

Item Position	Rationales	
1	Option B is correct	To determine the amount of money that Lucas has left, the student should have recognized that the total amount of money Lucas spent at the fair should be subtracted from the amount of money Lucas had to spend at the fair, \$40. The student could have added the amounts of money that Lucas spent, \$12 on food and \$25 on rides, resulting in $12 + 25 = 37$. Then the student should have subtracted the sum (the result when two or more quantities are added together) from \$40, resulting in $40 - 37 = 3$. This 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 did not regroup when subtracting, resulting in $40 - 37 = 13$. The student needs to focus on understanding how to regroup numbers, when needed, for subtraction.
	Option C is incorrect	The student likely calculated the amount of money Lucas spent at the fair ($12 + 25 = 37$) without subtracting that amount from the amount of money Lucas started with. The student needs to focus on choosing the correct operations when solving word problems.
	Option D is incorrect	The student likely calculated the amount of money Lucas spent at the fair ($12 + 25 = 37$) but added that amount to the money Lucas started with ($40 + 37 = 77$), instead of subtracting. The student needs to focus on choosing the correct operations when solving word problems.

Item Position	Rationales	
2	Top left option is correct	To determine which objects most likely weigh 20 pounds, the student could have determined that an object weighing 20 pounds would be difficult to lift with one hand but could be easily lifted with two hands. The student could have realized that a bicycle could be lifted with two hands. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.
	Bottom left option is correct	To determine which objects most likely weigh 20 pounds, the student could have determined that an object weighing 20 pounds would be difficult to lift with one hand but could be easily lifted with two hands. The student could have realized that a crate could be lifted with two hands. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.
	Top right option is incorrect	The student likely did not understand that an object that weighs 20 pounds would be difficult to lift with one hand. Since a baseball can be lifted with one hand, it would not weigh 20 pounds. The student needs to focus on understanding how to approximate the weights of objects.
	Middle left option is incorrect	The student likely confused pounds for ounces and chose a water bottle, thinking that it weighed 20 pounds. The student needs to focus on understanding how to approximate the weights of objects.
	Bottom right option is incorrect	The student likely confused pounds for tons and chose a bus, thinking that it weighed 20 pounds. The student needs to focus on understanding how to approximate the weights of objects.

Item Position	Rationales	
3	Option D is correct	To determine which statement is true, the student should have understood that thirds are greater than fourths. The student could have drawn two fraction bars of equivalent lengths to represent the two books. Then the student could have divided one fraction bar into 4 equal-sized parts and shaded one part to represent the amount of the book Isabella has read. Next, the student should have divided the other fraction bar into 3 equal sized- parts and shaded one part to represent the amount of the book Alexis has read. The student should have compared the shaded portions of the fraction bars and determined that the shaded portion of Alexis's fraction bar is larger than the shaded portion of Isabella's fraction bar. The student should have then concluded that Alexis has read more of the book than Isabella because $\frac{1}{3} > \frac{1}{4}$. This is one way to solve the problem; however, other methods could be used to solve the problem correctly.
	Option A is incorrect	The student likely compared the total lengths of the books being read rather than comparing the portions the two people read. The student needs to focus on attending to the details to accurately solve the problem.
	Option B is incorrect	The student likely looked only at the numerators (top numbers in fractions) of the two fractions, which are both equal to 1, recognized that they were the same, and decided the fractions were equal without determining whether the denominators (bottom numbers in fractions) were the same. The student needs to focus on comparing the denominators of fractions to determine whether the fractions are equal when the numerators are the same.
	Option C is incorrect	The student likely looked at the numerators of the two fractions, which are both equal to 1, recognized that they were the same, and then recognized that the denominators were different and therefore needed to be compared. The student likely concluded that since 4 is greater than 3, $\frac{1}{4}$ is greater than $\frac{1}{3}$. The student needs to focus on comparing the denominators of fractions to determine which fraction is greater when the numerators are the same.

