**Lesson Title: Uneven Balance**

**Length: (30 minutes)**

**Standard(s) Addressed: 6.RP.A.3, 7.RP.A.3, 7.NS.A.3**

**Materials:**

1. Dry pinto beans
2. Uncentered balance
3. 2 Solo cups
4. Digital scale
5. Ruler

**Outline:**

1. Fill one Solo cup with pinto beans. Place on shorter side of the balance.
2. Place the other cup on the longer side of the balance.
3. Add pinto beans to the empty cup until the balance balances.
4. Use the digital scale to measure the weight of each of the cups.
5. Find the ratio of weight of the cups.
6. Measure the distance from each end of the balance to the fulcrum.
7. If s is the shorter distance and l is the longer distance. Find an equation s=k\*l for some k.

**Questions:**

1. What is the equation s=k\*l?
2. The fulcrum is x units off center. Write, as a fraction, the ratio of the distances (l/s).