1	Option D is correct	To determine which shapes appear to have only one line of symmetry (an imaginary line that divides
	Option A is incorrect	The student likely chose Shape K (square) based on the presence of vertical lines and confused vertical lines with lines of symmetry. The student needs to focus on attending to the details of the question being asked in a problem.
	Option B	

2	Option C is correct	To determine which number fits the three clues, the student should have evaluated each of the clues: 8 × 0.01 = 0.08, 5 × 10 = 50, and 3 × 1,000 = 3,000. Given these values, the student should have realized that in the number 3,652.48, the 8 is in the hundredths place (3,652.4<u>8</u>

4	Option A is correct	To determine whether a statement is true about the number, the student should have compared the values of the digits in 2,222. The student should have found that the digit in the thousands place has a value of (2 × 1,000 = 2,000), the digit in the hundreds place has a value of (2 × 100 = 200), the digit in the tens place has a value of (2 × 10 = 20), and the digit in the ones place has a value of (2 × 1 = 2). The digit in the hundreds place represents 200, and the digit in the tens place represents 20; 20 is — as much as 200.
	Option C is correct	To determine whether a statement is true about the number, the student should have compared the values of the digits in 2,222. The student should have found that the digit in the thousands place has a value of (2 × 1,000 = 2,000), the digit in the hundreds place has a value of (2 × 100 = 200), the digit in the tens place has a value of (2 × 10 = 20), and the digit in the ones place has a value of (2 × 1 = 2). The digit in the hundreds place represents 200, and the digit in the thousands place represents 2,000; 2,000 is ten times 200.
	Option B is incorrect	The student likely understood the relationship between the hundreds and thousands places but reversed the relationship. The student needs to focus on understanding that the value of each place-value position is 10 times the value of the position to the right and — the value of the position to the left.
	Option D is incorrect	The student likely understood the relationship between the hundreds and the tens places but reversed the relationship. The student needs to focus on understanding that the value of each place-value position is 10 times the value of the position to the right and — the value of the position to the left.
	Option E is incorrect	The student likely understood the relationship between the ones and the tens place but reversed the relationship. The student needs to focus on understanding that the value of each place-value position is 10 times the value of the position to the right and — the value of the position to the left.

7	Option D is correct	To determine which rule shows how to find the value when given the position, the student should have considered the relationship between each position and each value listed in the table. Since each output

10	Option C is correct	To determine which stem and leaf plot (a stem and leaf plot displays the data with each number split into a stem [the first digit or digits of the number] and a leaf [the last digit of the number]) correctly adds a kick of 42 yards to the data, the student could have written the data in order from least to greatest and systematically checked each data point until identifying the data point that would complete the stem and leaf plot. The student should have recognized that the given stem and leaf plot already has a 42, since 4|2 means 42, and that the stem and leaf plot needs an additional 42. This answer choice is the only stem and leaf plot showing two 42s. 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 chose a stem and leaf plot where 24 was added instead of 42. The student needs to focus on representing data in stem and leaf plots.
	Option B is incorrect	The student likely chose a stem and leaf plot where 42 was removed instead of added. The student needs to focus on representing data in stem and leaf plots.
	Option D is incorrect	The student likely chose a stem and leaf plot where 24 was removed instead of one where 42 was added. The student needs to focus on representing data in stem and leaf plots.

11	Option A is correct	To determine the area of (amount of space covered by) a square that has a perimeter of 36 meters, the student first should have used the formula for the perimeter of a square from the perimeter section of the STAAR Grade 4 Mathematics Reference Materials page within the student's test booklet ($P = 4s$, where P = perimeter and s = side length). The student should have solved $36 = 4s$ to determine the value of one side length ($36 \div 4 = 9$ meters). Next, the student should have used the formula for the area of a square ($A = s \times s$, where A = area and s = side length). Since all sides of a square are equal, the student should have calculated the area as 9×9, resulting in 81 square meters.
	Option B is incorrect	The student likely divided 36 by 4 and then multiplied the result by 2, resulting in 18. The student needs to focus on understanding that the area of a square is determined by multiplying the side length of the square by itself.
	Option C is incorrect	The student likely confused area and perimeter and first divided 36 by 2, and then multiplied the result by 4, representing the 4 sides needed to find the perimeter ($36 \div 2 = 18$; $18 \times 4 = 72$). The student needs to focus on understanding the difference between area and perimeter calculations and when to use each to solve problems.
	Option D is incorrect	The student likely confused area and perimete

12	625 ÷ 5 = 125	To determine an equation that could be used to show how many apples are in each container, the student should have concluded that the total amount of apples (625) should be divided by the number of containers (5), resulting in 625 ÷ 5 = 125.

