Item#	Rationale	
1	Option A is correct	

Item#	Rationale
2	**Option G is correct** To determine the probability (how likely it is that some event will occur) of choosing a purple bow from the box, the student should have found the total number of bows in the box $(5 + 1 + 4 = 10)$. The student could have then found the ratio of the number of purple bows in the box to the total number of bows in the box and written this as the fraction $\frac{4}{10}$. When reduced, this fraction is equal to $\frac{2}{5}$.
	Option F is incorrect The student likely found the probability of choosing a pink bow from the box $\left(\frac{5}{10}\right.$ which reduces to $\left.\frac{1}{2}\right)$. The student needs to focus on attending to the details of the question/problems that require the student to determine probability.
	Option H is incorrect The student likely found the probability of choosing a blue bow from the box $\left(\frac{1}{10}\right)$. The student needs to focus on attending to the details of the question/problems that require the student to determine probability.
	Option J is incorrect The student likely found the probability of NOT choosing a purple bow from the box of bows $\left(\frac{6}{10}\right.$, which reduces to $\left.\frac{3}{5}\right)$. The student needs to focus on understanding how to determine theoretical probabilities.

Item#	Rationale
3	**Option D is correct** To determine that this statement is supported by the information in the box plots (data displays that show the minimum, first quartile, median, third quartile, and maximum of sets of data), the student should have calculated the interquartile range (difference between the third quartile and the first quartile of a set of data) for both box plots. The interquartile range of the data for 20–40 year olds is $150 - 110 = 40$ and the interquartile range of the data for 50–70 year olds is $125 - 95 = 30$. The interquartile range of the data for 20–40 year olds (40) is greater than the interquartile range of the data for 50–70 year olds (30).
	Option A is incorrect The student likely reversed the relationship between the ranges (difference between the maximum value and minimum value of each set of data) of the two data sets in the box plot. The student chose the statement that says $170 - 90$ or 80 is less than $145 - 75$ or 70 instead of the opposite. The student needs to focus on attending to the details of answer options that describe data presented in comparative box plots.
	Option B is incorrect The student likely reversed the relationship between the medians (value for which half of the numbers in each set of data are greater and half are less) of the two data sets in the box plot. The student chose the statement that says 130 is less than 110 instead of the opposite. The student needs to focus on attending to the details of answer options that describe data presented in comparative box plots.
	Option C is incorrect The student likely reversed the relationship between the minimum values of the two data sets in the box plot. The student chose the statement that says 90 is less than 75 instead of the opposite. The student needs to focus on attending to the details of answer options that describe data presented in comparative box plots.

Item#	Rationale	
6	Option H is correct	To determine that this statement is supported by the information in the graph, the student should have found the number of premium memberships sold during Week 3 and Week 2 and compared them. There were 50 premium memberships sold during Week 3 and 25 premium memberships sold during Week 2. Since 50 is equal to 2 times 25, the number of premium memberships sold during Week 3 was 2 times the number of premium memberships sold during Week 2.
	Option F is incorrect	The student likely misinterpreted 75% more to mean 75 more. The number of premium memberships sold during Week 4 was 95, which is 75 more than the number of premium memberships sold during Week 1 (20). Since $\frac{95}{20} = 4.75$, the number of premium memberships sold during Week 4 was 475% of the number of premium memberships sold during Week 1. The student needs to focus on understanding how to determine percentages when solving problems using data represented in bar graphs.
	Option G is incorrect	The student likely miscalculated the total number of memberships sold during Week 1 or the total number of memberships sold during Week 2. The total number of memberships sold during Week 1 was 55 + 20 = 75, and the total number of memberships sold during Week 2 was 45 + 25 = 70. The student needs to focus on performing calculations accurately when solving problems using data represented in bar graphs.
	Option J is incorrect	The student likely misinterpreted 35 less than 2 as an increase of 35 memberships. The total number of memberships sold during Week 4 was 155 (60 + 95 = 155), which is 35 more than the 120 memberships sold during Week 3 (70 + 50 = 120). The student needs to focus on understanding how to use words like less than 2 to describe relationships between data represented in bar graphs.

