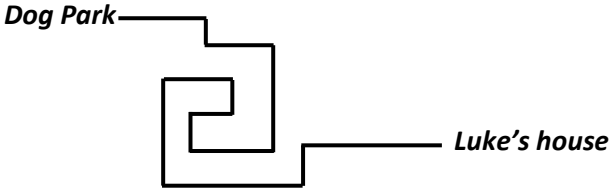
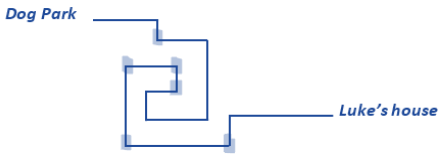
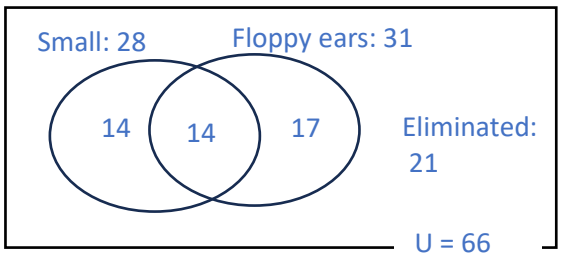
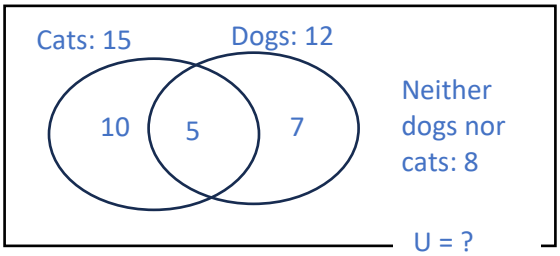
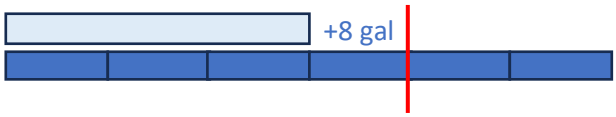
First Name: _____	Last Name: _____	Grade: _____
Teacher: _____	Parent's email: _____	

Pets

Kinder & First Grade: solve <u>at least</u> 3 problems.
Second & Third Grade: solve <u>at least</u> 7 problems.
Fourth Grade and above: solve <u>at least</u> 12 problems.

		Answer
1.	Ron has a dog, two cats, three birds, and four hamsters. How many total pets does Ron have? 1 + 2 + 3 + 4 = **10 pets.**	*10 [pets]*
2.	Esha made 10 homemade treats for her three dogs. She gave 1 treat to Cash the Corgee, 2 treats to Marcy the Maltesse and 3 treats to Phoenix the Poodle. How many treats did she have left? Number of treats given to Cash, Marcy and Phoenix = 1+2+3 = 6. Number of treats left = 10 – 6 = **4.** Or 10 – 1 – 2 – 3 = **4 treats**.	*4 [treats]*
3.	There are four dogs lining up nicely in a row: Archimedes, Zeus, Lotus and Madura. Archimedes has one neighbor, and it is not Zeus. Lotus also has only one neighbor. Who is Lotus' neighbor? Archimedes, Madura, Zeus, Lotus 	*Zeus*
4.	Luke took the following path to walk his dog to the dog park. He did not walk backwards or repeat any part of the path. How many times did he turn right on his way to the park?  	*6 [times]*
5.	You can guess until you get 12 total: • 3 guinea pigs, 6 hamsters. Total: 9 • 4 guinea pigs, 8 hamsters. Total: 12 Another way is to draw a diagram: Hamster Guinea pigs 12 12 stands for 3 units. 1 unit = 12÷3 =4, so, 4 guinea pigs 12 – 4 = 8 or 4×2 = 8 hamsters	*8 [hamsters]*
6.	Since only 24 – 19 = 5 birds are parrots, the rest are not parrots. 58 – 5 = 53. So, **there are 53 animals that are not parrots.**	*53*
7.	Rehan bought 6 mollies: 6×$4 = $24. Since each goldfish costs $3, he must have bought $24÷$3 = **8 goldfish.**	*8 [goldfish]*

