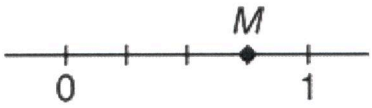
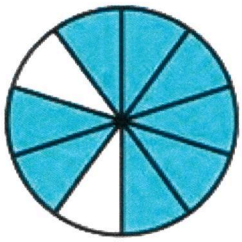
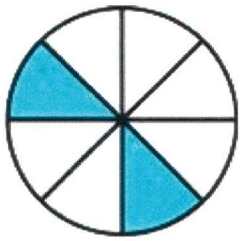
1. Juliana divided the part of a number line from 0 to 1 into sections of equal length. She plotted point M on the number line, as shown below. One of the following circles is shaded to represent a fraction that is equivalent to the number represented by point M. Which one? * 1 point

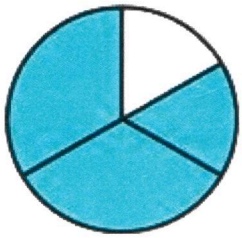




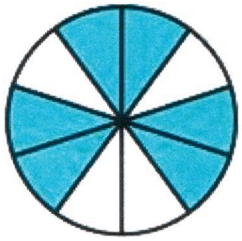
A.



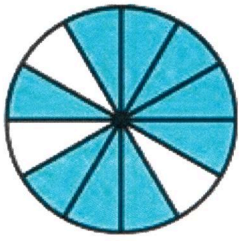
B



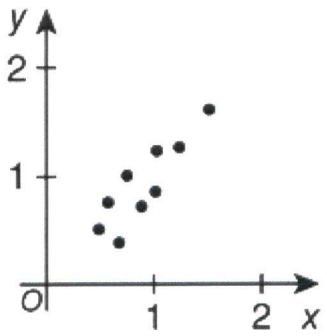
C



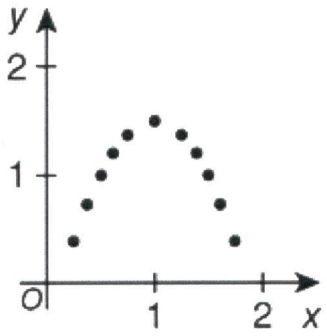
D



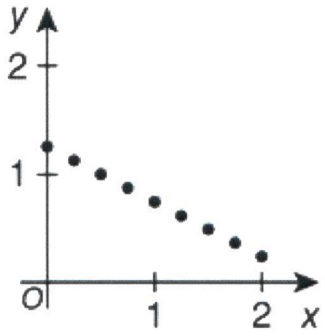
6. Three scatterplots in the standard (x,y) coordinate plane are shown below. Check the boxes that best describe the pattern of its data. 3 points



scatter plot A



scatter plot B



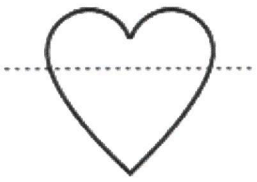
scatter plot C

	No association	Positive linear association	Negative linear association	Nonlinear association
Scatter plot A	☐	☐	☐	☐
Scatter plot B	☐	☐	☐	☐
Scatter plot C	☐	☐	☐	☐

Submit

- ○ E

2. Explain what a line of symmetry is. Explain why the dashed line drawn in the figure below is NOT a line of symmetry for the figure. * 0 points



Your answer

3. A container at a deli has exactly 5 pounds of cheese slices. Each cheese slice weights exactly 2 ounces. How many total cheese slices are in the container. Enter your answer below. * 1 point

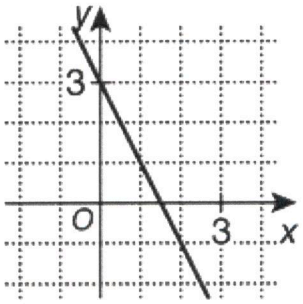
Your answer

4. Liam is making chocolate chip cookies. The recipe calls for 1 cup of sugar for every 3 cups of flour. Liam only has 2 cups of flour. How much sugar should Liam use? * 1 point

- ○ 16 cups
- ○ 2/3 cup
- ○ 5 1/3 cups
- ○ 2.66 cups
- ○ Cannot be determined

2. Functions A, B, and C are linear. Shown below are the graph of Function A in the standard (x,y) coordinate plane, a table of 5 ordered pairs belonging to Function B, and an equation for Function C. Based on their rates of change, place the functions in order from Least to Greatest. * 1 point

Function A



Function B

x	y
−4	−1
−2	0
0	1
2	2
4	3

Function C

$y = 3$

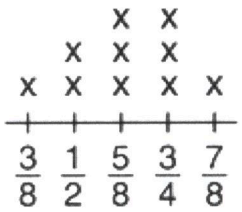
- A. Function A, Function B, Function C
- B. Function B, Function C, Function A
- C. Function A, Function C, Function B
- D. Function C, Function A, Function B
- E. Function C, Function B, Function A