Item#	Rationale	
7	Option D correct	To determine the outcome of exactly two of the coins showing heads out of the next 120 trials, the student should have first determined the experimental probability (how likely it is that an event will occur during an experiment) from the data in the table. When the coins were flipped 40 times during the experiment, the coins landed with exactly two coins showing heads 16 times. The student could have used the ratio of 16 out of 40 and the variable x to represent the unknown quantity to make a prediction for 120 trials by setting up and solving the proportion (comparison of two ratios). $\frac{16}{40} = \frac{x}{120}$ The student could have used 3 as a scale factor (a number used as a multiplier of a quantity) since $40 \times 3 = 120$ and then multiplied 16×3 to find the prediction for 120 trials. This means that if the experiment is repeated 120 times, the prediction is that there would be 48 times when the coins would land with exactly two coins showing heads. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.
	Option A incorrect	The student likely multiplied the theoretical probability of a coin landing with the head side up (50%) by the 120 trials instead of using the actual results of their 40 trials to make a prediction, resulting in 60. The student needs to focus on when to use experimental probabilities to make predictions and when to use theoretical probability in problems.
	Option B incorrect	The student likely added the number of outcomes showing 1 head to the number of outcomes showing 2 heads $(13 + 16 = 29)$. The student could have used the ratio of 29 out of 40 to make the prediction by setting up and solving the proportion $\frac{29}{40} = \frac{x}{120}$ The student could have used 3 as a scale factor since $40 \times 3 = 120$ and then multiplied 29×3 to find the prediction for 120 trials, 87. The student needs to focus on attending to the details of the question in problems that involve making predictions using experimental probabilities.

Item#	Rationale
	Option C is incorrect The student likely used the number of outcomes showing 2 tails instead of the number of outcomes showing 2 heads (13) The student could have used the ratio 13 out of 40 to make the prediction by setting up and solving the proportion $\frac{13}{40} = \frac{x}{120}$ The student could have used a scale factor, since $40 \times 3 = 120$ and then multiplied 13×3 to find the prediction for 120 trials 39 hehehehe h9.2 (student T277 ctl49.24 (proport

Item#	Rationale	
8	Option H is correct	To determine the number of liters of gasoline Chris bought, the student could have used the ratio of 3.8 liters to 1 gallon and the variable g to represent the unknown quantity and then set up and solved the proportion (comparison of two ratios) $\dfrac{3.8 \text{ liters}}{1 \text{ gallon}} = \dfrac{g \text{ liters}}{10.4 \text{ gallons}}$. The student could have used 10.4 as a scale factor (number used as a multiplier of a quantity) since $1 \times 10.4 = 10.4$, and then multiplied 3.8×10.4 to determine the number of liters, 39.52. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.
	Option F is incorrect	The student likely used the correct scale factor but made an error when multiplying 10.4 by 3.8 by not using a placeholder of zero, resulting in 11.44 liters instead of 39.52 liters. The student needs to focus on understanding how to accurately multiply a three-digit number by a two-digit number.
	Option G is incorrect	The student likely divided 10.4 by 3.8 instead of multiplying 10.4 by 3.8 and rounded the answer, resulting in 2.74 liters. The student needs to focus on understanding how to use proportions to convert between measurement systems.
	Option J is incorrect	The student likely added 10.4 and 3.8 instead of multiplying 10.4 by 3.8, resulting in 14.20 liters. The student needs to focus on understanding how to use proportions to convert between measurement systems.

Item#	Rationale		
9	Option A is correct	To determine the number line that best represents the solution to the inequality $125x + 200 \leq 1,200$, the student could have solved the inequality by subtracting 200 from both sides of the inequality, resulting in $125x \leq 1,000$ and then dividing both sides of the inequality by 125 .	