16	Option B is correct	To determine a reasonable estimate og (n)]TT0 1 T56 Tm(3)TjETQ0 0 612

17	Option B is correct	To determine which number has a 2 with a value of 2 × 0.1, the student should have evaluated 2 × 0.1 = 0.2. The student then could have identified the value with the digit 2 in the tenths place (the first digit to the right of the decimal point). The number "forty-one and two tenths," written as 41.2, has the digit 2 in the tenths place, with a value equivalent to 2 × 0.1 = 0.2.
	Option E is correct	To determine which number has a 2 with a value of 2 × 0.1, the student should have evaluated 2 × 0.1 = 0.2. The student then could have identified the value with the digit 2 in the tenths place. The number 10.26 has the digit 2 in the tenths place, with a value equivalent to 2 × 0.1 = 0.2.
	Option A is incorrect	The student likely confused the tenths place and the hundredths place (the second digit to the right of the decimal point). The student needs to focus on understanding the positions of digits to the left and right of the decimal point.
	Option C is incorrect	The student likely multiplied 2 × 1 = 2 and then added the 0.1 to that value (2 + 0.1 = 2.1). The student needs to focus on representing the value of each digit in a number.
	Option D is incorrect	The student likely multiplied 2 × 1 = 2 instead of multiplying by 0.1. The student needs to focus on representing the value of each digit in a number.

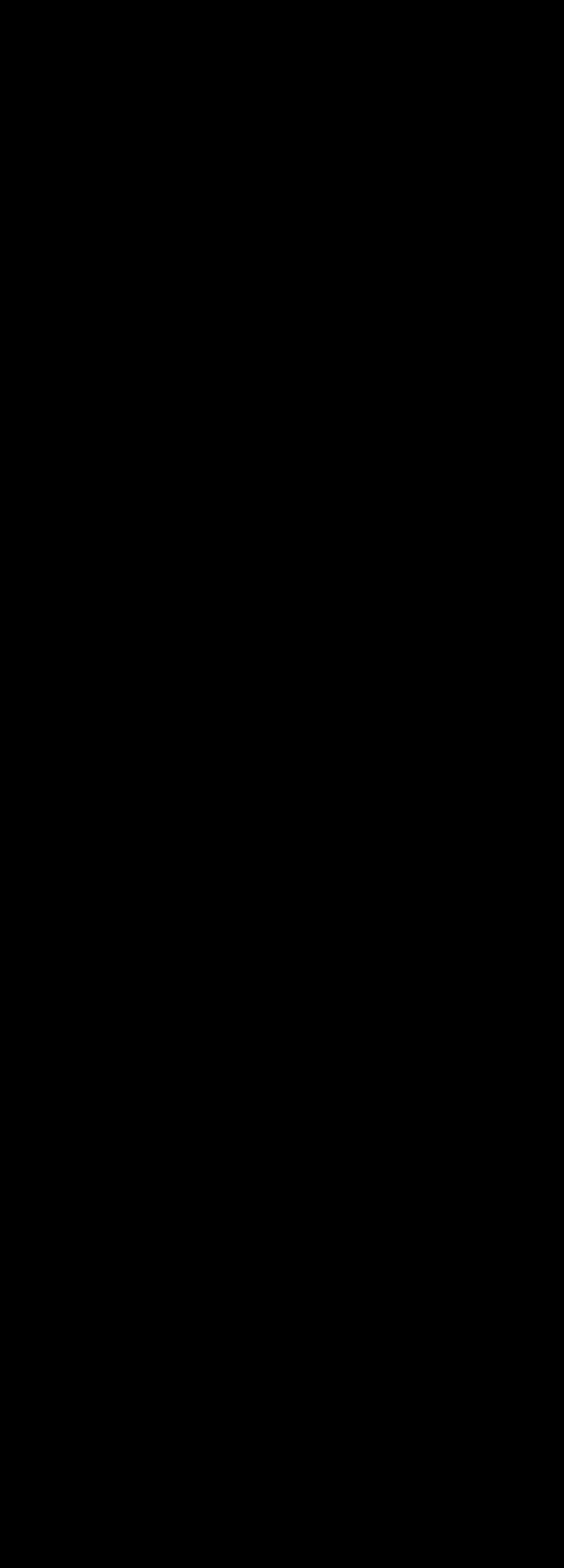|		
20	20, 10, 5	To determine which numbers complete the area model (model representing the amount of space covered) that represents 23 × 15 = 345, the student should have first decomposed (broken apart) each of the factors, resulting in 23 = 20 + 3 and 15 = 10 + 5. The student should have interpreted each shape in the model to represent a multiplication problem, leading to the total of 345 square units. The area of each large square is 100 square units because the area is found by multiplying the side lengths (10 × 10). The area of each bar is 10 square units because the area is found by multiplying the side lengths (10 × 1). The area of each small square is 1 square unit because the area is found by multiplying the side lengths (1 × 1). Since there are two large squares, the student should have recognized that the total horizontal length of the large squares is 10 + 10 = 20 units and the total vertical length of the large square is 10 units. Since there are fifteen small squares, the student should have recognized that the total horizontal length of the small squares is 1 + 1 + 1 = 3 (as shown in the model), and the total vertical length of the small squares is 1 + 1 + 1 + 1 + 1 = 5.