Item Position	Rationales	
4	Cone, Cylinder, Rectangular pyramid, Triangular prism	To determine how to sort the shapes into groups, the student should have first identified the shapes that have circle bases, which are the cylinder and the cone. The student then should have determined that the cone has exactly 1 base and the cylinder has 2 identical bases. Then the student should have identified the shapes that have a polygon base, which are the triangular prism and the rectangular pyramid. The student should have determined that the pyramid has exactly 1 base and the prism has 2 identical bases. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
5	Option A is correct	To determine how many minutes Tyler skateboards, the student could have recognized that, since Tyler skateboards for 75 minutes a day for 7 days, multiplying 75 by 7 using the standard algorithm would result in the total number of minutes: $75 \times 7 = 525$. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.
	Option B is incorrect	The student likely multiplied 7 by the ones digit of 75 ($7 \times 5 = 35$) and then multiplied 7 by the tens digit of 75 ($7 \times 7 = 49$). The student then likely added the two products ($35 + 49 = 84$) and determined that there should be a placeholder zero in the ones place, resulting in 840. The student needs to focus on multiplying using the standard algorithm and understanding place value.
	Option C is incorrect	The student likely multiplied 7 by the ones digit of 75 ($7 \times 5 = 35$) and placed the 5 in the ones place. The student then likely multiplied 7 by the tens digit of 75 ($7 \times 7 = 49$) but did not add the 3 that was carried over from the ones place multiplication. The student then likely added $490 + 5$, resulting in 495. The student needs to focus on multiplication with regrouping.
	Option D is incorrect	The student likely multiplied 7 by the ones digit of 75 ($7 \times 5 = 35$) and then multiplied 7 by the tens digit of 75 ($7 \times 7 = 49$). The student then likely added the two products, resulting in $35 + 49 = 84$. The student needs to focus on multiplying using the standard algorithm.

Item Position	Rationales	
6	5, 2, 3, 4	To determine the number of each type of candle the store sells in one day, the student could have first looked at the y-axis (vertical axis on a graph) and determined that the scale is 1, but the axis is labeled only every other line. Then the student should have looked at the height of each bar and counted the lines to determine that the store sells 5 cedar candles, 2 lemon candles, 3 rose candles, and 4 pumpkin candles. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
7	Option D is correct	To determine which statement about the number 125 is true, the student should have recognized that the number ends in a 5. Numbers that end in 1, 3, 5, 7, or 9 are odd numbers because those digits cannot be evenly divided by 2.
	Option A is incorrect	The student likely determined that the digit in the tens place was even because it can be evenly divided by 2 but did not understand that the digit in the tens place does not determine whether the number is even or odd. The student needs to focus on understanding divisibility rules and how they are used to determine whether a number is even or odd.
	Option B is incorrect	The student likely identified the first digit, rather than the ones digit, as determining whether a number is even or odd. The student needs to focus on understanding divisibility rules and how they are used to determine whether a number is even or odd.
	Option C is incorrect	The student likely determined that any number that can be evenly divided by a different number is even. The student needs to focus on understanding divisibility rules and how they are used to determine whether a number is even or odd.

Item Position	Rationales	
8	$\times, \times$	To complete the equation to represent the number of avocados the store manager buys, the student could have recognized that the relationship between the number of boxes and the number of bags in each box and the relationship between the number of bags and the number of avocados in each bag should both be represented by multiplication. Therefore, since there are 2 boxes of avocados, 15 bags of avocados in each box, and 3 avocados in each bag, the number sentence $2 \times 15 \times 3 = ?$ represents the total number of avocados the store manager buys. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
9	Option B is correct	To determine which statement about points <i>A</i> and <i>B</i> is true, the student should have recognized that since the number lines (a line whose points correspond to numbers) are the same size and point <i>A</i> is the same distance from zero as point <i>B</i> , the fractions represented are equivalent.
	Option A is incorrect	The student likely recognized that the first number line is divided into 12 equal parts, and the second number line is divided into 6 equal parts. Then the student likely determined that since the number lines represented fractions with different denominators (bottom numbers of fractions), the fractions were not equivalent. The student needs to focus on how to accurately interpret fractions represented on number lines.
	Option C is incorrect	The student likely determined that both points being closer to 1 than to 0 was the reason the fractions are equivalent. The student needs to focus on how to accurately interpret fractions represented on number lines.
	Option D is incorrect	The student likely recognized that since point <i>A</i> is 10 parts out of 12 away from zero, it represents the fraction $\frac{10}{12}$, and that since point <i>B</i> is 5 parts out of 6 away from zero, it represents the fraction $\frac{5}{6}$. The student then likely determined that since the numerators (top numbers of fractions) are different, the fractions could not be equivalent. The student needs to focus on how to accurately interpret fractions represented on number lines.