Item#	Rationale	
10	Option J is correct	To determine the diagram that best represents the relationship among integers, natural numbers, rational numbers, and whole numbers, the student should have used the understanding that natural numbers (the counting numbers 1, 2, 3, 4, etc.) are a subset of whole numbers (the counting numbers and zero), whole numbers are a subset of integers (all positive and negative numbers with no fractional or decimal parts, and zero), and integers are a subset of rational numbers (numbers that can be represented by the division of two integers). This diagram shows these relationships.
	Option F is incorrect	The student likely understood that natural numbers are a subset of whole numbers but did not understand that integers are a subset of rational numbers. The student needs to focus on understanding sets and subsets of rational numbers.
	Option G is incorrect	The student likely misinterpreted the relationship between rational numbers and the subsets of rational numbers. The student needs to focus on understanding sets and subsets of rational numbers.
	Option H is incorrect	The student likely reversed the relationship between whole numbers and natural numbers. The student needs to focus on understanding sets and subsets of rational numbers.

Item#	Rationale	
11	Option B correct	To determine the total surface area (total amount of space covered by the surfaces) of the triangular prism in square centimeters, the student should have measured the dimensions of the rectangles and triangles to the nearest half centimeter. The rectangles on the left and right of the net (two-dimensional view of a three-dimensional figure) are congruent (same shape and size) and have a base of 2.5 cm and a height of about 7 cm. The rectangle in the center has a base of 8 cm and a height of about 7 cm. The triangular bases (the triangle at the bottom of the prism and the triangle at the top of the prism) are congruent, and each has a base length of 8 cm and a height of 2 cm. The areas of the rectangles A = bh

Item#	Rationale	
13	Option A is correct	

Item#		Rationale
14	Option is correct	To determine the area (amount of space covered by) the circular head of the nail, the student should have used the formula for the area of a circle

Item#	Rationale	
15	Option D is correct	To determine by what percentage the price was reduced, the student could have found the amount the sweater was discounted, $20 - 12 = 8$, and divided this value by the original cost of the sweater, resulting in $\frac{8}{20} = 0.4$. The student should have then converted the decimal value to a percentage by moving the decimal point two places to the right, resulting in 40%. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.
	Option A is	the sweater was discounted $8 as the percentage that the price was reduced. The student needs to focus on understanding how to find the percent decrease given an original price and a reduced price.
	Option B is incorrect	
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Item#	Rationale	
16	Option G is correct	To determine which statement is NOT supported by the data in the table, the student should have

Item#	Rationale	
17	Option A is correct	To determine the equation representing the relationship between x and y in the graph, the student could have identified the rate of change (ratio of the change in y-values to the change in x-values) and the y-value when $x = 0$ of the graphed line and written the equation in the form $y = mx + b$, where m represents the rate of change and b represents the y-value when $x = 0$. To find the rate of change, the student could have used the points $(0, -3)$ and $(4, -6)$ and found the ratio of the vertical distance (up and down) to the horizontal distance (left to right). The vertical distance between these two points is 3 units, and the horizontal distance between these two points is 4 units. Since the line is decreasing from left to right, the rate of change is negative. This results in a rate of change of $-\dfrac{3}{4}$.

The y-value is -3 when $x = 0$. Substituting $-\dfrac{3}{}$ |
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Item#		Rationale
19	Option B is correct	To determine Phillip's net worth, the student should have subtracted the total liabilities shown on the net worth statement from the total assets shown on the net worth statement $(113,000 - 71,500 = 41,500)$, resulting in Phillip's net worth of $41,500.
	Option A is incorrect	The student likely combined the total assets and the total liabilities shown on the net worth statement $(113,000 + 71,500 = 184,500)$. The student needs to focus on understanding how to determine net worth using a net worth statement of total liabilities and total assets.
	Option C is incorrect	The student likely used the value of the total liabilities shown on the net worth statement ($71,500)
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Item#	Rationale	
20	Option F is correct	To determine the scale used to create the scale drawing of the library, the student could have compared the length of the library in the scale drawing to the length of the actual library, noticing that 13 inches represents 78 feet. The student could have then divided each of, noticing