8.	Friday: +3 feet and – 2 feet = 1 foot from the bottom of the wall at the end of the night. Saturday: (1+3) feet – 2 feet = 2 feet from the bottom of the wall at the end of the night. Sunday: (2+3) feet – 2 feet = 3 feet from the bottom of the wall at the end of the night. Monday: (3+3) feet – 2 feet = 4 feet from the bottom of the wall at the end of the night. **Tuesday: (4+3) feet – this is the day the snail reaches the top of the 7-foot wall.**	*Tuesday*
9.	 The price of 3 guinea pigs = the price of 12 fancy rats. The price of 12 fancy rats = the price of 4 hamsters. Therefore, the price of **1 hamster = the price of 3 fancy rats.**	*3 [fancy rats]*
10.	Since Pepper is one month older than Dash, they both must be born this year. Pepper was born on Jan 1 this year and Dash on Feb 1 this year. We now narrow down that Alfie and Jakie were born last year. Since Alfie is younger, Jakie was born on Oct 1. Jakie is **3 months older** than Pepper.	*3 [months]*
11.	a. They bought 2 cases that have a total of 48 pounds of gravel. Each case has 24 pounds of gravel (in multiple bags). If each bag has 2 pounds of gravel, then there were 12 bags in each case. b. 61÷7 = 8 r 5. Each tank will have 8 clownfish and the left over 5 clownfish are placed in the display aquarium.	*a. 12 [bags]* *b. 5 [clownfish]*
12.	After the first round: 66 – 21 = 45 dogs remained. (28 + 31) – 45 = 59 – 45 = **14** small dogs with floppy ears. We can solve it by creating a Venn Diagram. The universe is made from 66 dogs. 	*14 [finalists]*
13.	In order for the dogs to be next to each other, there are 2 different ways: cat-dog-dog-dog and dog-dog-dog-cat. For each way, there are 6 different ways for the dogs: d1-d2-d3, d1-d3-d2, d2-d1-d3, d2-d3-d1, d3-d1-d2, d3-d2-d1. Therefore, total number of arrangements: 2×6 = **12 ways**. 	*12 [ways]*
14.	 1/8 of the dog's weight = 4 pounds. One third of the cat's weight = 4 pounds. The cat's full weight must be 4×3 = **12 pounds**.	*12 [pounds]*
15.	Draw the Venn diagram to the problem.  15 + 12 – 5 = 22 students have dogs, cats, or both. Total number of students in the class is 22 + 8 = 30	*30 [students]*

16.	Tank A +8 gal Tank B  8 gallons = 1/6 of tank B Tank B had 6×8 = 48 gallons of water at the beginning	*48 [gallons]*
17.	The volume of a rectangular tank can be found as follows: V = Length × Width × Height. In this case, the volume is given as 512 cubic inches, so 512 = 2w × w × 0.5w. Simplify: 512 = w^3 → w = 8 because 8 × 8 × 8 = 512 or $\sqrt[3]{512} = 8$ Width = 8 inches, Length = 16 inches, Height = 4 inches	*16 by 8 by 4 [inches] or 16 [in] by 8 [in] by 4 [in]*
18.	In groups of 3 with 2 left out: 5, 8, 11, 14, 17, 20, 23, 26, 29, 32 … In group of 5 with 2 left out: 7, 12, 17, 22, 27, 32, 37, 42, 47, 52, … Mia is taking care of 17 puppies. When she puts them in groups of 3, 2 puppies will be left out; the same case when she puts them in groups of 5, two will be left out. The next number that is divisible by 3 and by 5 is 30. She needs 30 – 17 = 13 so, that no puppies will be left out when she puts them in groups or 3 or groups of 5.	*13 [more puppies]*

Solution is available on March 01, 2024
www.mathinaction.org