Item Position	Rationales	
10	8 or any equivalent value	To determine the width of the pool in feet, the student could have recognized that the perimeter is the distance around a figure. Therefore, if the perimeter of the rectangular pool is 40 feet, the sum (answer to an addition problem) of the measurements of the four sides of the pool is equal to 40. The student should have understood that opposite sides of a rectangle have the same measurement, so, if the length of one side is 12 feet, the length of the opposite side is also 12 feet. Therefore, the total length of those two sides is $12 + 12 = 24$ feet. To find the total length of the other two sides, the student could have subtracted 24 from 40, resulting in $40 - 24 = 16$. Then, to find the width of the pool (the length of each of the 2 remaining sides), the student could have divided 16 by 2, resulting in $16 \div 2 = 8$. Therefore, the width of the pool is 8 feet. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
11	Option A is correct	To determine which equation can be used to find how much more money Vince needs to buy the board game, the student should have recognized that the amount needed could be found by subtracting the amount saved (\$12) from the price of the game (\$50). The student then should have represented this with the equation $50 - 12 = \square$.
	Option B is incorrect	The student likely recognized that the price of the board game was \$50 but added the \$12 Vince had saved instead of subtracting. The student needs to focus on determining the correct operation to use in a word problem.
	Option C is incorrect	The student likely confused the price of the board game, \$50, with the remaining amount of money Vince needs to buy the board game, resulting in $\square - 12 = 50$. The student needs to focus on attending to the details of the question and understanding how to set up equations with variables.
	Option D is incorrect	The student likely identified \$50 as the amount Vince has saved and \$12 as the remaining amount he needs to buy the game and determined that price of the game was unknown. The student needs to focus on attending to the details of the question and understanding how to set up equations with variables.

Item Position	Rationales	
12	Option B is correct	To determine how many action figures Mateo collects in January, the student could have first added the numbers of action figures Mateo collected in February and March, resulting in $23 + 14 = 37$. The student then could have subtracted that sum (answer to an addition problem) from the total number of action figures Mateo collected, resulting in $54 - 37 = 17$. The student then should have concluded that Mateo collected 17 action figures in January. This 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 added the number of action figures collected in February and the number of action figures collected in March to the total number of action figures collected, 54, resulting in $23 + 14 + 54 = 91$. The student needs to focus on understanding which operations to use when solving two-step word problems.
	Option C is incorrect	The student likely added the number of action figures collected in February and the number of action figures collected in March, resulting in $23 + 14 = 37$, but did not subtract the sum from the total number of action figures collected. The student needs to focus on understanding which operations to use when solving two-step word problems.
	Option D is incorrect	The student likely attempted to subtract the sum of the numbers of action figures collected in February and March from the total number of action figures collected ($54 - 37$) but subtracted the smaller digit from the larger digit in each place value. The student needs to focus on understanding how to regroup numbers for subtraction when needed.