Item#	Rationale	
21	Option B is correct	

Item#		Rationale
22	14.4 and any equivalent values are correct	To determine the number of acres of land used for corn, the student could have first used the circle graph to find the percentage of land used for corn. Since the entire circle graph represents 100%, the student could have subtracted the percentages of land given in the circle graph for cotton, wheat, and other from 100%, resulting in $100 - 40 - 20 - 10 = 30$. This means that 30% of the land is used for corn. The student could have then multiplied the total number of acres used for planting (48) by the decimal equivalent of 30% (0.30), resulting in $48 \times 0.30 = 14.4$. This means that 14.4 acres of the land are used for corn. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.

Item#	Rationale	
23	Option A is correct	T

Item#	Rationale	
24	Option H is correct	To determine the value of $6\frac{3}{4} - 11.5)$ the student could have changed the decimal value of -11.5 to the mixed number $-11\frac{1}{2}$. The student could have then changed both mixed numbers to improper fractions and multiplied, resulting in $(\frac{27}{4} \times (-\frac{23}{2}) = -\frac{27 \times 23}{4 \times 2} = -\frac{621}{8}$. The student could have then changed the improper fraction to a mixed number, resulting in $-77\frac{5}{8}$. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.
	Option F is incorrect	The student likely made a sign error when multiplying, resulting in a positive value instead of a negative value. The student needs to focus on understanding how to multiply rational numbers.
	Option G is incorrect	The student likely multiplied 6 by 11.5, resulting in 69. The student then likely carried over the fraction $\frac{3}{4}$ and did not use the negative sign, resulting in $69\frac{3}{4}$. The student needs to focus on understanding how to multiply rational numbers.
	Option J is incorrect	The student likely multiplied 6 by -11.5, resulting in -69. The student then likely carried over the fraction made $-$

Item#	Rationale	
25	Option A correct	To determine which probability statement is true, the student should have found the probability of Justin being in a picture with his friends and the probability of Justin being in a picture with his family. The album has 30 pictures showing Justin's friends and Justin is in half of them, which means that he is in 15 of them. This probability is $\frac{15}{50} = \frac{30}{100}$, or 30%. The album has 12 pictures showing Justin's family and Justin is in half of them, which means that he is in 6 of them. This probability is $\frac{6}{50} = \frac{12}{100}$, or 12%. The probability of selecting a picture showing Justin with his friends (30%) is greater than the probability of selecting a picture showing Justin with his family (12%).
	Option B incorrect	The student likely used the number of pictures in the album that show only Justin (8) as the probability of selecting a picture that shows Justin. The student needs to focus on solving problems involving proportional relationships using quantitative predictions from simple experiments.
	Option C incorrect	The student likely found the probability of a picture that shows Justin with his family (12%) and the probability of a picture with any of Justin's friends ($\frac{30}{50} = \frac{60}{100}$, or 60%) instead of a picture with only Justin's friends ($\frac{15}{50} = \frac{30}{100}$, or 30%). The student then likely reversed the relationship when comparing 12% and 60%, getting $\frac{60\%}{12\%} = 5$ instead of $\frac{12\%}{60\%} = \frac{1}{5}$. The student needs to focus on

Item#	Rationale	
26	Option is correct	To determine the expression that represents the value of

Item#	Rationale	
27	Option B is correct	To determine the solution set, the student could have first subtracted 40 from both sides of the inequality, resulting in $-8x > -56$. The student could have then divided both sides of the inequality by -8. When an inequality is divided by a negative number, the inequality sign is reversed. This step results in the solution to the inequality, which is $x < 7$. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.
	Option A is incorrect	The student likely followed all the correct steps to solve the inequality but did not reverse the inequality sign. The student needs to focus on using all the correct steps to solve an inequality.
	Option C is incorrect	The student likely subtracted 40 from the left side of the inequality but added 40 to the right side of the inequality in their first step, resulting in $-8x > 24$. The student then likely divided both sides of the inequality by -8 but did not reverse the inequality sign, resulting in $x > -3$. The student needs to focus on using all the correct steps to solve an inequality.
	Option D is incorrect	The student likely subtracted 40 from the left side of the inequality but added 40 to the right side of the inequality in their first step, resulting in $-8x > 24$. The student then likely divided both sides of the inequality by -8 and correctly reversed the inequality sign, resulting in $x < -3$. The student needs to focus on using all the correct steps to solve an inequality.

