Associative tables (grid match)

Name: _____   **Date:** _____

1. Mark the column to show whether the solution will be positive, negative, zero, or whether there is no solution.

	solution is positive	solution is negative	solution is zero	there is no solution
$3x = 5$	○	○	○	○
$5z + 7 = 3$	○	○	○	○
$7 - 5w = 3$	○	○	○	○
$4a = 9a$	○	○	○	○
$y = y + 1$	○	○	○	○

2. Determine if each sentence is true or false.

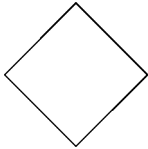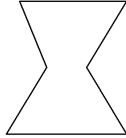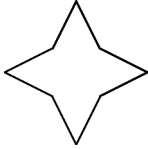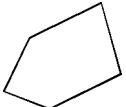|	**True**	**False**
On a number line, an odd number is always between 2 even numbers.	○	○
A number that ends in 1, 2, or 3 is an odd number.	○	○
A number that divides by 2 without a remainder is an even number.	○	○
The digit in the tens place determines if a number is even or odd.	○	○
A number that divides by 3 without a remainder is an odd number.	○	○
A three-digit number is always an odd number.	○	○

3. For each number on the left, indicate whether it can be classified as a whole number, natural number, integer, or rational number. Each number may have more than one classification, and you should select all that apply.

	Whole	Natural	Integer	Rational
−78	❏	❏	❏	❏
0	❏	❏	❏	❏
4	❏	❏	❏	❏
6.5	❏	❏	❏	❏

4. Indicate whether each statement is always, sometimes, or never true.

	Always	Sometimes	Never
The mode of a set of numbers must be one of the numbers of the set.	○	○	○
The median of a set of 110 numbers must be one of the numbers of the set.	○	○	○
The mean of a set of numbers can be larger than the largest number of the set.	○	○	○
The mode of a set of numbers can be equal to the median of the numbers of the set.	○	○	○

5. For each shape, select all the geometric terms that apply.

Shape	Polygon	Regular	Convex	Concave
	❑	❑	❑	❑
	❑	❑	❑	❑
	❑	❑	❑	❑
	❑	❑	❑	❑

6. The left column of the table shows the rounding of six numbers. For each, select the best explanation of the rounding.

How is the number rounded?	Nearest 100	Nearest 1,000	Nearest 10,000
25,800 → 26,000	○	○	○
34,728 → 34,700	○	○	○
81,324 → 81,000	○	○	○
65,234 → 65,200	○	○	○
17,339 → 20,000	○	○	○
98,781 → 99,000	○	○	○

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7. Four systems of equations are shown in the table. Indicate whether each system of equations has no solution, one solution, or infinitely many solutions.

Select one answer in each row.

System of Equations	No Solution	One Solution	Infinitely Many Solutions
$y = 3x + 1$ $y = 3x + 5$	○	○	○
$y = 2x + 2$ $y = -2x + 4$	○	○	○
$3x + 2y = 2$ $3x + 2y = 5$	○	○	○
$x - 2y = 1$ $2x - 4y = 2$	○	○	○

8. For numbers 1a to 1d, choose Yes or No to indicate whether each number graphed on the number line represents one whole.

1a. ○ Yes ○ No

1b. ○ Yes ○ No

1c. ○ Yes ○ No

1d. ○ Yes ○ No

Associative tables (grid match)
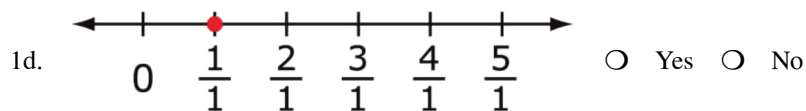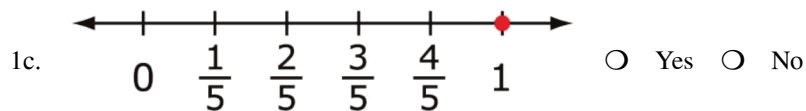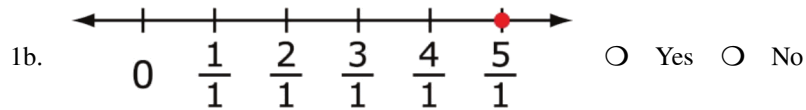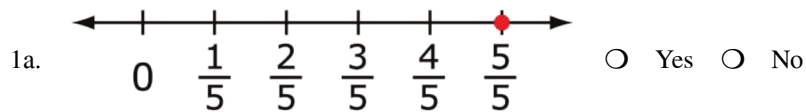
9. The coordinate grid below shows points A through J.
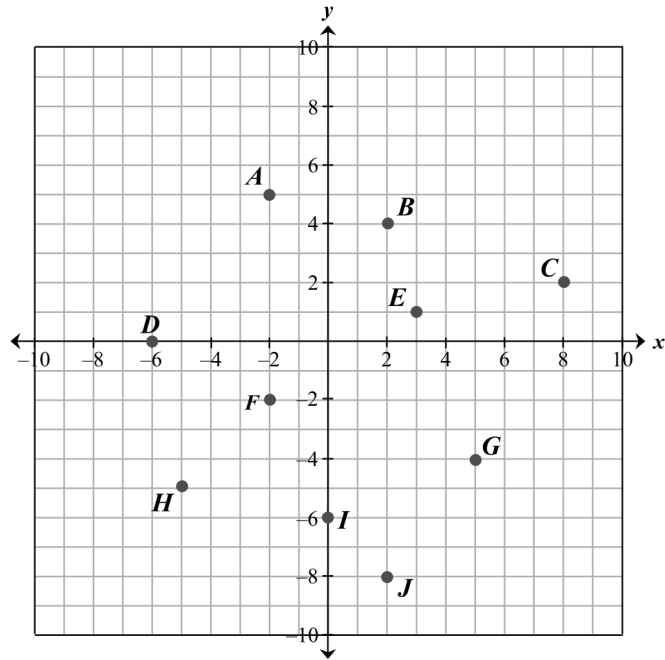