Item Position	Rationales	
13	incorrect, shaded part, total parts	To complete the statement to describe Jill's claim, the student should have determined that the fraction model shows 1 shaded part and 4 equal total parts and concluded that the fraction model represents the fraction $\frac{1}{4}$. The student should have understood that the fraction $\frac{1}{3}$ would be represented by a model having 1 shaded part and 3 equal total parts. Therefore should have concluded that Jill's claim is incorrect. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
14	Option C is correct	To determine which table shows the correct relationship between the number of cartons and the number of sticks of butter, the student should have multiplied each number of cartons of butter in the table by 4 and to find the corresponding number of sticks of butter. The table shows $1 \times 4 = 4$, $4 \times 4 = 16$, and $6 \times 4 = 24$, and therefore correctly represents the relationship.
	Option A is incorrect	The student likely chose the table in which the number of cartons in each row is the previous row's number of cartons multiplied by 4 ($2 \times 4 = 8$; $8 \times 4 = 32$), and the number of sticks in each row is the previous row's number of sticks multiplied by 4 ($4 \times 4 = 16$; $16 \times 4 = 64$) and did not consider the relationship between the number of cartons of butter and the number of sticks of butter in each row. The student needs to focus on understanding the relationship between numbers paired in a table.
	Option B is incorrect	The student likely confused the multiplicative relationship with an additive relationship and determined that the number of sticks was the number of cartons increased by 4 ($2 + 4 = 6$; $8 + 4 = 12$; $32 + 4 = 36$). The student needs to focus on understanding the relationship between numbers paired in a table.
	Option D is incorrect	The student likely reversed the relationship and chose the table that shows that there are 4 times as many cartons of butter as sticks. The student needs to focus on understanding the relationship between numbers paired in a table.

STAAR Spring 2026 Grade 3 Mathematics Rationales

Item Position	Rationales	
15	fluid ounces, milliliters, pounds, ounces	To determine which units Maggie can use, the student should have recalled which units are used for measuring liquid volume (amount of space taken up by a liquid) and which units are used for measuring weight. The student should have recalled that fluid ounces and milliliters are units of liquid volume and that pounds and ounces are units of weight.

STAAR Spring 2026 Grade 3 Mathematics Rationales

Item Position	Rationales	
16	Option C is correct	To determine which phrase describes an example of using credit, the student should have recognized that credit is used when a need exceeds a person's ability to pay for an item. Therefore, a person using credit borrows money from a lender, as represented by the example of borrowing money from a bank to buy a house.
	Option A is incorrect	The student likely confused using credit with paying sales tax. The student needs to focus on understanding what credit is and why a consumer would use credit.
	Option B is incorrect	The student likely confused using credit with spending responsibly (using cash to pay for a meal at a restaurant). The student needs to focus on understanding what credit is and why a consumer would use credit.
	Option D is incorrect	The student likely confused using credit with saving money. The student needs to focus on understanding what credit is and why a consumer would use credit.

Item Position	Rationales	
17	<, <	To determine which symbols compare the three numbers, the student could have first recognized that the three numbers have the same digits in the ten-thousands place and the thousands place. Then the student could have compared the digits in the hundreds places. The student could have noticed that the 7 in 11,740 is less than the 8 in 11,805 and selected the < (less than) symbol to compare these numbers. Then, since the digits in the hundreds place in 11,805 and 11,850 are both 8, the student could have compared the digits in the tens place. The student should have noticed that the 0 in 11,805 is less than the 5 in 11,850 and selected the < (less than) symbol to compare these numbers. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
18	Option B is correct	To determine which statement is true, the student should have recognized that the 3 in the expression 3×8 represents the number of books James read this month. Since the expression shows the number of books James read this month, times the number eight (3×8), the student should have understood that to mean James read 8 times as many books last month as he did this month.
	Option A is incorrect	The student likely interpreted the word “more” as describing multiplication rather than addition. The student needs to focus on understanding how to describe a multiplication expression.
	Option C is incorrect	The student likely determined that 3 represented the multiplication factor rather than the number of books James read this month. The student needs to focus on understanding how to describe a multiplication expression.
	Option D is incorrect	The student likely interpreted the word “more” as describing multiplication rather than addition and determined that 3 represented the multiplication factor rather than the number of books James read this month. The student needs to focus on understanding how to describe a multiplication expression.