Item#	Rationale	
28	Option F is correct	To determine which store will have the lowest price on 4 tires, the student should have calculated the price for 4 tires at each store using the information in the table. At Store R each tire has a price of $150, and the sale is buy 3 tires and get the 4th free. To find the total price of 4 tires, the student could have multiplied $150 by 3, resulting in $450. At Store S each tire has a price of $200, and the sale is $70 off each tire when 4 are bought. To find the total price of 4 tires, the student could have subtracted $70 from $200, resulting in $130 per tire, and multiplied $130 by 4, resulting in $520. At Store T each tire has a price of $175 and the sale is $200 off the total price when 4 tires are bought. To find the total price of 4 tires, the student could have multiplied $175 by 4, resulting in $700, and subtracted $200, resulting in $500. At Store V each tire has a price of $130, and the sale is 10% off the total price of 4 tires. To find the total price of 4 tires, the student could have multiplied $130 by 4, resulting in $520, and subtracted 10% of $520 ($52) from $520, resulting in $468. Comparing the total price of 4 tires at each store results in Store R having the lowest price. The rationale for the correct answer is an efficient way to solve the problem. However, other methods could be used to solve the problem correctly.
	Option G is incorrect	The student chose the store with the highest price on 4 tires instead of the lowest price on 4 tires. The student needs to focus on analyzing all the information given in a problem to determine the best sale price.
	Option H is incorrect	The student likely found the price of 4 tires at Store V without regard to the advertised sale, resulting in a price of $600. The student also likely took $10 off the total price at Store V instead of 10% off, resulting in a price of $510. The student likely determined that Store T, with a sale price of $500, has the lowest price on 4 tires. The student needs to focus on analyzing all the information given in a problem to determine the best sale price.
	Option J s I[9.2 (sale,)]TJ 1l2 ([9.2 (s)649.2 ($52 (took)64BDC 13.9 0 Td [(The)649.2 (salee,)]TJ 1l2 ([9.2 (s)649.2 ($52 (took)645l[49.2 (the)64)/ce. .2 (]rmined The student nds to	

Item#		Rationale
29		

Item#		Rationale
30	45 and any equivalent values are correct	To determine the area (amount of space covered by) the drawing, the student could have calculated the combined area of the triangle and the rectangle using the formulas for the area of a triangle and rectangle from the Area section of the STAAR Grade 7 Mathematics Reference Materials page within the student's test booklet ($A = \frac{1}{2}bh$ where A = the area of the triangle, b = the length of the base, and h = the height (vertical distance from top to bottom) and $A = bh$ where A = the area of the rectangle, b = the length of the base, and h = the height). To find the area of the triangle, the length of the base, 5 cm, could be multiplied by the height, 6 cm, and multiplied by $\frac{1}{2}$, resulting in $\frac{1}{2}(5 \times 6) = 15$ square centimeters. To find the area of the rectangle, the student could have multiplied the length of the base, 12 cm, by the height, 2.5 cm, resulting in $12 \times 2.5 = 30$ square centimeters. Combining the areas of the two shapes results in an area of $15 + 30$

Item#		Rationale
31	Option D is correct	To determine the total distance that Perry traveled, the student could have used the formula for distance from the Additional Information section of the STAAR Grade 7 Mathematics Reference Materials page within the student's test booklet ($d = rt$ where d = distance, r = rate or speed, and t = time) and multiplied each rate of speed in miles per hour by the amount of time traveled at that speed and added the resulting distances. Perry traveled at a speed of 55 miles per hour for 3.5 hours, resulting in a distance of 192.5 miles ($55 \times 3.5 = 192.5$). He then traveled at a speed of 60 miles per hour for 2.5 hours, resulting in a total distance of 150 miles ($60 \times 2.5 = 150$). Combining these distances results in a total distance of 342.5 miles. The rationale for the correct answer is an efficient way to solve the problem 60 T(the)649.f 0.0055 T919(the)6492t 2ec answer /T1 2.375 33od /TD <</MC use formula the problem 60 T(the)6

