**Standards addressed by these problems: 2.OA.3**

Overall purpose of these problem types: In part one, **students will investigate what it takes to make a number odd or even**. Students need many opportunities to join odd and even numbers to make a prediction about how odd and even numbers are created. In part two, **students will investigate how the combination of two equal addends creates an even number.**

**PART ONE: Determining if a number is even or odd.**

**MDIV (Measurement Division)**

Afterschool, Coach Austin was teaching some second graders how to play soccer. There were \_\_\_\_ second graders attending practice. Coach Austin put the students on two different teams, a red team and a blue team. How many second graders are on each team? Are the teams even?

(20) (19) (18) (17)

The Roger’s Tornado baseball team practices every Monday night. Last Monday night, there were \_\_\_\_ baseball players at practice. Coach Tim paired the players up to practice throwing and catching the ball. How many groups of players were practicing?

(16) (15) (14) (13)

Carla’s mom was folding laundry on Sunday. She had \_\_\_\_ socks in the laundry basket. Carla’s mom matched the socks up into pairs. How many pairs of socks did Carla’s mom have?

(12) (11) (10) (9)

Ms. Smith has \_\_\_\_ books. She puts \_\_\_\_ books in each basket. How many baskets will she need to hold all her books?

(10, 2) (11, 2) (20, 2) (21, 2)

**PART TWO: Creating an opportunity for students to understand that an even number is a sum of two equal addends.**

**PPW-WU (Part-Part-Whole, Whole Unknown)**

Everyday the afterschool program plays relay games. The afterschool teacher must have 2 teams for each game. On Monday, the teacher had 2 teams and the STAR TEAM had \_\_\_\_ members and the ROCKET TEAM had \_\_\_\_ members. How many kids played the relay games altogether? Are the teams fair? Why or why not?

(5, 5) (5, 6) (8, 8) (8, 9)

On the last day of school, the second grade class at Harvey Elementary has a tug of war competition between the boys and the girls. Each member of the winning team receives a trophy. This year there are \_\_\_\_ boys and \_\_\_\_ girls in the class. How many kids are participating in the tug of war this year? Are the teams fair? Why or why not?

(7, 7) (8, 8) (8, 9) (9, 9)

There are \_\_\_\_ girls and \_\_\_\_ boys in second grade. How many students are in second grade?

(10, 10) (10, 11) (12, 12) (12, 13)