Item Position	Rationales	
19	Option A is correct	To determine Emilio's estimate, the student should have rounded each number to the hundreds place and added the rounded numbers. The student should have rounded 129 to 100 because the digit in the tens place, 2, is less than 5, and therefore the digit in the hundreds place should remain the same. The student should have then rounded 134 to 100 because the digit in the tens place, 3, is less than 5, and therefore the digit in the hundreds place should remain the same. Then the student should have added the rounded numbers, resulting in $100 + 100 = 200$.
	Option B is incorrect	The student likely rounded both the digit in the hundreds place and the digit in the tens place based on the digit in the ones place. For 129, the student likely determined that the ones digit, 9, is greater than 5, so the hundreds place should round up to 200 and the tens place should round up to 30, resulting in 129 rounding to 230. For 134, the student likely determined that the ones digit, 4, is less than 5, so the digits in the hundreds place and the tens place should remain at the same, resulting in 134 rounding to 130. The student then likely added the two rounded values together, resulting in $230 + 130 = 360$. The student needs to focus on understanding how to round to the nearest hundred.
	Option C is incorrect	The student likely rounded each number to the nearest ten instead of the nearest hundred, resulting in 129 rounding to 130 and 134 rounding to 130. The student then likely added the two values, resulting in $130 + 130 = 260$. The student needs to focus on understanding how to round to the nearest hundred.
	Option D is incorrect	The student likely used the digit in the ones place to determine how to round to the nearest hundred. The student likely determined that 129 should round to 200 because the ones digit, 9, is greater than 5, and therefore the hundreds digit should round up. The student then likely determined that 134 should round to 100 because the ones digit, 4, is less than 5, and therefore the hundreds digit should remain the same. The student then likely added the two rounded values together, resulting in $200 + 100 = 300$. The student needs to focus on understanding how to round to the nearest hundred.

Item Position	Rationale	
20	$\frac{1}{3}$	To create a model that represents a fraction equivalent to $\frac{2}{6}$, the student could have recognized that the numerator (top number of a fraction) and the denominator (bottom number of a fraction) are each divisible by 2 and reduced the fraction to its simplest form, which is $\frac{1}{3}$. The student then should have divided the square into 3 equal parts, which represents the denominator of the fraction. Then the student should have selected 1 part to be shaded, which represents the numerator of the fraction. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
21	Option B is correct	To determine the width of the rectangle, the student should have recognized that perimeter means the distance around a figure. Since the perimeter of the rectangle is 36 inches, the sum (answer of an addition problem) of the measurements of the rectangle's four sides is 36. Because opposite sides of a rectangle are the same length, if the length of one side is 8 inches, the length of its opposite side is also 8 inches, so the total length of those two sides is 16 inches. To find the total length of the other two sides, the student should have subtracted 16 from 36, resulting in $36 - 16 = 20$. The width of the rectangle is the length of each of the two remaining sides, which can be found by dividing 20 by 2, resulting in $20 \div 2 = 10$, so the width is 10 inches. This 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 calculated the total measurement of the width and its opposite side, 20 inches, but did not divide 20 by 2 to find the width. The student needs to focus on understanding the meaning of perimeter and how to find the missing length of figure.
	Option C is incorrect	The student likely divided the perimeter of the rectangle by 4 to represent the 4 sides, resulting in $36 \div 4 = 9$ inches. The student needs to focus on attending to the details of the problem.
	Option D is incorrect	The student likely subtracted 8 from 36, resulting in $36 - 8 = 28$ inches. The student needs to focus on understanding the meaning of perimeter and how to find the perimeter of a figure.

STAAR Spring 2026 Grade 3 Mathematics Rationales

Item Position	Rationales	
22	minus, 10	To determine the relationship between the weight on the broken scale and the weight on the working scale shown in the table, the student could have recognized a pattern in the table. For each value representing the weight of the fruit on the broken scale, the weight on the working scale is 10 ounces less. The student then should have concluded that the weight on the broken scale minus 10 is equal to the weight on the working scale. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
23	Option C is correct	To determine which three-dimensional figure can be classified in both sets, the student should have determined that a triangular prism is the only listed figure that has both triangular bases and rectangular faces.
	Option A is incorrect	The student likely focused only on attributes of Set 1 and recognized a triangular pyramid has at least 1 triangular base. The student needs to focus on attending to the details of the problem.
	Option B is incorrect	The student likely determined that a cone had a triangular base and focused only on attributes of Set 1. The student needs to focus on understanding the attributes of three-dimensional figures to classify them correctly.
	Option D is incorrect	The student likely focused only on attributes of Set 2 and recognized that a cube has at least 1 rectangular face. The student needs to focus on attending to the details of the problem.

