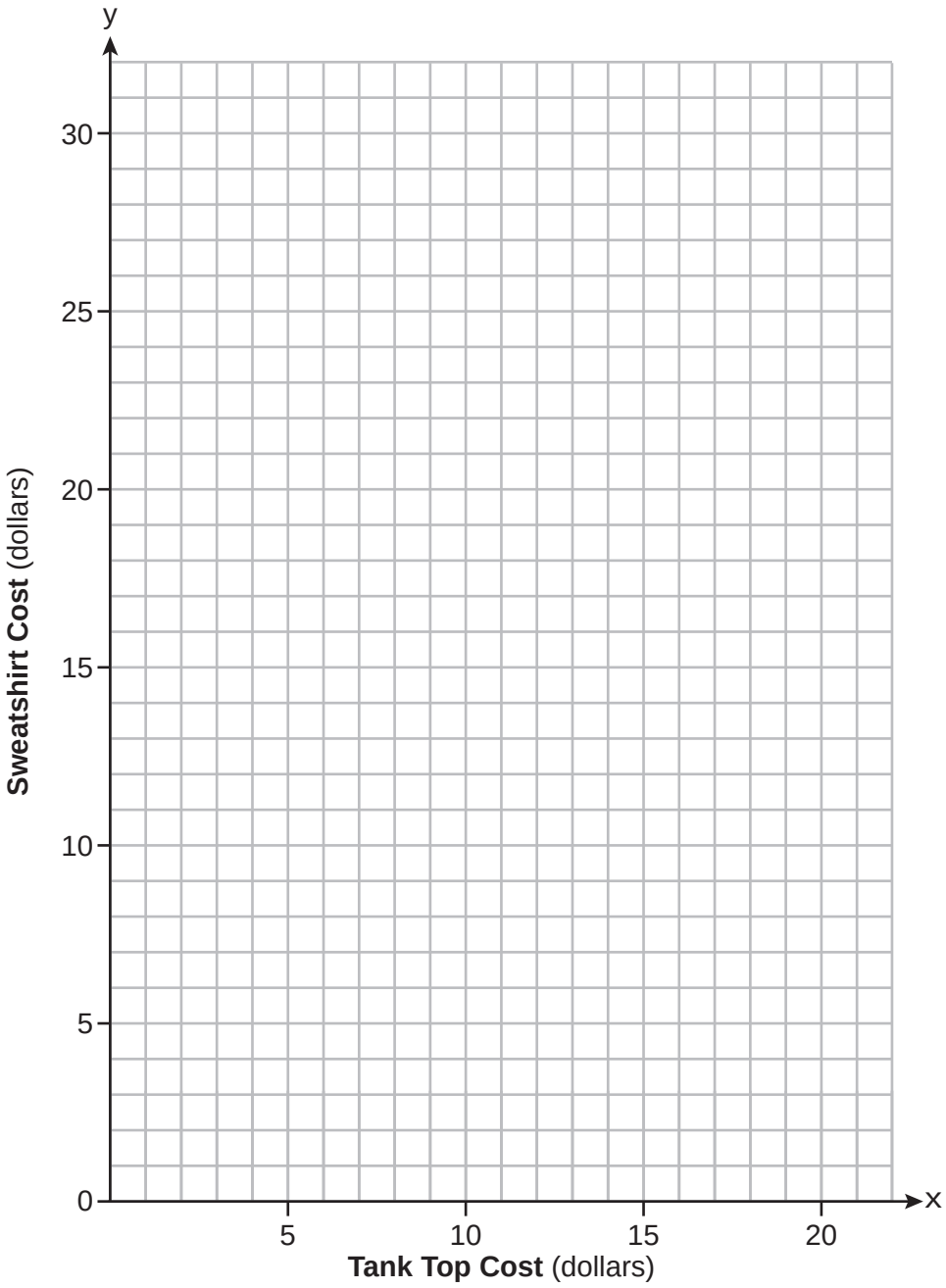
If x represents the price of one tank top and y represents the cost of one sweatshirt, write a system of equations that could be used to model this situation.

Question 35 is continued on the next page.

Score 0: The student did not show enough correct work to receive any credit.

Question 35 continued

On the set of axes below, graph the system of equations.



State the coordinates of the point of intersection of your lines.

(0,0)

Explain what each coordinate of the point of intersection means in the context of the problem.

Coordinates is the Sweatshirt cost in Dollars, and Tank top cost in Dollars.

The State Education Department / The University of the State of New York

Regents Examination in Algebra I – JUNE 2026

Chart for Converting Total Test Raw Scores to Final Exam Scores (Scale Scores)

(Use for the June 2026 exam only.)

Raw Score	Scale Score	Performance Level
82	**100**	5
81	**99**	5
80	**97**	5
79	**96**	5
78	**94**	5
77	**93**	5
76	**92**	5
75	**91**	5
74	**90**	5
73	**89**	5
72	**88**	5
71	**87**	5
70	**86**	5
69	**85**	5
68	**84**	4
67	**84**	4
66	**83**	4
65	**82**	4
64	**82**	4
63	**81**	4
62	**81**	4
61	**80**	4
60	**80**	4
59	**79**	4
58	**78**	4
57	**78**	4
56	**77**	4
55	**77**	4
54	**76**	4
53	**76**	4
52	**76**	4
51	**75**	4
50	**75**	4
49	**74**	3
48	**74**	3
47	**73**	3
46	**73**	3
45	**72**	3
44	**72**	3
43	**72**	3
42	**71**	3
41	**71**	3
40	**70**	3
39	**70**	3
38	**69**	3
37	**69**	3
36	**69**	3
35	**68**	3
34	**68**	3
33	**67**	3
32	**67**	3
31	**66**	3
30	**66**	3
29	**65**	3
28	**64**	2
27	**64**	2
26	**63**	2
25	**62**	2
24	**61**	2
23	**61**	2
22	**60**	2
21	**59**	2
20	**58**	2
19	**56**	2
18	**55**	2
17	**54**	1
16	**52**	1
15	**50**	1
14	**49**	1
13	**47**	1
12	**44**	1
11	**42**	1
10	**40**	1
9	**37**	1
8	**34**	1
7	**31**	1
6	**27**	1
5	**24**	1
4	**20**	1
3	**15**	1
2	**11**	1
1	**5**	1
0	**0**	1

To determine the student's final examination score (scale score), find the student's total test raw score in the column labeled "Raw Score" and then locate the scale score that corresponds to that raw score. The scale score is the student's final examination score. Enter this score in the space labeled "Scale Score" on the student's answer sheet.

Schools are not permitted to rescore any of the open-ended questions on this exam after each question has been rated once, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately.

Because scale scores corresponding to raw scores in the conversion chart change from one administration to another, it is crucial that for each administration the conversion chart provided for that administration be used to determine the student's final score. The chart above is usable only for this administration of the Regents Examination in Algebra I.