3. Check all of the boxes of irrational numbers below: * 4 points

- [ ] A. $\sqrt{2}$
- [ ] B. $\sqrt{4}$
- [ ] C. $\sqrt{8}$
- [ ] D. $\sqrt{16}$
- [ ] E. $\sqrt{32}$
- [ ] F. $\sqrt{64}$
- [ ] G. $\sqrt{128}$
- [ ] H. $\sqrt{256}$

5. Nigel's class placed 10 empty rain gauges on the playground Monday morning. The line plot below shows the number of inches of rainwater in each gauge after it rained Monday afternoon. What is the mean amount of rainwater per rain gauge, in inches, in the 10 rain gauges? * 1 point

Number of Inches of Rainwater



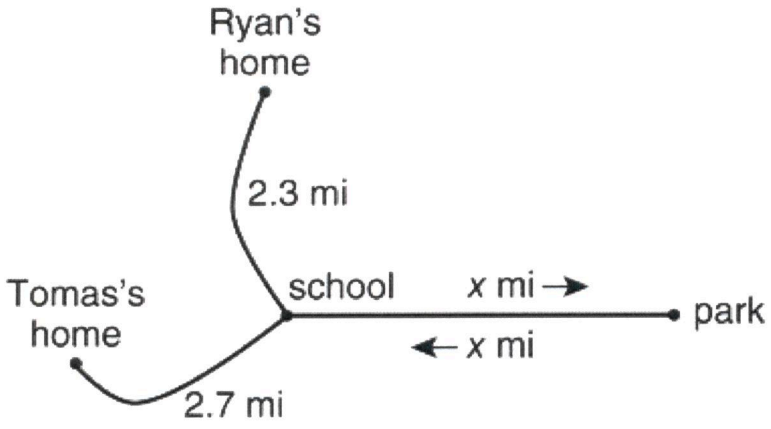
- A. 25/80
- B. 5/8
- C. 51/80
- D. 37/56
- E. 51/8

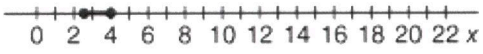
4. The table below represents the number of episodes of a certain television series Jessica, Kev and Miriam watched last weekend. Kevin watched 2 fewer episodes than Jessica. Miriam watched 1/2 as many episodes as Kev. One of the following statements in NOT true. Which one? * 1 point

Name	Total number of episodes watched
Jessica	j
Kev	k
Miriam	m

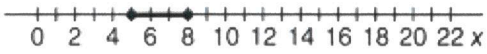
- A. Jessica watched k+2 episodes.
- B. Miriam watched k x 1/2 episodes.
- C. Miriam watched k x 2 episodes.
- D. Kev watched m x 2 episodes.
- E. Kev watched j - 2 episodes.

6. Ryan and Tomas walked to school and then to the park, as described below: Ryan walked 2.3 miles from his home to meet Tomas at school. Tomas walked 2.7 miles from his home to meet Ryan at school. Once they were at school, the boys walked x miles to the park and then x miles back to the school. The sum of the distance Ryan walked and the distance Tomas walked was at least 15 miles but not more than 21 miles. One of the following is the graph of the possible values of x. Which one? * 1 point

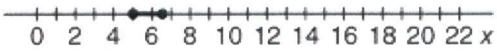




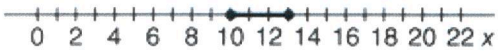
A.



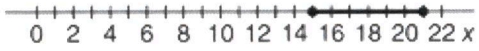
B.



C.



D.



E.

7. *

1 point

A pattern exists among the units digits of the powers of 7, as shown below. What is the units digit of 7^{50} ?

$7^0 = 1$	$7^3 = 343$	$7^6 = 117,649$
$7^1 = 7$	$7^4 = 2,401$	$7^7 = 823,543$
$7^2 = 49$	$7^5 = 16,807$	$7^8 = 5,764,801$

(Note: The units digit of 2,401 is 1.)

A. 1

B. 3

C. 4

D. 7

E. 9

Submit

5. On a given day on a certain poultry farm, the relative frequencies of chickens, ducks, and geese that laid an egg or did not lay an egg are given in the table below. Two of the relative frequencies are given by letters. If it can be determined, what is the sum of the values of a and b in this table? * 1 point

	Laid an egg	Did not lay an egg	Total
Chickens	a	0.33	1.00
Ducks	0.45	0.55	1.00
Geese	0.48	b	1.00

- A. 0.19
- B. 0.67
- C. 1.19
- D. 1.80
- E. Cannot be determined by the given information