Item Position	Rationales	
24	Third option is correct	To determine which groups Mrs. Smith could create, the student could have recognized that this is a division problem where the total number of students, 48, is divided by the number of groups to determine the number of students in each group. The student could have divided 48 by 3, resulting in $48 \div 3 = 16$. The student should have determined that Mrs. Smith could divide the 48 students into 3 groups with 16 students in each group. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.
	Fifth option is correct	To determine which groups Mrs. Smith could create, the student could have recognized that this is a division problem where the total number of students, 48, is divided by the number of groups to determine the number of students in each group. The student could have divided 48 by 6, resulting in $48 \div 6 = 8$. The student should have determined that Mrs. Smith could divide the 48 students into 6 groups with 8 students in each group. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.
	First option is incorrect	The student likely divided 48 by 2, resulting in 24, and then divided 24 by 2 again, resulting in 12, and determined that Mrs. Smith could divide the 48 students into 2 groups with 12 students in each group. The student needs to focus on determining the correct steps and calculations to solve a word problem.
	Second option is incorrect	The student likely rounded 48 to 50 and determined that 50 could be divided by 5, resulting in 10, and determined that Mrs. Smith could divide the 48 students into 5 groups with 10 students in each group. The student needs to focus on determining the correct steps and calculations to solve a word problem.
	Fourth option is incorrect	The student likely miscalculated $48 \div 7$ to equal 7 and determined that Mrs. Smith could divide the 48 students into 7 groups with 7 students in each group. The student needs to focus on determining the correct steps and calculations to solve a word problem.

Item Position	Rationales	
25	Option D is correct	To determine which sum is equivalent to 40,401, the student could have broken the number into place values. Since this is a five digit number, the greatest place value (starting on the left) is ten thousands. The digit 4 in the ten-thousands place can be represented as 4 ten thousands. The zero in the thousands place would not be represented, since there are zero thousands. The digit 4 in the hundreds place can be represented by 4 hundreds or 40 tens. The 1 in the ones place can be represented by 1 one. The student then could have determined that the given number, 40,401, is represented by the sum of the values of the digits in all the place values: 4 ten thousands + 40 tens + 1 one. This 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 determined that the 4 in the hundreds place was in the tens place, resulting in 4 tens instead of 40 tens. The student needs to focus on understanding place value to write numbers in word form correctly.
	Option B is incorrect	The student likely determined that the 4 in the ten-thousands place was in the hundred-thousands place, resulting in 4 hundred thousands. The student needs to focus on understanding place value to write numbers in word form correctly.
	Option C is incorrect	The student likely determined that the 4 in the ten-thousands place was in the thousands place, resulting in 4 thousands. The student needs to focus on understanding place value to write numbers in word form correctly.

Item Position	Rationales	
26	2 or any equivalent value	To determine how many bags of apples each classroom gets, the student could have first divided to determine the number of bags with 8 apples each, resulting in $96 \div 8 = 12$ bags. The student could have determined that there are 12 bags of apples for Cathy to distribute to the classrooms. Since each classroom gets the same number of bags, the student could have then divided 12 bags by 6 classrooms, resulting in $12 \div 6 = 2$. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.