Item#	Rationale	
32	Option H is correct	To determine which statement is supported by the information in the dot plots (graphs that use dots to display data), the student could have calculated the mean (the sum of the data points divided by the number of data points) of the data for each store. For Store 1, the student could have determined the sum of the values representing the number of children's books purchased (2(0) + 3(1) + 5(2) + 3(3) + 1(4) + 4(5) + 2(6) = 58). The student could have then divided the sum (58) by the number of data points (20), resulting in a mean of 2.9. For Store 2, the student could have determined the sum of the values representing the number of children's books purchased (4(0) + 6(1) + 4(2) + 2(3) + 1(4) + 2(5) + 1(6) = 40). The student could have then divided the sum (40) by the number of data points (20), resulting in a mean of 2. The mean of the data for Store 1 (2.9) is greater than the mean of the data for Store 2.

Item#	Rationale	
33	Option B is correct	To determine the value of d, the student could have set up and solved a proportion (comparison of two ratios, comparing corresponding side lengths of the similar figures (two figures with corresponding angle measures equal and corresponding sides proportional). Sides RW and RT are corresponding sides, and sides WV and TS are corresponding sides. The length of side RT is the sum of the lengths of sides RW and WT, or 10 + 5 = 15. The student could have used the proportion $\frac{d}{18} = \frac{10}{15}$ to find the value of d by multiplying 18 by 10, resulting in 180, and then dividing 180 by 15, resulting in $d = 12$ mm. The rationale for the correct answer is an efficient way to solve the problem.

Item#	Rationale	
34	Option is correct	To determine the values that satisfy the inequality, the student could have solved the inequality for x. The student could have subtracted 3 from both sides of the inequality, resulting in $-\frac{1}{2}x \geq 2$. The student could have then divided both sides of the inequality by $-\frac{1}{2}$ and reversed the direction of the inequality symbol because of division by a negative number, resulting in $x \leq -4$. The values from the given set that satisfy this inequality are those that are less than or equal to -4.

Item#	Rationale	
36	Option J is correct	To determine how many inches of steel wire are needed to make a spring, the student should have divided the number of inches of steel wire used to make these springs (450) by the number of springs made (300). This results in $\frac{450}{300}$ which is equal to $1\frac{1}{2}$ inches.
	Option F is incorrect	The student likely subtracted 300 from 450 before dividing, resulting in $\frac{150}{450}$, which reduces to $\frac{1}{3}$. The student needs to focus on understanding how to calculate a unit rate given a problem situation.
	Option G is incorrect	The student likely divided the number of springs made (300) by the number of inches of steel wire used to make these springs (450), resulting in $\frac{300}{450}$. The student then likely made an error when reducing the fraction by canceling out all the zeros in the fraction, resulting in $\frac{3}{45}$ which reduces to $\frac{1}{15}$. The student needs to focus on understanding how to calculate a unit rate given a problem situation.
	Option H is incorrect	The student likely divided the number of springs made (300) by the number of inches of steel wire used to make these springs (450). This results in $\frac{300}{450}$ which reduces to $\frac{2}{3}$. The student needs to focus on understanding how to calculate a unit rate given a problem situation.