21	a right triangle, a right angle and two acute angles	To determine whether the triangle is an acute, obtuse, or right triangle, the student should have first understood that perpendicular lines are lines that intersect (cross each other) at a right angle (90° angle). Then the student should have understood that an obtuse triangle has an obtuse angle (an angle that is greater than 90°) and so cannot have a right angle, an acute triangle has three acute angles (angles that are less than 90°) and so cannot have a right angle, and a right triangle has a right angle. With this information, the student should have determined that the triangle is a right triangle because it has a right angle and two acute angles.

22	

29	— and any equivalent values are correct.	To determine what fraction of the books are mystery or sports books, the student should have first looked at the key (one book image = 1 book). The total number of books in the pictograph, 11, is the denominator (bottom number), and the number of mystery and sports books, 7 (2 + 5 = 7), is the numerator (top number) of the fraction.

30	Option A is correct	To determine which object holds more than 3 fluid ounces but less than 1 pint of liquid when full, the student should have recognized that there are 8 ounces of liquid in 1 cup and that there are 16 ounces in one pint. The juice box will likely contain about one cup of liquid, which is more than 3 fluid ounces but less than 1 pint. 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 confused a pint with a gallon and chose an object that would hold about 1 gallon. The student needs to focus on identifying relative sizes of measurement units within the customary and metric systems.
	Option C is incorrect	The student chose an object that could hold several gallons. The student needs to focus on identifying relative sizes of measurement units within the customary and metric systems.
	Option D	

31	Option A is correct	To determine which thing will hold onto your money for you and also lend out money, the student should have recognized that banks provide both services to their customers.
	Option B is incorrect	The student likely misunderstood the function of a school. The student needs to focus on understanding the primary services of a bank.
	Option C is incorrect	The student likely confused a paycheck with lending money and did not realize that a job does not hold onto money. The student needs to focus on understanding the primary services of a bank.
	Option D is incorrect	The student likely considered the fact that a loan means lending money but did not realize that a loan does not hold onto money. The student needs to focus on understanding the primary services of a bank.

32	Option B is correct	To determine the perimeter (distance around the outside of a shape) of the rectangle, the student could have used one of the rectangle formulas from the Perimeter section of the STAAR Grade 4 Mathematics Reference Materials page within the student's test booklet ($P = l + w + l + w$ or $P = 2l + 2w$, where P = perimeter, l = length, and w = width). Because this rectangle has two sides that are 12 inches long and two sides that are 8 inches long, the perimeter is 40 inches ($12 + 8 + 12 + 8 = 40$). 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 one length and one width, resulting in $12 + 8 = 20$ inches. The student needs to focus on solving problems related to perimeter of rectangles.
	Option C is incorrect	The student likely confused perimeter with area (amount of space covered by a figure, $A = l \times w$) and did not regroup when multiplying 8×12 to find area. The student needs to focus on solving problems related to perimeter of rectangles.
	Option D is incorrect	The student likely used the area formula for a rectangle instead of finding perimeter, resulting in $12 \times 8 = 96$ inches. The student needs to focus on solving problems related to perimeter of rectangles.