Item Position	Rationales	
27	Option A is correct	To determine the area of Darnell's garden in square feet, the student should have recognized that area is the amount of space occupied by a two-dimensional figure, measured in square units. Each unit square in the figure has an area of 1 square foot, as shown in the key, so the area of each row of the garden is 5 square feet. There are 16 rows of flowers in the garden. The student could have multiplied the number of rows by the area of 1 row, resulting in $16 \times 5 = 80$ square feet. This is an efficient way to solve the problem; however, other methods could be used to solve the problem correctly.
	Option B is incorrect	The student likely determined that the width of Darnell's garden is 5 feet and the length of Darnell's garden is 16 feet. The student then likely added the lengths of the sides of the rectangular garden, resulting in $5 + 16 + 5 + 16 = 42$ square feet, which is the perimeter of the garden. The student needs to focus on understanding how to determine the area of a rectangle.
	Option C is incorrect	The student likely multiplied the area of the row shown, 5 square feet, by 5 instead of by 16, resulting in $5 \times 5 = 25$ square feet. The student needs to focus on attending to the details to accurately solve the problem.
	Option D is incorrect	The student likely counted the grid lines, instead of the squares, in the row shown. The student likely counted 6 grid lines across and multiplied 6 by the number of rows, resulting in $6 \times 16 = 96$ square feet. The student needs to focus on understanding how to determine the area of a rectangle.

Item Position	Rationales	
28	Fourth point from the left	To determine which point on the number line represents a distance of $\frac{3}{8}$ foot from 0, the student should have recognized that the distance from 0 feet to 1 foot on the number line is divided into 8 equal sections, or eighths, which each represent $\frac{1}{8}$ foot. The student then should have recognized that $\frac{3}{8}$ is represented by 3 of the 8 sections, so the point at the end of the third section, or the fourth point from the left, represents a distance of $\frac{3}{8}$ foot.

Item Position	Rationales	
29	Option D is correct	To determine how many pages are in Brenda's sticker book, the student could have determined that this is a division problem that corresponds to a multiplication fact. The student could have recalled that $9 \times 6 = 54$, meaning that $54 \div 9 = 6$. This 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 did not recognize this as a division problem and added the two given values. The student needs to focus on understanding what operation to use when solving a word problem.
	Option B is incorrect	The student likely used fact families to solve the problem but thought 9×8 , rather than 9×6 , was equal to 54. The student should focus on accurately identifying multiplication facts and their corresponding fact families.
	Option C is incorrect	The student likely subtracted the given values instead of dividing, resulting in $54 - 9 = 45$. The student needs to focus on understanding what operation to use when solving a word problem.

Item Position	Rationales	
30	Option B is correct	To determine which list represents the data shown in the pictograph (a graph that represents data using pictures), the student should have first read the key to identify that each sun symbol represents 4 days. Then the student could have counted the number of suns for January, 6 whole suns, and multiplied by 4, resulting in $6 \times 4 = 24$. Then the student could have counted the number of suns for February, 5 whole suns, and multiplied by 4, resulting in $5 \times 4 = 20$. The student then could have counted the number of suns for March, 6 whole suns and 1 half sun. The student should have recognized that since each whole sun represents 4 days, a half sun represents 2 days. The student could have multiplied the number of whole suns by 4, $6 \times 4 = 24$, and added 2 for the half sun, resulting in $24 + 2 = 26$. The student then could have counted the number of suns for April, 5 whole suns and 1 half sun, and multiplied the number of whole suns by 4, $5 \times 4 = 20$, and added 2 for the half sun, resulting in $20 + 2 = 22$. The student should have selected the list January: 24 days; February: 20 days; March: 26 days; April: 22 days. This 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 determined that each symbol, regardless of whether it was a whole sun or a half sun, represented one sunny day. The student needs to focus on understanding how to interpret a data set presented in graph form.
	Option C is incorrect	The student likely determined that each symbol, regardless of whether it was a whole sun or a half sun, represented 4 days. The student likely determined that the number of sunny days in March was $7 \times 4 = 28$ days, and the number of sunny days in April was $6 \times 4 = 24$ days. The student needs to focus on understanding how to interpret a data set presented in graph form.
	Option D is incorrect	The student likely determined that each whole sun represented 2 days. For January, the student likely determined that the number of sunny days was $6 \times 2 = 12$ days. For February, the student likely determined that the number of sunny days was $5 \times 2 = 10$ days. For March, the student likely determined that the number of sunny days was $6 \times 2 = 12$ plus 1 for the half sun, resulting in 13 days. For April, the student likely determined that the number of sunny days was $5 \times 2 = 10$ plus 1 for the half sun, resulting in 11 days. The student needs to focus on understanding how to interpret a data set presented in graph form.