Item#		Rationale
37	Option A is correct	To determine the circumference of the circle (distance around the circle), the student should have used the formula for the circumference of a circle from the Circumference section and the approximation of pi (π) from the Additional Information section of the STAAR Grade 7 Mathematics Reference Materials page within the student's test booklet ($C = \pi d$ where $C =$ the circumference, $d =$ the diameter (straight line going through the center of circle connecting two points on the circumference) and $\pi \approx 3.14$). This results in $C \approx (3.14)(7.6)$, which is 23.9 feet.
	Option B is incorrect	The student likely used the formula for area (amount of space covered by a surface) instead of the formula for circumference. The student likely first determined that the radius (distance from the center to the circumference of a circle) is 3.8 feet by dividing the diameter of 7.6 feet by 2. Then the student likely calculated the value of the expression $\pi \times (3.8)^2$ which has a value of approximately 45.3 feet. The student needs to focus on understanding which formula to apply in calculations involving circles.
	Option C is incorrect	The student likely confused the given diameter of 7.6 as the radius (distance from the center to the circumference of a circle). The student likely used the formula $C = 2\pi r$ and substituted 7.6 for r, resulting in $C = 2 \times \pi \times 7.6 \approx 47.7$ feet. The student needs to focus on understanding the difference between the radius and the diameter.
	Option D is incorrect	The student likely determined the radius (distance from the center to the circumference of a circle) by dividing the diameter of 7.6 feet by 2, resulting in 3.8 feet. The student likely used the radius instead of the diameter in the formula, resulting in $\pi \times 3.8$ which has a value of approximately 11.9 feet. The student needs to focus on applying the correct formula to calculate the circumference of a circle.

Item#	Rationale	
38	Option G is correct	To determine which inference (a conclusion based on evidence) is best supported by the information in the table, the student should have compared the number of freshmen who chose Education as their major (60) to the number of freshmen who chose Science or Other as their major (55). The number of students who chose Education as their major (60) is greater than the number of students who chose Science or Other (55) as their majors, so the statement is supported by the information.
	Option F is incorrect	The student likely read less than as equal to ≥ when comparing the number of freshmen who chose English as their major (50) to the number of freshmen who are Undecided on their major (50). The student needs to focus on attending to the details of answer options in problems that require the

Item#		Rationale
39	Option B is correct	To determine the volume (amount of three-dimensional space taken up) by the rectangular prism in cubic centimeters, the student should have used the formula for the volume of a prism from the Volume section and the formula for the area of a rectangle from the Area section of the STAAR Grade 7 Mathematics Reference Materials page within the student's test booklet ($V = Bh$ where $V =$ the volume of the prism, $B =$ the area (amount of space covered) by the base, and $h =$ the height (vertical distance from top to bottom) of the prism, and $A = bh$ where A represents the area of the rectangular base, b represents the thickness of the base, and h represents the width of the base). The area of the base is represented by the expression 2×9 which has a value of 18 square centimeters. The volume is represented by the expression 18×15 which results in 270 cubic centimeters.
	Option A is incorrect	The student likely added the given dimensions, resulting in $15 + 2 + 9 = 26$. The student needs to focus on understanding how to solve problem 9.2 (studen h3esers.)Tj EM(Optiproblem9.2 (studenh3e Tf 1..855 -1.6 Td r65t)]TJ (the)64T

Item#	Rationale	
40	Option F is correct	To determine the equation that can be used to find y, the student should have first understood that the expression "$9.50 for each shirt" is equivalent to 9.5 times the number of shirts bought and that the expression "one-time fee of $22.50 for the design" represents the initial, or starting, value. The number of shirts bought is represented by x, so the total cost, y, is $9.5x + 22.5$. Therefore, the equation is $y = 9.5x + 22.5$.
	Option G is incorrect	The student likely reversed the relationship between the cost of each shirt and the one-time fee, resulting in the equation $y = 22.5x + 9.5$. The student needs to focus on understanding how to represent linear relationships using equations in the form $y = mx + b$.
	Option H is incorrect	The student likely subtracted the one-time fee from the cost for x shirts instead of adding it, resulting in the equation $y = 9.5x - 22.5$. The student needs to focus on understanding how to represent linear relationships using equations in the form $y = mx + b$.
	Option J is incorrect	The student likely reversed the relationship between the cost of each shirt and the one-time fee and subtracted instead of adding, resulting in the equation $y = 22.5x - 9.5$. The student needs to focus on understanding how to represent linear relationships using equations in the form $y = mx + b$.