**Lower Elementary:**

*Question:* Sergeant Stubby was the most decorated war dog of World War I and reportedly received 11 medals for his service. Chips was the most decorated war dog of World War II and reportedly received 3 medals for his service. How many more awards than Chips did Sergeant Stubby receive?

****Upper Elementary:**

*Question:*  In New York City’s Central Park, there is a statue of Balto, the sled dog who helped deliver medicine in the middle of a blizzard to Nome, Alaska and saved the town from a dangerous diphtheria outbreak. Balto arrived in Nome on February 2, 1925. The statue of Balto was erected on December 17, 1925. How many days passed between Balto arriving in Nome and his statue being erected? (Hint: 1925 was **not** a leap year.)

**Middle School:**

*Question:* Man Ray, Fay, and Battina were dogs featured in work by the famous photographer, William Wegman. Battina’s photos are in 18 fewer than double the number of books Fay’s photos are in. Fay’s photos are in 1 more than 5 times the number of books Man Ray’s photos are in. If Man Ray’s photos are in 4 books, then how many books contain Battina’s photos?

**Algebra and Up:**

*Question:* Laika was the first living animal to be launched into orbit. She was chosen from a pool of 10 dogs, and 1 other dog was chosen as an alternate for the launch. How many possible combinations of flight dogs and flight dog alternates were there?

**Lower Elementary:**

*Question:* Sergeant Stubby was the most decorated war dog of World War I and reportedly received 11 medals for his service. Chips was the most decorated war dog of World War II and reportedly received 3 medals for his service. How many more awards than Chips did Sergeant Stubby receive?

*Answer:* 8 medals

*Solution:* We need to find the difference between 11 medals and 3 medals. 11 and 3 are far apart, so the best method would be to take away 3 from 11. Doing this tells us that Sergeant Stubby received 11 – 3 = 8 more medals than Chips received.

****Upper Elementary:**

*Question:*  In New York City’s Central Park, there is a statue of Balto, the sled dog who helped deliver medicine in the middle of a blizzard to Nome, Alaska and saved the town from a dangerous diphtheria outbreak. Balto arrived in Nome on February 2, 1925. The statue of Balto was erected on December 17, 1925. How many days passed between Balto arriving in Nome and his statue being erected? (Hint: 1925 was **not** a leap year.)

*Answer:* 317 days

*Solution:* Since we’re looking for the number of days between those two dates, we will not include those days in our answer. After February 2, there are 28 – 2 = 26 more days in February. Adding the days in March through November gets us 26 + 31 + 30 + 31 + 30 + 31 + 31 + 30 + 31 + 30 = 301 days. Adding the first 16 days of December brings our total up to 317 days.

**Middle School:**

*Question:* Man Ray, Fay, and Battina were dogs featured in work by the famous photographer, William Wegman. Battina’s photos are in 18 fewer than double the number of books Fay’s photos are in. Fay’s photos are in 1 more than 5 times the number of books Man Ray’s photos are in. If Man Ray’s photos are in 4 books, then how many books contain Battina’s photos?

*Answer:* 24 books

*Solution:* We can express the number of books featuring Fay and Battina in terms of the other dogs:

***B*** = 2***F*** - 18

***F*** = 5***M*** + 1

Man Ray was in 4 books, so ***M*** = 4. Plugging 4 into the first equation tells us that Fay was in 5(4) + 1 = 21 books, so ***F*** = 21. Plugging 21 into the second equation tells us that Battina was in 2(21) – 18 = 24 books.

**Algebra and Up:**

*Question:* Laika was the first living animal to be launched into orbit. She was chosen from a pool of 10 dogs, and 1 other dog was chosen as an alternate for the launch. How many possible combinations of flight dogs and flight dog alternates were there?

*Answer:* 90 possible combinations

*Solution:* There were 10 dogs in total, so there were 10 possible flight dogs to choose from. Once the flight dog was chosen, there were 10 – 1 = 9 dogs left to choose from as the flight dog alternate. Using the Fundamental Counting Principle tells us that there were 10 flight dogs × 9 alternates = 90 possible combinations.