Given the system of inequalities shown below, select all the points that are solutions to this system of inequalities.
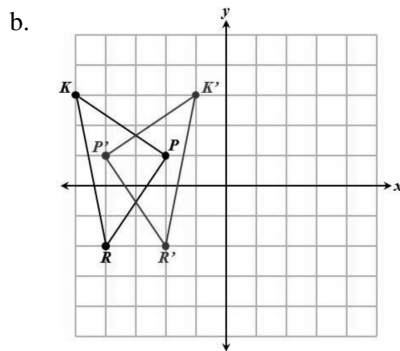
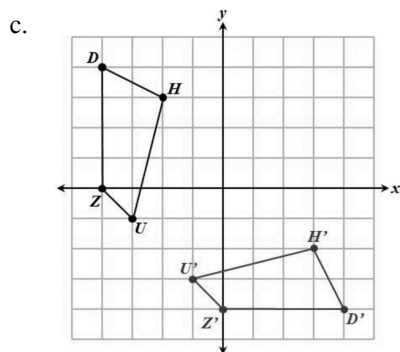$$\begin{cases} x + y < 3 \\ 2x - y > 6 \end{cases}$$

☐A ☐B ☐C ☐D ☐E

☐F ☐G ☐H ☐I ☐J
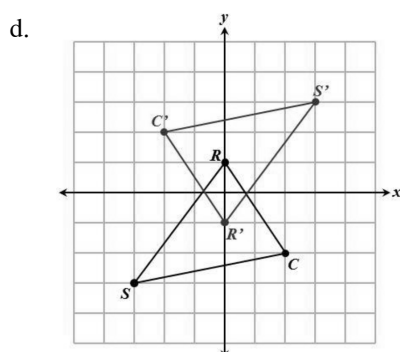
Associative tables (grid match)

10. The graph of a figure and its image are shown below. Identify the transformation to map the image back onto the figure.
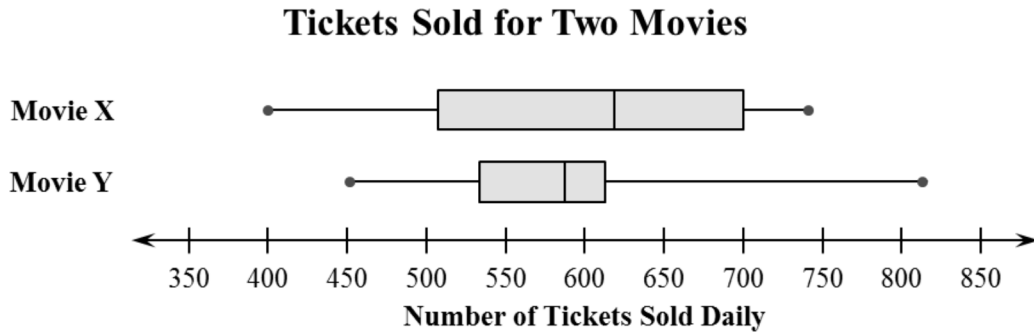
reflection   rotation   translation

a.   ○   ○   ○

b.   ○   ○   ○

c.   ○   ○   ○

d.   ○   ○   ○

Associative tables (grid match)
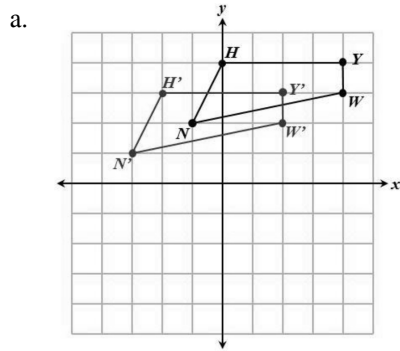
11. A movie theater recorded the number of tickets sold for two movies each day during one week. Box plots of the data are shown below.

Tickets Sold for Two Movies

Based on the box plot, determine whether each of the following statements is **True**, **False**, or **Cannot Be Determined** from the information given in the box plot.
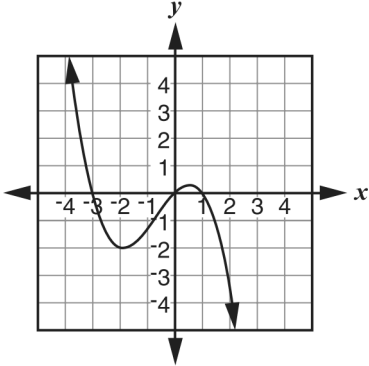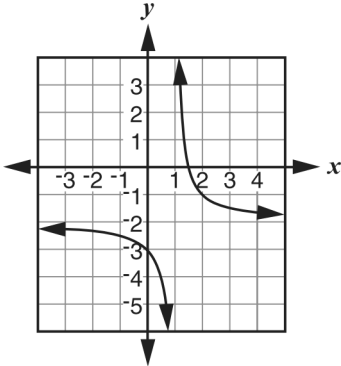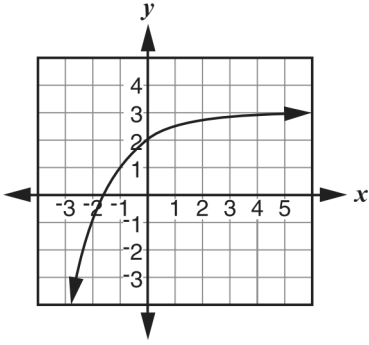
		True	False	Cannot Be Determined
a.	The mean number of tickets sold for Movie X is greater than the mean number sold for Movie Y.	○	○	○
b.	The median number of tickets sold for Movie X is greater than the median number of tickets sold for Movie Y.	○	○	○
c.	The interquartile range of the number of tickets sold for Movie X is greater than the interquartile range of the number of tickets sold for Movie Y.	○	○	○

12. Determine whether each statement listed in the table is always true, sometimes true, or never true. Select one box in each row.

Statement	Always True	Sometimes True	Never True
A square is a rhombus.	○	○	○
A square is a rectangle.	○	○	○
A square is a parallelogram.	○	○	○
A parallelogram is a rectangle.	○	○	○
A triangle is a kite.	○	○	○
A trapezoid is a quadrilateral.	○	○	○

Associative tables (grid match)

13. Classify each function as either an exponential, polynomial, or rational function.

Select the correct boxes.

	Exponential	Polynomial	Rational
$f(x) = x^3$	❑	❑	❑
$f(x) = 3x$	❑	❑	❑
$f(x) = \dfrac{x+1}{x-3}$	❑	❑	❑
	❑	❑	❑
	❑	❑	❑
	❑	❑	❑

14. Given the data set $\{2, 2, 2, 2, 4, 7, 8, 9, 9\}$, select the description for what each value measures.
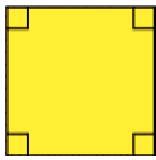
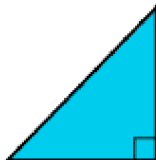|	Mean	Median	Interquartile Range	Number of Observations
4	○	○	○	○
5	○	○	○	○
6.5	○	○	○	○
9	○	○	○	○

Associative tables (grid match)

15. Which scenarios *best* represent exponential growth, exponential decay, or neither? Select the correct boxes.

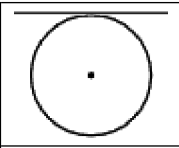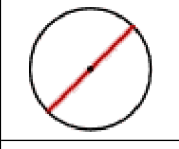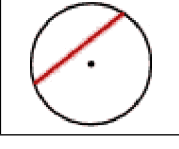|	Exponential Growth	Exponential Decay	Neither
An initial population of 15 hamsters doubles each year for 6 years.	○	○	○
Sheila bought a car for $18,000. She expects the car to lose value at a rate of 14% per year.	○	○	○
Ella starts a track program by walking 2 miles. She increases her distance 3% each week.	○	○	○
To take a taxi, it will cost Connor $2.00 for the first mile. After 5 miles, it will cost him a total of $6.50.	○	○	○
Membership at a fitness center declined at a rate of 5% per year. There were 125 members at the end of the first year.	○	○	○

16. Four shapes are shown.

Select the boxes for all of the phrases that describe each shape.

	Has at Least One Right Angle	Has Parallel Sides
	❏	❏
	❏	❏
	❏	❏
	❏	❏

Associative tables (grid match)

17. Match each diagram to *all* the terms that describe it.

	Chord	Diameter	Tangent
	❏	❏	❏
	❏	❏	❏
	❏	❏	❏

18. A spinner is divided into eight congruent sections and labeled as shown.
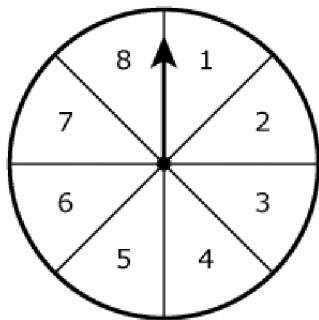
Aaron will spin the arrow on the spinner once.

For each outcome listed in the table, select whether the outcome is "Likely," "Unlikely," or "Neither Unlikely nor Likely."

Outcome	Likely	Unlikely	Neither Unlikely nor Likely
A number less than 2	○	○	○
A number greater than 1	○	○	○
An odd number	○	○	○
A multiple of 2	○	○	○

Associative tables (grid match)